



# ANNUAL PLAN AND REPORT

ANNUAL PLAN  
2020-2021

ANNUAL REPORT  
2019-2020



**Rural Development Academy [RDA], Bogura**  
Rural Development and Cooperative Division  
Ministry of Local Government, Rural Development & Cooperatives

# ANNUAL PLAN AND REPORT

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2020-2021

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Bogura, Bangladesh

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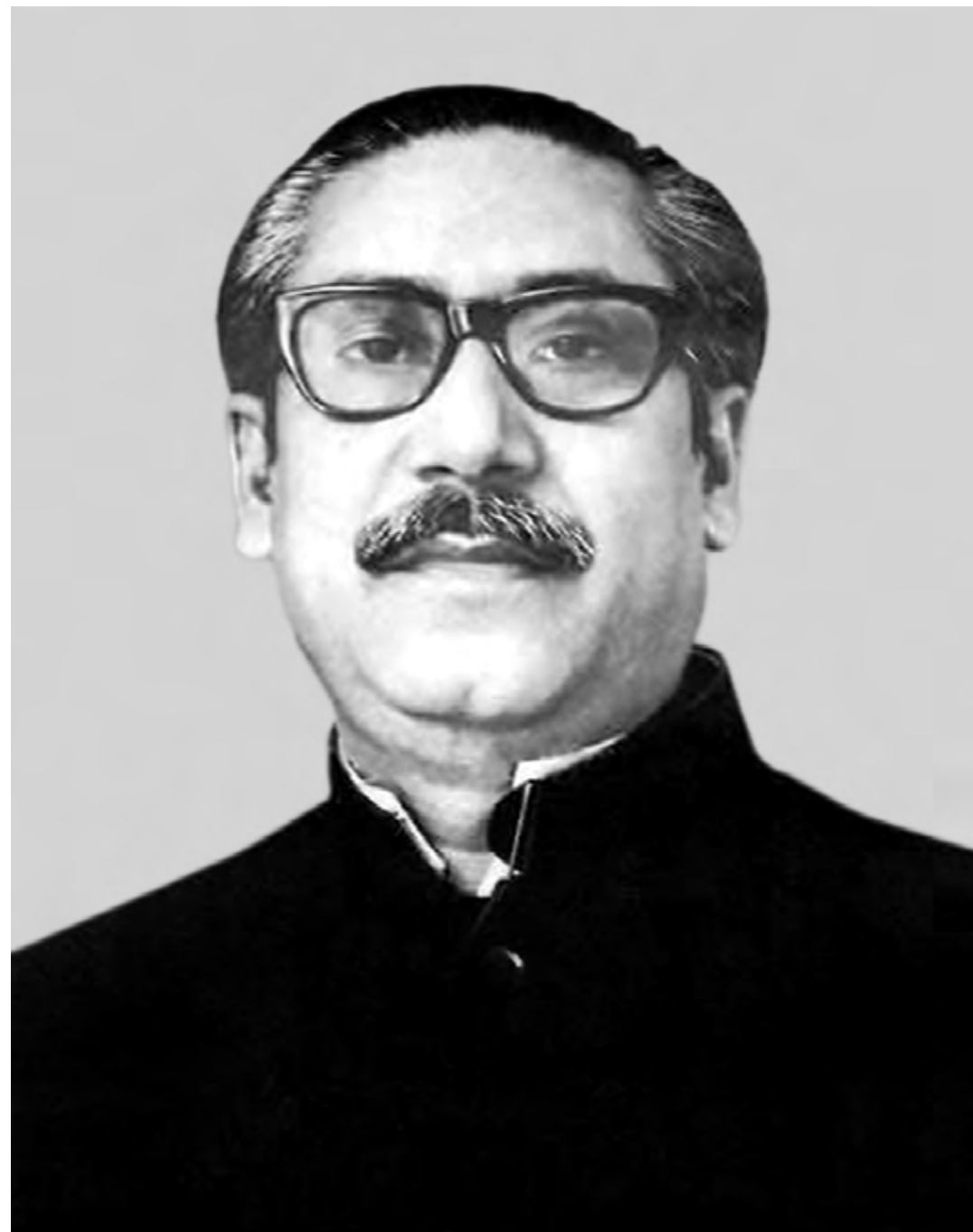
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Father of the Nation  
**Bangabandhu Sheikh Mujibur Rahman**



## State Minister

Ministry of Local Government, Rural Development and Cooperatives (LGRD&C)  
Government of the People's Republic of Bangladesh

## Message



RDA is contributing immensely in rural development with vision to accomplish the dream of the Father of the Nation Sheikh Mujibur Rahman for development of Bangladesh through rural development. Annual Planning Conference (APC) has been a good practice of RDA to formulate participatory planning for its continuous development and better performance. APC brings out annual plan for the next year providing new directions on the other hand, annual report which reviews the previous year's activities of the Academy.

Since its inception, RDA has been contributing a lot in Agriculture, Biotechnology, socioeconomic development, poverty reduction, irrigation, water resources management, asset transfer, women empowerment and other social issues etc.

These successes certainly reflect the sincerity, dedication and commitment of the Academy to work for the rural people. RDA has been working in joint ventures and has collaboration with different agencies.

My sincere thanks and gratitude goes to the Director General of RDA and other concerns for arranging such an effective conference. Hopefully, this annual plan for 2020-2021 and annual report for 2019-2020 would guide RDA in future endeavors and to work for sustainable rural development.

*Swapan Bhattacharjee*  
13.12.2020

Swapan Bhattacharjee, MP

## Secretary

Rural Development and Cooperative Division  
Ministry of Local Government, Rural Development and Cooperatives (LGRD&C)  
Government of the People's Republic of Bangladesh

## Message



This is to appreciate that Rural Development Academy (RDA), Bogura has been doing excellent work in rural development of the country since its inception in 1974. The 30<sup>th</sup> Annual Planning Conference (APC) under such global pandemic condition was a brave and pragmatic approach by RDA to analyze its activities and performance for 2019-20 and to formulate plan for 2020-21 in context of RDA's training, research, action research and advisory services.

At present, this world is facing an unprecedented situation due to Covid-19. Bangladesh is not out of this situation. The progress of our economy is now facing a challenge due to Covid-19. The economy of Bangladesh is still predominantly agricultural. Agriculture is the back bone of our Economy. The country has achieved an incredible growth in food production. Rural Development Academy (RDA) is working successfully in conducting action research on agricultural sector and poverty reduction and disseminating various technologies in the sector.

RDA contributes a lot to economic development and poverty reduction. Bangladesh achieved independence under the leadership of Father of the Nation Bangabandhu Sheikh Mujibur Rahman. Honourable Prime Minister has made a road map to fulfill the dream of Father of the Nation and formulate vision 2021 & vision 2041. As we know that our Honourable Prime Minister has given utmost importance on the mechanization of agricultural in the country. It is a matter of great pleasure that RDA has started an experiment on agricultural mechanization through collective farming. If it proves successful, it will bring a revolutionary change in our agricultural practices, increase production and income in rural areas.

Expert opinions on contemporary issues in all four mandatory activities would show RDA a pragmatic path towards development while annual report scrutinizes last year's efforts. Critical analysis and constructive criticism would help to do better planning and to move forward, learning lessons learnt from past shortfalls and continuously improve the activities of RDA. Annual report 2019-2020 and Annual plan 2020-21-these two reports would give RDA an opportunity to work look back and move forward for ultimate rural development.

Finally I would like to thank Mr. Khalil Ahmed, Director General (Additional Secretary), RDA and his faculties who have wholeheartedly worked to make the APC successful publish the report.

*Md. Rezaul Ahsan*  
Md. Rezaul Ahsan



## Director General

Rural Development Academy (RDA)  
Bogura, Bangladesh

## Message



Rural Development Academy (RDA), Bogura has a glorious reputation in the field of rural development. To become a center of excellence in this sector RDA believes in participatory development planning and continuous improvement of the rural development process in the mandated working areas of training, research, action research and advisory services. Experts from different corners of the country contributed in the 30<sup>th</sup> APC of RDA to formulate a realistic and practical plan even under the Covid-19 pandemic.

The Annual Plan 2020-21 would guide RDA to proceed further and stay on the original track of business, show way forward and provide guidance to take new challenges in the field of rural development. During and after this pandemic, we might need to re-organize our thoughts, policies and mindset to cope with the neo normal situation.

Rigorous analysis of our work in last year would give us an opportunity to learn from our mistakes and fine tune the rural development initiatives of RDA.

I would like to extend my sincere and cordial appreciation to Md. Mizanur Rahman, Joint Director (Evaluation), Convener of the 30<sup>th</sup> APC; Co-conveners Ms. Andalib Mahejabin, Deputy Director and Mr. Md. Al Mamun, Assistant Director for working hard for compiling, editing and publishing this report within a short time frame.

Khalil Ahmed

## Convener

30<sup>th</sup> APC 2020  
Rural Development Academy (RDA)  
Bogura, Bangladesh

## Message



I am really grateful to all the participants for joining us in this 30<sup>th</sup> Annual Planning Conference (APC) even under the Covid-19 pandemic. Traditionally RDA arranges APC each year to review training, research and action research activities of the institute carried out last year and formulate the action plan for the next year. Valued presence and sharing of expertise, innovative and professional ideas of the participants assisted RDA to make an effective and practical plan for the upcoming year along with learning from critical analysis of our last year's performance to move forward.

I heartfelt thanks goes to Mr. Khalil Ahmed (Additional Secretary) and Director General of RDA for his precious guidance and continuous support during formulation of this publication.

Finally, I express my sincere thanks and appreciation to the Co-conveners of the APC Ms. Andalib Mahejabin, Deputy Director and Mr. Md. Al Mamun, Assistant Director for their sincere efforts in organizing the conference successfully and help in preparation of this document.

Md. Mizanur Rahman

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AARDO	Afro-Asian Rural Development Organization
ADP	Annual Development Programme
AERS	Agricultural Extension and Research System
AEZ	Agro-ecological Zone
AFWSP	Arsenic-Free Safe Drinking Water Supply Project
APC	Annual Planning Conference
BADC	Bangladesh Agricultural Development Corporation
BARC	Bangladesh Agricultural Research Council
BARD	Bangladesh Academy for Rural Development
BARI	Bangladesh Agricultural Research Institute
BAU	Bangladesh Agricultural University
BCS	Bangladesh Civil Service
BMDA	Barind Multipurpose Development Authority
BPATC	Bangladesh Public Administration Training Centre
BRDB	Bangladesh Rural Development Board
BRDTI	Bangladesh Rural Development Training Institute
BRRI	Bangladesh Rice Research Institute
BSMRAU	Bangabandhu Sheikh Mujibur Rahman Agricultural University
CIRDAP	Centre on Integrated Rural Development for Asia and the Pacific
CIWM	Centre for Irrigation and Water Management
CLP	Chars Livelihoods Programme
CVDP	Comprehensive Village Development Programme
DAE	Department of Agricultural Extension
DFID	Department of International Development
DLS	Department of Livestock
DPD	Deputy Project Director
DPP	Development Project Proposal
DTW	Deep tube well
ERD	External Relation Division
GO	Government organisation

GSI	Good Seed Initiative
ICT	Information and communication technology
IGA	Income generating activity
IMED	Implementation Monitoring and Evaluation Division
IBS	Institute of Bangladesh Studies
IDCOL	Infrastructure Development Company Limited
IT	Information technology
IUB	Independence University of Bangladesh
JSC	Join-Sponsored Course
LFE	Live-in-Field Experience Programme
LGRD&C	Ministry of Local Government, Rural Development and Cooperatives
M4C	Making Markets Work for the Jamuna, Padma and Teesta Chars
MOPA	Ministry of Public Administration
MOU	Memorandum of Understanding
MVRD	Model Village in Rural Development
NAEM	National Academy for Educational Management
NATP	National Agricultural Technology Project
NCDP	Northwest Crop Diversification Programme
NGO	Non-government organization
NILG	National Institute of Local Government
O&M	Operation and Maintenance
PD	Project Director
PSC	Project-Sponsored Course
PRSP	Poverty Reduction Strategy Paper
PPP	Public-Private Partnership
RD	Rural Development
RDA	Rural Development Academy
RDCD	Rural Development and Cooperative Division
RPC	Rural Plant Clinic
SAARC	South Asian Association for Regional Cooperation
SB	Sonali Bank
SDC	Swiss Agency for Development and Cooperation
SHIP	Seed Health Improvement Project
SREDA	Sustainable and Renewable Energy Development Authority
SSC	Self-Sponsored Course
TPD	Training Person Days
TOT	Training of Trainers
UP	Union Parishad
WASA	Water and Sewerage Authority
WISE	Women in Seed Entrepreneurship



## Introduction

Rural Development Academy (RDA), Bogura was established in 1974 as an outcome of visionary and ingenious thinking of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman. After independence he envisioned development of Bangladesh through development of rural Bangladesh. Since inception RDA has been working sincerely in this sector and contributing in development of Bangladesh. RDA believes in participatory development strategies therefore each year arranges Annual Planning Conference (APC) with an objective of formulating plan for the next financial year in respect of its core activities along with critical review of last year's performance in the field of training, research and action research. It has become a glorious tradition of RDA and accordingly this year organized 30<sup>th</sup> APC. The conference held on 17-18 October 2020 to prepare a work plan for 2020-2021 and review last year's activities of RDA. A total of 113 participants including 38 guest participants from different national organizations were present physically and 35 participants joined virtually through "Zoom" in this conference. Academicians, researchers, trainers, teachers, development practitioners and policy makers representing various reputed national agencies and organizations participated this conference, analyzed activities, given new thoughts and directions to move forward and formulated effective planning under the global pandemic situation. As a result of effective discussions review of the last year's activities of RDA and a pragmatic plan of action for the upcoming year of the Academy.

The two-day long conference was divided into three main business sessions; inaugural session was followed by three sessions on training, research and action research activities. After thorough discussion the participants finalized the working papers in the concluding session.

The inaugural session was chaired by Mr. Khalil Ahmed, Director General (Additional Secretary), Rural Development Academy, Bogura. Mr. Md. Rezaul Ahsan, Secretary, Rural Development and Cooperative Division, Ministry of Local Government, Rural Development and Cooperatives (LGRD&C) graced the occasion as the Chief Guest.



Besides, Professor Dr. Major Nazmul Ahsan Kalimullah, BNCCO, Vice-chancellor, Begum Rokeya University, Rangpur and Mr. Md. Ziaul Hoque, Deputy Commissioner, Bogura attended the session as the Special Guests.

The inaugural session started with recitation from the holy books followed by one minute silence and doa for the departed soul of former Director General of RDA Mr. Md. Aminul Islam. The program started with the welcome speech by the convener of 30<sup>th</sup> APC Mr. Md. Mizanur Rahman, Joint Director, RDA. He welcomed and expressed gratefulness to all the participants to take the challenge to join this programme physically and virtually even under the Covid-19 pandemic situation and request to the learned participants to contribute and formulate realistic action oriented annual plan for RDA, Bogura.

Mr. Khalil Ahmed, Director General (Additional Secretary), RDA and respected chairperson of the session presented the keynote paper

and introduced RDA activities to the audience. First of all, he paid homage to the Father of the Nation Bangabandhu Sheikh Mujibur Rahaman. He remembered the martyrs of Bengali Language Movement in 1952, the 1969 Mass Uprising, the Bangladesh War of

Independence 1971, the blood bath of 15 August, the jail killing of four national leaders and the 1990 Mass Uprising. In his presentation, he highlighted various activities of RDA, Bogura and requested delegates for extending their cooperation and constructive criticism to formulate a realistic action plan for RDA in the light of vision 2021, SDG, Vision 2041, 8<sup>th</sup> five year plan and delta plan to fulfil the dream of Father of the Nation “Hunger and poverty-free a happy and prosperous Sonar Bangla”. He requested to join all in the drive of development declared by the honorable prime minister. He also emphasized to conduct research in the field of crop insurance, health insurance and delivery of Govt. service to the doorstep of rural community to develop their socio-economic condition.

As special guest, Professor Dr. Major Nazmul Ahsan Kalimullah, BNCCO, Vice chancellor, Begum Rokeya University, Rangpur mentioned in his speech that Bangladesh has overcome the ignominy of being bottomless basket and now on the highway of development by the proper leadership of our honorable Prime Minister Sheikh Hasina, MP. He also mentioned that development is an endless process and expected that this APC would provide guidelines and articulate the pathway of demand-driven rural development action plan for RDA, Bogura.

Professor Dr. M. Abul Kashem, Vice Chancellor, HSTU, Dinajpur virtually joined the inaugural session and delivered his speech. He inspired RDA faculty members to work in the field of co-operative based rural development. He focused on more cooperative based initiatives for sustainable rural development in Bangladesh as Father of the Nation Bangabandhu Sheikh Mujibur Rahaman, directed to cooperative based rural development. He also emphasized that sectors e.g. women empowerments and farmers perceptions towards the sustainable rural development should be addressed by RDA model.





Mr. Md. Ziaul Hoque, Deputy Commissioner, Bogura and special guest of the program highly appreciated the activities of RDA. He also suggested to make active collaboration and exchange of RDA research experiences among other research organizations and implementing agencies. He also advised RDA faculty members to avoid duplication of research work.

Mr. Md. Rezaul Ahsan, hon'ble Secretary, Rural Development and Cooperative Division, Ministry of Local Government, Rural Development and Cooperatives (LGRD&C), stated in speech that, Father of the Nation Bangabandhu Sheikh Mujibur Rahaman, established this academy in 1974 to minimize regional disparity through uplifting the socio-economic condition of the marginalized people, particularly in north-western Bangladesh. This academy has been playing key role in rural development to improve livelihood of rural people, he also notified that RDA contributed a lot in economic development and poverty reduction and earned a strong reputation in the field of training, research and action research since its inception. He also appreciated RDA's praise worthy achievements in irrigation, water resources management, seed technology and social development as a whole. He hoped, considering Covid-19 circumstances, by sharing participants views and experiences this conference would formulate a rational and productive action plan for the fiscal year 2020-21 keeping the guiding principles, especially SDG, Perspective Plan 2021-41, Government Election Manifesto-2018 and Five-Year Plan in their mind.



## Director General

**Khalil Ahmed**

(Additional Secretary)

Rural Development Academy (RDA)  
Bogura, Bangladesh

## Policy Guideline

*Bismillahir Rahmanir Rahim*

Honourable Chief Guest,

**Mr. Md. Rezaul Ahsan**, Secretary to the Government of the People's Republic of Bangladesh, Rural Development and Cooperative Division, Ministry of Local Government, Rural Development and Cooperatives.

Respected Special Guest,

**Mr. Md. Ziaul Hoque**, Deputy Commissioner, Bogura and

**Professor Dr. Major Nazmul Ahsan Kalimullah**, BNCCO Vice-chancellor, Begum Rokeya University, Rangpur.

Distinguished delegates from different agencies, universities, research and training institutes, representatives from print and electronic media, respected participants joined with us through virtual platform, my dear colleagues, ladies and gentlemen.

*Assalamu-alaikum and very good morning to you all.*

In the beginning of my speech, I would like to pay homage to the **Father of the Nation Bangabandhu Sheikh Mujibur Rahman** who sacrificed his whole life for the nation and the betterment of the country people. I would also like to remember the martyrs of the Bangla Language Movement in 1952, the 1969 Mass Uprising, the Liberation War in 1971, the Bloodbath on 15 August 1975, the Four National Leaders on Jail Killing Day and the 1990 Mass Uprising. Here I would like to remind you that the **Father of the Nation Bangabandhu Sheikh Mujibur Rahman** built this Academy in 1974 for minimizing regional disparity through uplifting the socioeconomic condition of the marginalized people, particularly in north-western Bangladesh. RDA is

now working for achieving his dream **Sonar Bangla**. RDA always works as a team; and we feel proud to say 'RDA Family'. Thus, I want to show my heartfelt gratitude to all who worked hard for reaching RDA at its present position, including the former Directors General, former RDA faculty members and staff not only who are here but also who are not able to come here and join with us, particularly who left us forever. I pray for their souls to rest in peace.

### **Ladies and Gentlemen**

We all are fully aware of the ongoing Corona Virus COVID-19 pandemic situation. The whole world is going through economic crisis. People's lives and livelihoods have been hampered. Considering both global and national context, RDA authority has been taken necessary actions to control spreading the virus. The campus was on lockdown for around five months. I am sorry to inform you that the respected Director General of RDA second from the last Mr. Aminul Islam left us due to COVID-19. May his soul rest in peace. In addition, in total 51 RDA faculty members and staff were also Corona positive but with the blessings of Almighty Allah all have been recovered. Here I would like to inform you that before joining at RDA, I was also infected by Corona Virus and hospitalised. With the blessings of Allah, I am also recovering from it. However, we are trying our best to recover from that situation. RDA has been restarting its regular activities for last couple of months. Organising this APC is one of them.

### **Learned Participants**

It is a great privilege for me to welcome our today's Honourable Chief Guest, Special Guest, Guest of Honour and distinguished dignitaries in the 30<sup>th</sup> Annual Planning Conference of Rural Development Academy, Bogura. At the very inception, I would like to express my deepest gratitude to the respected Chief Guest, Special Guest and Guest of Honour for gracing this occasion with their kind presence and the distinguished delegates representing different organizations and disciplines to be here in this event to help us in formulating a forward looking action plan for the current financial year 2020-21 more meaningful.

I would also like to convey my warm gratitude to the Honourable **Prime Minister Sheikh Hasina** for giving special attention to our works. After judging our activities and dedication to the poor of the country, she asked us to build two more RDA like Academies at Rangpur and Jamalpur to ensure available services and supports to the extreme poor of those backward regions. Another Academy in Jashore is under approval process.

### **Respected Guests**

We have some successes in this tenure and have received national and international recognitions for our outstanding performances. We have already crossed four and half decades. Towards the endless journey of rural development, we like to be enlightened from you with valuable guidance and scholastic suggestions. Apart from the overcoming the losses due to COVID-19 pandemic, we will keep on our commitments, dedication and sincere efforts in the days to come for fruitful achievement of Sustainable Development Goals (SDG), 7th Five-Year Plan and the Election Manifesto of the present government. We all know about the main commitment of the manifesto – **'Amar Gram Amar Shohor'** [My Village My Town]. The dream of our beloved Honourable **Prime Minister Sheikh Hasina** is to provide all sorts of urban amenities at rural level. My energetic RDA colleagues conducted a holistic research work on this issue and the research report has been published. We presented the key findings of the research in a seminar in Dhaka in the

presence of Cabinet Secretary and other high government officials. I believe we have done our work; now it is the right time to take necessary action for implementing the recommendations of the research for achieving the dream of our Prime Minister.

The presence of renowned policymakers, professionals, researchers, trainers and academicians like you have made the conference more colorful and your judgments, thoughts, ideas will make it more meaningful one. I am pleased to inform you, particularly those who are here in the conference for the first time that, RDA is an autonomous body attached with the Ministry of Local Government, Rural Development and Cooperatives governed by the Board of Governors (BoG). The Honourable State Minister to LGRD and Cooperatives chairs the board and the Director General of RDA works as the Member Secretary. The mandated functions of RDA are to: (i) provide training to the government and non-government officials, public representatives, farmers, rural women and youths, social leaders, students and other practitioners, who are devoted in rural development activities; (ii) carry out research on rural development issues; (iii) conduct action research to evolve models for sustainable rural development; (iv) provide advisory and consultancy services for identifying problems and appropriate solutions; and (v) offer Post Graduate Diploma in Rural Development (PGDRD). This assembly is arranged to review the activities of the preceding fiscal year and chalk out a pragmatic action plan for the financial year of 2020-21.

### **Respected Participants**

In keeping with our vision to become a Centre of Excellence in the field of rural development, we continue to enhance our capacities, improve facilities and disseminate technologies. At present, we have eight Divisions and seven established Research Centres with strength of 304 personnel including 61 faculty members. Out of eight, four are service divisions such as Administrative Division, Training Division, Research and Evaluation Division, and Project Planning and Monitoring Division. Rest of them are academic divisions, namely Social Sciences Division, Agricultural Sciences Division, Rural Governance and Gender Division, and Farm Technology, Irrigation, Water Resource Management Division. The Centre for Irrigation and Water Management (CIWM) established in 2003 has been continuing its remarkable success in irrigation and water management from its inception. The other centres are:

- Char Development Research Centre (CDRC)
- Seed and Biotechnology Centre (SBC)
- Cattle Research and Development Centre (CRDC)
- Renewable Energy Research Centre (RERC)
- Community Development Centre (CDC)
- Palli Pathshala Research Centre (PPRC)

Equipped with all the modern amenities of urban life including Wi-Fi coverage, the Academy has a green campus of 120 acres of land offering facilities to cater national and international training, research and action research activities. Since inception till 30 June 2019, we have trained **609,796 persons including 166,048 females (27.23%)**, published **493 research reports and journal articles** and successfully completed **40 action research projects**. Apart from COVID-19 pandemic situation, RDA has taken some initiatives to celebrate **Mujib Borsho**. We planned

to distribute 100,000 fish fries (young fish) and 10,000 saplings. Meanwhile, we have distributed 42,000 fish fries and 27,000 saplings amongst the rural poor. We will continue to do so. Besides, we are working on to set up **Bangabandhu Corner** and **Bangabandhu Chair**.

We have developed a package of green innovations for addressing problems and sustainable solutions on rural development issues. The green innovations are:

- Low-cost DTW (Borehole) and its Multi-purpose use for livelihood improvement and sustainable rural development;
- SRI, AWD and Raised Bed technology for effective and efficient use of Water Resources in Agricultural Sector in Bangladesh;
- Community Based Multi-storied Rural Housing for restoration of agricultural land (Palli Janapad);
- Asset transfer for poverty reduction through livelihood improvement model
- Community Bio-Gas Plant for Production of Renewable Energy and Organic Fertilizer in Bangladesh;
- Multi-Storied Agriculture with Solar Powered Irrigation System;
- Women in Seed Entrepreneurship (WISE);
- Rural Plant Clinic;
- Trichoderma Enhanced Composting Technology;

RDA has been working relentlessly with many national and international partner institutions to contribute for achieving Sustainable Development Goals (SDG) as well as Seventh Five Year Plan (FY 2016-2020) and the Election Manifesto of the present government.

#### *Guest of Honor Ladies and Gentlemen*

Let me highlight some major activities within the mandated functional scope of RDA.

#### **Training Activities**

RDA has been keeping up its efforts on transferring skills and technologies through training programmes with modern know-how in horticultural nursery development, seed production and processing technology, plant tissue-culture especially for potato and strawberry production, agricultural product processing and marketing technology, livestock and poultry rearing, pisciculture technology, fruits and vegetables production, farm mechanics, plumbing and electrical applications, food processing, irrigation management, homestead gardening, cooperatives management, women in seed entrepreneurship, on-farm water management, beef fattening, organic manure production and marketing, silage production etc. All these courses will not only help generate self-employment by means of training the educated and semi-educated unemployed youth but will also help boost up production and economic empowerment directly or indirectly in rural areas.

The Academy has been arranging training for the representatives of the local government institutions, agri-business development and Char livelihood projects. As a new important trade in our training activities, we have included training on IGAs for women on processing, packaging and marketing of high-valued fruits and vegetables crops.

Apart from above, special foundation courses for BCS (Health) Cadre Officials and Regular BCS Foundation Training Course; field attachment courses for BCS officials belonged to different Cadres, visits/attachments of the students of different national and international universities to RDA such as University of Dhaka, Bangladesh Agricultural University (BAU), Mymensingh, Institute of Banglaesh Studies (IBS) - University of Rajshahi, Independent University of Bangladesh (IUB), Ghent University of Belgium and students coming from different universities of United States of America under Higher Education Consortium for Urban Affairs (HECUA) Programme, rural orientation as well as other collaborative courses jointly organized will be continued as before.

Last year we introduced skilled development trainings through 'Self-Help Group' approach in our training courses. Six trades based 45-day long training courses offered here at RDA campus. These trades are: housekeeping, driving, electrical, plumbing, hairdressing and handicrafts. In total 109 participants including 47 female participants were trained up. Here I would like to inform the learned audience that most of the participants of these trades are either self-employed or skilled manpower in job market. This year will continue this training approach. Besides, we are going to utilize the existing facilities of RDA, Rangpur and RDA, Jamalpur as training venues, particularly for trainings under development projects implemented in those areas.

#### **Respected Dignitaries**

In collaboration with Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur, RDA conducts Post Graduate Diploma in Rural Development (PGDRD) Course to create a cadre of rural development professionals through self-employment. Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur is the awarding authority. In 5th Batch, 21 students including seven female ones have completed their degree. Due to COVID-19 pandemic situation, we have not been started 6th batch. We are regularly communicating with BSMRAU and I do hope we will start PGDRD soon.

#### **Research and Action Research Activities**

The purposes of research works undertaken by the Academy have technical, practical and academic values that help in policy formulation of the state planners, policymakers, development partners and government agencies for the advancement in rural development sector. I have already mentioned about the research on 'Amar Gram Amar Shohor'. Besides, we are conducting two more research works on Aisle free integrated farming system and farm modernization. Chak Pathalia – a near village of RDA campus, is our research laboratory. We are implementing out green technologies as pilot basis.

Action research activities aim to address rural problems and evolve models for sustainable solutions. Since its establishment, RDA has developed some unique models in the field of water resources developments and agricultural seed sectors through carrying out action research. The models are: RDA-developed Low-cost Deep Tube Wells (DTW); Buried Piped Irrigation System for Command Area Development; Rural Piped Water Supply System; Arsenic Treatment Plant; Multiple use of DTW Water for Rural Livelihood Improvement; Asset Transfer Model for Poverty Reduction through Livelihood Improvement; Maria Model for Seed Preservation; and Women Initiatives in Seed Business.

RDA is implementing a number of Annual Development Programmes (ADP) funded projects such as:

- i. Action Research Project on Construction of Co-operative based Low-cost Multistoried 'Palli Janapad' Housing for Restoration of Agricultural Land and Maximization of Organic Manure;
- ii. Action Research Project on Extension and Dissemination of Modern Water Saving Technologies and Management Practices to Increase Crop Production;
- iii. Establishment of Rural Development Academy at Rangpur;
- iv. Establishment of Rural Development Academy at Jamalpur;
- v. Livelihood Improvement of the Poor People in the Char Islands of Sariakandi and Sonatola Upazilas under Bogura District (LIP Project);
- vi. Action Research Project on Disseminating Two-storied Agriculture with Solar Power Irrigation Technology and its Multi-purpose Uses;
- vii. Comprehensive Village Development Programme (CVDP)- 3rd Phase RDA Part; and
- viii. Project on Poverty Reduction of Marginalized People of Kurigram and Jamalpur Districts (KAJ Project).

Besides, one jointly funded projects are also going on - SAARC SDF funded Livelihood Enhancement of the small farmer in SAARC region through small scale agro-business focusing on value chain development. Another recent completed project is Making Markets Work for the Jamuna, Padma and Teesta Chars (M4C) 2nd Phase jointly funded by GoB and SDC.

The "Palli Janapad" is the prioritized project of our Honourable Prime Minister. In the project area there will be the accommodation of 272 families in a common tower with all modern urban facilities. We believe it will create a positive impact on prevention of our fertile agricultural land from those who are planning to construct their house here and there. The "Palli Janapad" will be a zero waste building. The project has drawn keen interest by the Prime Minister and other policy planners. Initially, "Palli Janapad" will be constructed in one village of seven divisions as pilot basis. Palli Janapad at Rangpur site is almost ready to allocate the flats to the project beneficiaries.

RDA is also one of the proud initiators and implementer of Comprehensive Village Development Program (CVDP), the 3rd phase of this programme has already been started. Char People are more vulnerable in all respect as the sandbars are isolated from the main land. A project in the name of Making Markets Work for the Char (M4C) has been implemented by the Academy in collaboration with Swiss contact to intervene the better market access with the mainland.

To minimize power consumption and popularize renewable energy sources, RDA conducted research on two-storied agriculture with solar powered irrigation system. Where the base crop is rice and creeper type vegetables are producing in second layer without hampering the production of rice with 200% cropping intensity and harvesting solar power from the top for pumping irrigation water. RDA is planning to disseminate this result for addressing the food security. In this regard an action research project has already been started to implement.

RDA is implementing a project titled "Livelihood Improvement of the Poor People Live in Char Island of Sariakandi and Sonatola Upazila under Bogra District" with incorporating the findings of Chars Livelihoods Programme (CLP). Recently two other action research projects titled "Disseminating Two-storied Agriculture Technology through Solar Power Irrigation and its Multipurpose Use" and "Poverty Reduction of Marginalized People of Kurigram and Jamalpur Districts" are implementing at field level.

Apart from these, some other projects proposed by RDA are in the process of approval. These are:

- i. Action Research Project on Sustainable Livelihood Improvement and Women Empowerment through RDA-Developed Women in Seed Entrepreneurship (WISE) Model;
- ii. Project on Strengthening of physical facilities through Capacity building of RDA, Bogura;
- iii. Action Research Project on Sustainable Socio-economic Development of Rural Farmers Through Farm Mechanization with Cost Saving Integrated Agricultural Technologies;
- iv. Action Research Project on Creation of Entrepreneurship and Employment Generation through Skill Development;
- v. Establishment of Rural Development Academy (RDA) at Jashore;
- vi. Project on Solar based Livelihood Improvement and Enlightened Village;
- vii. Action Research Project on Strengthening and Expansion of Cattle Research and Development Centre under RDA, Bogura;
- viii. Project on Establishment of Most. Amina Begum Rural Development Training & Research Center at Barishal;
- ix. Action Research Project on Community Based Livestock and Waste Management for Better Livelihood;
- x. Action research project on converting municipal dumping ground waste into asset using environmental friendly Trichoderma technology; and
- xi. Making Markets Work for the Chars (M4C) Phase- 2.

#### **Distinguished Delegates**

Now let me share some recent remarkable achievements of RDA in the partnership approaches to the field of rural development.

- i. RDA has signed an MoU with African-Asian Rural Development Organization (AARDO) to organize a regular international training programme at RDA. The theme of the training course is "Green Innovation in Agriculture and Rural Development".
- ii. Another MoU also signed with National Institute of Rural Development and Panchayati Raj (NIRDPR), Hyderabad, India, to exchange and share technologies for mutual benefits of the two countries.
- iii. An MoU has been signed with six organizations like DANIDA, JICA, UNCDF, USAID, World Bank, UNDP for strengthening local government institutions.
- iv. MoUs has also extended with different organizations namely SDC, Katalyst, Innovation, VSO international Bangladesh, International Development Enterprise (IDE), ACI Seeds, Limra Pvt. Ltd. Supreme Seed, Getco Agro Vision etc. for conducting joint research and quick extension through Public Private Partnership (PPP).
- v. RDA in collaboration with Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU) has launched a one year Post Graduate Diploma in Rural Development (PGDRD) course. Five batches have already completed successfully. The programme has planned to extend to international participants soon.

- vi. RDA in collaboration with Cornell University of USA has conducted a joint research project on Water Saving through Raised Bed Technology. This technology can save approximately 42% of irrigation water, increase 7% yield and reduce 20% nitrogen fertilizer of Boro rice.
- vii. A laboratory has been set up for carrying out research study on Trichoderma (beneficial fungi) and its application in the soil for improving fertility and control plant diseases.
- viii. Making Markets Work for the Jamuna, Padma and Teesta Chars (M4C) Technical Assistant Project is being implemented with a cost of Tk. 616 million by RDA along with Swisscontact to reduce poverty and vulnerability of Char-dwellers by facilitating better access of people to markets and improve business services.
- ix. Chars Livelihoods Programme (CLP) aiming to uplift two million people in the project areas out of under poverty by 2016. The project having substantial contribution making good impact on the overall well being of the char population. RDA took over the lead with its active participation and establishing a Char Development Research Centre (CDRC) to go forward with those project activities.
- x. RDA has launched an action research project on 'Improving Public Services through TQM' sponsored by JICA Bangladesh and technically assisted by BPATC.
- xi. RDA has already a strategic plan in collaboration with SDC to move forward with its mission, manpower and other resources in full strength.
- xii. RDA has a unique demonstration farm with eight units which are used as practical ground for training, research and action research.

#### **Distinguished Participants**

RDA is dedicated to discovery and innovation to new ideas and new ways to work. This commitment yields long lasting solutions solving the problems that have shaped RDA's reputations as rural development leader and created opportunities to attain national and international recognitions. RDA has received many awards and recognitions. Some of the foremost awards are:

#### **Independence Award 2004**

(for Irrigation command areas development, innovation of multipurpose use of Deep Tube-Well, arsenic free safe water supply and technical protocol for hybrid maize seed development)

#### **International Communication Award 2004 from IVCA, London**

(for developing effective women to women extension model)

#### **Bangabandhu National Agricultural Award 1415 (2010) Gold Medal**

(for developing environment friendly technology in agriculture)

#### **Bangabandhu National Agricultural Award 1417 (2011) Silver Medal**

(for creating awareness in rural communities)

#### **AARDO Award 2012**

(for outstanding contribution in the field of rural development)

#### **HSBC – The Daily Star Climate Award 2011**

#### **Flame Asia 2015 and so on.**

#### **Respected Dignitaries**

All these recognitions remind us the contribution and intelligent guidance of our former directors general and colleagues of RDA since its inception. I would like to humbly acknowledge all of them and their contribution as well.

#### **Learned Participants**

Every institution confronts many challenges, crisis, up and down in its way. We here at RDA are fully aware of challenges needed to be addressed in ongoing COVID-19 pandemic context. We have taken a well thought-out effort to overcome the challenges apart from adopting a strategic plan which will transform us into a sustainable entity and help us to meet the demands of the next 50 years. We started working through some iconic projects like CLP, M4C, LIP and KAJ Project for the Char people who are regularly affected by severe floods and river erosion and their livelihoods are hampered. Our satisfaction lies in the smile of two million Char dwellers who now have three meals in a day. The challenge is not over yet. Apart from the coastal and Haor areas, still four million Char dwellers on river islands in Padma-Jamuna-Meghna river basin have not been covered by any significant government package to uplift their lives and livelihoods. Besides, we need to work for ensuring quality education and healthcare services towards the Char people. And I do hope RDA will take effective initiatives to address those sectors.

#### **Dear Participants**

Surely, we have not been able to provide all the services to your expectation level. But I can assure you that there is no dearth of sincerity and cordiality from our part. I would like to urge upon you all to take this Academy as your own institution and forgive us for our limitations with your generosity.

Again I express my heartfelt gratitude to all of you once again to attend this conference. I also express our deep thanks to our Chief Guest, Special Guests and all my fellow colleagues who have worked hard for making this APC a success one.

I would like to say that the world is changing rapidly and we should consider what we are facing for last few months. RDA wants to properly keep up with all these changes and prepare itself to serve the best for the poor people and thereby the nation. RDA cannot work alone. We should work together as a team. Your meticulous guidance and cooperation would go a long way to make that happen. Finally, let me wish your stay with us at RDA be pleasant, precious, and mutually beneficial for all of us.

Thank you very much for your patience hearing.

Bangladesh Chirojibi Hok [May Bangladesh live forever].

# ANNUAL PLAN 2020-21

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# CHAPTER 1



## ANNUAL TRAINING PLAN 2020-21



## 1.1 Introduction to RDA training

Training is one of the mandated functions of Rural Development Academy (RDA), Bogura. It provides training to the employees from nation building departments, public representatives, NGO workers, cooperators and farmers with a view to creating a cadre of professionals in the field of rural development. Since its inception in 1974 the academy has been working relentlessly towards human resources development in rural development through training.

## 1.2 Categories of training course

The wide variety of training and related programs of RDA are classified into following broad categories

- Skill Development Training
- Management Training
- Foundation Training Course (FTC)
- International Training
- PGDRD
- Internship
- RDA Technology Extension
- Seminar/ Workshop

## 1.3 Training proposals for 2020-21

Faculty members of RDA have proposed 39 courses in 66 batches (Annex-1), Under the category of joint-sponsored training courses, four categories of training courses have been proposed by different organizations (Annex -2). Based on the experience gained over the years, it may well be mentioned that more courses will have to be incorporated in this category as the year progresses.

## 1.4 Observations

RDA has started providing skill development training courses for unemployed rural youths and the project beneficiaries since its inception for the socio-economic development of the rural people. In course of time, some new avenues for training have gradually been found and on the basis of training need analysis RDA has started capacity building and entrepreneur development training in different fields, e.g. driving, plumbing, electrical, home management, agro product and food processing, organic bio fertilizer preparation; *Trichoderma* production, indigenous poultry bird rearing, farm mechanization, water saving technology, renewable energy and plant tissue culture etc.

With the construction and modernization of training and accommodation facilities of the Academy, the demand for RDA as a training venue has been increased in manifold. Linkages with the relevant national and international organizations like LGED, MoPA, BBS, BRDB, DAE BPATC, NAEM, PKSf, BAU, IUB, DU, BUP, UZGP, CLP, IRRI, M4C, CIRDAP, IBS-RU, KU, BSMRAU, JICA, SAC etc. have been established for continuously holding training programmes at the Academy. For



better management and service facilities of training venue, hostel and cafeteria RDA has oriented digital booking system of public service components which ultimately leads to highest loaded capacity and quality of services.

**Table 1.1: Target of training activities during 2020-21**

Sl. No.	APA targeted training category	No. of persons
1	Training on income generating activities	4080
2	Motivational training	5700
3	Seminar/ Workshop	24
4	Training for officials, public representatives and NGO workers	500
5	Training on income generating activities	1600

## Annex- 1

### 1.5 Training proposals for 2020-2021

**Table 1.2: Proposal of RDA financed training for 2020-2021**

No	Title of Training Course	Name of Faculty	Number of Participants	Duration (Days)	Number of Batch	Mode of Training	Target Participants
1	Online teaching tools and techniques for secondary school teachers	Md. Tanbirul Islam, Deputy Director	30	5	2	Online	Teachers of RDA Lab School and College, Bogura
2	A Daylong Seminar on Role and Impact of RDA-Credit for Poverty Reduction	Md. Mazharul Anowar, Deputy Director	40	1	1	Online	RDA Faculty Members and RDA-Credit Facilitators, APO and PO
3	Farm Mechanization through Modern Agricultural Equipments	Md. Abid Hossain Mridha, Deputy Director	25	5	3	Offline	Beneficiaries (Farmers), operators ( power tiller, tractor, combined etc.), Skilled labour etc.
4	Prospects and Challenges to Increase Income of Union Parishad	Maruf Ahmad, Assistant Director	28	2	2	Offline	UP Representatives (Chairman, Members) and UP Secretary
5	Leadership Development Program for Union Parishad Members	Maruf Ahmad, Assistant Director	28	2	2	Offline	UP Representatives (Chairman and Members) and UP Secretary

No	Title of Training Course	Name of Faculty	Number of Participants	Duration (Days)	Number of Batch	Mode of Training	Target Participants
6	Training on Good Governance for the Teachers and Staff of selected school and colleges (NIS)	Dr. Md. Nurul Amin, Director (Rural Governance and Gender Division)	50	1	3	Offline	Teachers and staff of selected school and colleges
7	Training Course on Job Responsibilities of Project Employees at RDA, Bogura (NIS)	Dr. Md. Nurul Amin, Director (Rural Governance and Gender Division)	50	1	3	Offline	Project Employees at RDA, Bogura
8	Entrepreneurship Development through Food Processing, Preservation and Marketing	Md. Abdul Alim, Assistant Director	30	12	3	Offline	Participants from our different development project (male/female), Unemployment people, Students.
9	Poverty Alleviation and Creation of Small Entrepreneurship through Milk based Products Processing, Preservation and Marketing	Md. Abdul Alim, Assistant Director and Md. Ferdous Hossain Khan, Director	30	5	1	Offline	Participants from our different development project of RDA (Male/Female), Unemployment people, Rural Youth.
10	Adoption of conservation agriculture technologies for sustainable rural development	Md Abdul Kader, Assistant Director	40	2	2	Offline	Scientist and extension workers in the field of agriculture and rural development
11	Research capacity development of RDA faculty	Md Abdul Kader, Assistant Director	25	1	1	Offline	RDA faculty member and academician
12	Training course on Commercial Nursery and Orchard Management	Md. Khalid Aurongozeb, Joint Director and Rebeka Sultana, Deputy Director	20	10	1	Offline	Unemployed Youth, Small nursery owners (Male and Female)
13	Training course on Char Suitable Climate Resilient Agricultural Technologies	Md. Abdul Majid Pramanik, Joint Director	40	3	2	Offline	Char dwellers of RDA Project Areas
14	Skill development training ( Self Help Group)	Dr. Md. Abdul Majid, Joint Director	160	45	1	Offline	Young aged unemployed people's who are interested to be an entrepreneur.

No	Title of Training Course	Name of Faculty	Number of Participants	Duration (Days)	Number of Batch	Mode of Training	Target Participants
15	Training course on Safe Pest Management through Rural Plant Clinic Establishment	Md. Khalid Aurangozeb, Joint Director	30	4	1	Offline	Progressive Male and Female farmers of RDA Projects Areas
16	Women in Seed Entrepreneurship using Maria Model	Rebeka Sultana, Deputy Director	40	3	2	Offline	Women farmers and their family head of RDA Project Area
17	Production Techniques and marketing of Medicinal Plant	Abdullah Al Mamun, Director (Agricultural Sciences Division) and Rebeka Sultana, Deputy Director	25	3	1	Offline	Interested youth and farmers
18	Training course on commercial safe fruit and vegetable production	Md. Khalid Aurangozeb, Joint Director and Rebeka Sultana, Deputy Director	25	4	1	Offline	Progressives farmers, Local Leader, Traders
19	Income Generation and Poverty Reduction through Plant Tissue Culture Techniques	Md. Mizanur Rahman, Director (SBC), Md. Asaduss Zaman, Deputy Director	10	5	1	Offline	Farmers, unemployed youths, students
20	Income Generation and Poverty Reduction through Mushroom Production	Md. Mizanur Rahman, Director (SBC), Md. Asaduss Zaman, Deputy Director	15	5	1	Offline	Farmers, unemployed youths, students
21	Income Generation and Poverty Reduction through Trichoderma Technology	Md. Mizanur Rahman, Director (SBC), Suvagata Bagchi, Deputy Director	15	5	1	Offline	Farmers, unemployed youths, students
22	Awareness Building Anti-Drug & HIV AIDS	S M Mohammad Ali, Librarian	30	4	1	Offline	Teachers of school, college and madrasa, representative union parishad and local leaders.
23	Training on Organic Fertilizer Production, Processing and Marketing	Suvagata Bagchi, Deputy Director	30	5	1	Offline	Compost user farmers, youth entrepreneur, SAAO, participants of ABAK, Karitas etc,

No	Title of Training Course	Name of Faculty	Number of Participants	Duration (Days)	Number of Batch	Mode of Training	Target Participants
24	Daylong Seminar on Present Situation and Effectiveness of Centers of RDA and Find out Way Forward	Md. Mazharul Anowar, Deputy Director	45	2	1	Offline	Faculty Members of RDA, Bogura
25	e-Filing operation system	Sk. Saeem Ferdous, Deputy Director	25	2	1	Offline	RDA Staff
26	Livestock Rearing and Primary Treatment	Dr. Samir Kumar Sarkar, Director (Training); Dr. Muhammad Riazul Islam, Deputy Director and Dr. Sultana Fizun Nahar, Assistant Director	30	30	1	Offline	Educated unemployment rural youth
27	Empowerment of Rural Women Through Community Based Indigenous Poultry Rearing	Abdullah Al Mamun, Director (Agricultural Sciences); Dr. Muhammad Riazul Islam, Deputy Director; Dr. Sultana Fizun Nahar, Assistant Director	30	3	3	Offline	Unemployment poor and marginalized rural women
28	Training Course on Artificial Insemination Technician	Dr. Samir Kumar Sarkar, Director (Training); Dr. Muhammad Riazul Islam, Deputy Director; Dr. Sultana Fizun Nahar, Assistant Director	30	21	1	Offline	Educated unemployed rural youth
29	Training on Innovation in Public Service Delivery	Sheikh Saeem Ferdous, Deputy Director and Innovation Team	25	1	4	Offline	
30	Awareness building on EVE-Teasing for SSC and HSC students of Selected Schools and Colleges in Rural Areas	Maupiya Abedin, Assistant Director	100	2	2	Offline	SSC and HSC students of selected schools and colleges in rural areas
31	Design and Implementation of Evaluation Research	Dr. Md. Shafiqur Rashid, Joint Director	20	2	1	Offline	RDA Faculties

No	Title of Training Course	Name of Faculty	Number of Participants	Duration (Days)	Number of Batch	Mode of Training	Target Participants
32	Database Management	Dr. Md. Shafiqur Rashid, Joint Director	10	2	1	Offline	Selected RDA Faculties and Staff of Training Division
33	Fish culture by biofloc technology	Macksood Alam Khan, Joint Director; Md. Ashraful Alam, Assistant Director	30	5	1	Offline	Rural unemployed youth
34	Dissemination of modern fish culture technology	Macksood Alam Khan, Joint Director; Md. Ashraful Alam, Assistant Director	40	5	1	Offline	Rural unemployed youth
35	Business managerial skills development	Shamal Chandra Hawlader, Deputy Director Md. Monirul Islam, Assistant Director	50	7	6	online	Small Scale Entrepreneurs
36	Training on Bookkeeping and Financial Management	Shamal Chandra Hawlader, Deputy Director	30	5	2	Offline	RDA employee/ project staff/ Small Scale Entrepreneurs
37	Better Office management system through Google Cloud	Sk. Saeem Ferdous, Deputy Director	20	2	1	Offline	RDA Staff
38	Operation of Rice Transplanter for Entrepreneurship Development & Poverty Reduction	Ferdous Hossain Khan, Director	10	7	2	Offline	Rural farmers and unemployed youths
39	Research methodology	Dr. Mohammad Munsur Rahman Director	25	5	1	Offline/ Online	RDA Faculty Member
<b>Total =</b>			<b>1336</b>	<b>234</b>	<b>66</b>		

## Annex-2

Table 1.3: Proposal from other organization (joint-sponsored) courses for 2020-2021

Sl. No.	Title of the Courses	Sponsor	No. of Batch	No. of Participants	Duration (day)	Type of Participants
1	Training courses under Upazila Governance and Development Project (UGDP)	RDA, UGDP	45	1620	3	Upazila level officials and public representatives
2	Training courses under Livestock and Dairy Development Project (LDDP)	RDA, LDDP	30	900	5	Officials under LDDP, DLS
3	RDA Attachment Programme for the Officers of BCS Foundation Training Course	RDA, BPATC, BARD, BCSAA, BIAM, NAEM etc.	20	1000	5	Officers of BCS Education Cadres
4	71 <sup>st</sup> Foundation Training Course	RDA, BPATC, MoPA	1	30	180	BCS Cadre Officials
<b>Total =</b>			<b>96</b>	<b>3550</b>	<b>-</b>	<b>-</b>

## CHAPTER 2



## ANNUAL RESEARCH PLAN 2020-21



## 2.1 Introduction of RDA Research

Research is one of the mandatory functions of RDA. It conducts research on rural problems and find out appropriate solutions for wellbeing of the rural people. The purposes of research studies undertaken by the Academy have technical, practical and academic values that help in policy formulation of the national planners, policy makers, development partners and government agencies for the advancement of rural development sector. It helps the rural people developing innovative models through contributing technical knowledge and acquiring practical experiences. Further, research-identifies the problems and prospects of rural livelihoods, Provides the planners and policy makers with new inputs and information in respect of poverty reduction and development programmes, Utilises the findings of research projects in developing training materials and disseminates to the rural people, Formulates action research strategies on the basis of research findings, and ensures gradual enhancement of the faculty members of RDA in their respective fields of specialisation.

Research always starts from a problem identification. The nature of the problem varies from one event to another, and to find out the probable solutions it needs to be examines. Research is oriented toward seeking answers and the purpose of research is to discover answers to the questions through the application of scientific procedures. The faculty members of RDA generally involve themselves in different processes of research activities that start from the preparation of research proposal to the submission of final report for publication. Research and Evaluation Division of RDA always assist them in conducting research projects smoothly. RDA has been doing that business since its inception. During the last four decades RDA has earned commendable achievements in conducting research and the number of completed research is 466. In order to facilitate wider dissemination of the findings of the researche projects, the Executive Summary of RDA Research Publications- Volume I, II, III and IV containing 245 articles are brought out by the Academy. These volumes will give the glimpses of Research highlights conducted by the Academy and pave the path of rural development and strategic plan of RDA.

## 2.2 Research activities

Research is one of the main activities of the Academy. The main objectives of the research activities are to improve the quality of life of rural population, identify various problems and possibilities of rural development, assist in the development of sustainable agriculture and environmental friendly technology, and determine the strategies of technical research based on the findings. In addition, the results of the research are also used in the preparation of training materials. Research projects are conducted with the aim of national rural development policies, poverty alleviation strategies, socio-economic development, agricultural development, environmental protection, etc. Through these research activities, not only the rural development but also provide assistance and advice to the policy makers and researchers who are involved in rural development process. Apart from these, the Division works on ensuring or developing technical skills of the Faculty Members in their respective fields of specialisation.

## 2.3 Research themes

**Sustainable Development Goals (SDGs):** Extreme poverty and hunger alleviation, basic education for all, gender equality and empowerment of women, reducing infant mortality, maternal health development and environmental protection etc.

**Socio-economic Development:** Micro credit, skill development, good governance, e-governance, gender development, institutional development, social empowerment, safe drinking water and sanitation, comprehensive village development, cooperative development, quality education, health and nutrition, population and family planning, development of backward and marginalised communities, human resource development, rural economy, accounts, demography, public administration, rural sociology, social work including social safety net programmes and so on.

**Agricultural Development:** Crop diversification, irrigation and water resources management, poultry and dairy management, fisheries development, nursery/ home gardening, animal health care, agricultural machinery, hybrid technology, seed technology, food processing and agribusiness, agricultural marketing, soil and land development, conventional agriculture, horticultural crops. Agricultural expansion, ICT based agricultural management, agricultural economy, and so on.

**Environmental Protection and Development:** Social forestry, safe water, elimination of arsenic problems, disaster risk management, climate change mitigation and adaptation, integrated pest management, enhancement of organic farming and soil fertility, biogas technology, varieties of crocodile crops, salt tolerance and saline cultivation in coastal areas, and so on.

## 2.4 Research area based classification

In addition to the above mentioned themes, the faculty members of RDA conducted a total of 493 research projects on 20 thematic areas from the year 1975 to 2020. Table 2.1 gives year-wise distribution of research projects according to thematic areas conducted by RDA. The table shows that the highest number of researches (142) was impact/ evaluation studies, followed by the studies on social issues (54), agricultural engineering (27) and gender aspects (30), etc.

**Table 2.1: Year-wise Area of Research (1975-2020)**

Sl. No.	Thematic Areas	1975-85	1986-96	1997-2007	2008-18	2019-20	Total
1.	Socio-economic/ social/ economic	20	14	5	12	3	54
2.	Fisheries	1	1	4	14	3	23
3.	Impact/ evaluation studies	47	26	26	40	3	142
4.	Baseline survey	2	4	4	3	-	13
5.	Agricultural crop	8	2	16	35	2	63
6.	Agricultural engineering	9	4	9	5	-	27
7.	Cooperative	4	8	7	4	-	23
8.	Feasibility study	3	-	1	9	3	16
9.	Ethnographic studies	1	-	-	-	-	01
10.	Gender issues	3	6	9	9	3	30
11.	Local government	1	6	4	12	1	24

Sl. No.	Thematic Areas	1975-85	1986-96	1997-2007	2008-18	2019-20	Total
12.	Environmental issues	-	8	2	6	-	16
13.	Comparative analysis	-	3	1	-	-	04
14.	Education	-	2	1	1	1	05
15.	Documentation	-	1	1	7	-	09
16.	Public health	-	2	9	4	-	15
17.	ICT	-	1	-	7	-	08
18.	Livestock	-	-	7	6	1	14
19.	Food and nutrition	-	-	-	2	-	02
20.	Accounting	-	-	-	1	-	01
21.	Others	1	1	-	1	-	03
<b>Grand Total =</b>							<b>493</b>

Source: RDA Research Souvenirs (Vol.1, 2, 3, and 4; Annotated Bibliography of RDA Publication along with Official Record).

## 2.5 Responsibilities of the Research and Evaluation Division

Research and Evaluation Division of the Academy is involved in different processes of research activities that start from the preparation of research proposal to the submission of final report for publication. For this purpose, this division has a permanent section of 15 skilled staff of four categories: Research Supervisors, Tabulators, Evaluation Assistants and Research Investigators. As a service division of the Academy, Research and Evaluation Division provides advice and services to the researchers in preparing research proposal, collecting, processing and tabulating primary data and maintaining appropriate review and edit process of research studies by the internal and external reviewers and editors before submitting the final reports for publication.

The progress of research projects is monitored regularly by the Research Division as well as by the Research Committee, which consists of the learned Faculty Members of different disciplines. Research Committee recommends the research proposal with estimated budget after reviewing by the committee members. According to the recommendation given by the committee, the Director General approves the research proposal with competitive budget. The status of annual research plan is also reviewed in the meetings of the Research Committee chaired by Director (Research and Evaluation). Besides, the Faculty Council of RDA regularly reviews the progress of ongoing research projects in its monthly review session. At the time of the Board of Governors' meeting, the status of the research projects is also reported. The progress of the research projects is also submitted to the Director General. Research Division helps to process and publish the research reports after being reviewed and edited by the internal or external reviewers and editors.

## 2.6 Research plan for 2020-2021

For the year 2020-21 the Faculty Members have proposed 17 research proposals considering the national priority, SDGs and Govt's priorities. The proposed titles are shown in Table 2.2. The details of research proposal are shown in Annex-1. Moreover, there is also scope for inclusion of new research projects in the plan whenever any new idea generates from the Faculty Members or any request is received from national or international agencies.

**Table 2.2: Proposed Research Projects (2020-2021)**

Sl. No.	Title	Researchers
1.	Knowledge Exposure and Practices of School Going Children towards COVID-19 that Secured to Unlocking the Schools in Rural Setup	Md. Abdul Alim Md. Ferdous Hossain Khan
2.	Small & Medium Entrepreneurship Development through Value Addition of Jackfruit as Chips	Md. Abdul Alim Md. Ferdous Hossain Khan Monirul Islam
3.	COVID-19: Technology adoption behavior towards online teaching methods of secondary school teachers' in Bangladesh	Asim Kumar Sarker
4.	Feasibility study of the freshwater prawn ( <i>Macrobrachium rogenbergii</i> ) culture in biofloc system	Md. Ashrafal Alam, Macksood Alam Khan
5.	Identification of Existing Cropping Pattern in Char land areas and Generalization of Crop Rotation Decisions	Dr. Md. Abdul Majid Rebeka Sultana Noor Muhammad
6.	Precision of irrigation water for upland crops under conservation tillage and mulching management	Md. Abdul Kader Md. Ferdous Hossain Khan
7.	Rural Development Reconsidered: A COVID-19 Effect on Workers' Migration in Bangladesh	Dr. Md Shafiqur Rashid
8.	Evaluate the Characteristics of Building Blocks in Comparison to Traditional One (Bricks)	Ferdous Hossain Khan
9.	Fish farmer's practices for the management of common problems and diseases: A study of freshwater pond aquaculture in northern Bangladesh	Macksood Alam Khan, Md. Ashrafal Alam, Sayed Abdus Sadik Ahnaf Tahmid, Abu Bin Azad, Dr. Md. Harunur Rashid
10.	Prospects of Commercial Soybean Cultivation in Char area of Jamuna River Basin	Abdullah Al Mamun Md. Khalid Aurangozeb Rebeka Sultana
11.	Public-Private Partnership for Agribusiness Development in Bangladesh: A Step towards Sustainable Agriculture	Maruf Ahmad Naznin Islam
12.	Social Safety Net Programmes to Fight against Pandemic in Bangladesh: A Study on Some Selected Union Parishad in Bangladesh	Maruf Ahmad Jannatul Fedous
13.	Protocol development for disease free plantlets production of local banana ( <i>Musa spp.</i> ) cultivars through micropropagation	Md. Mizanur Rahman Md. Asaduss Zaman
14.	A new Applicable model towards Rural e-Commerce: Rural Women e-Commerce School to Expand Rural e-Entrepreneurship based on Rural Traditional Products in the Network Economy	Monirul Islam Shamal Chandra Hawlader Dr. Mohammad Munsur Rahman, Dr. Hasneen Jahan
15.	Sequestration Trial of Biochar as an Exceptional Bioresource Energy for Enhancing Soil Productivity in Rice	Noor Muhammad

Sl. No.	Title	Researchers
16.	In COVID-19 pandemic situation the Role of ICT in the education system in Bangladesh (A case study in the northern part in Bangladesh)	Sk. Saeem Ferdous
17.	Existing situation and Future challenges of Micro-Credit Programmes for Poverty Reduction towards Government and Non-government Organizations in the Northern region of Bangladesh: An Comparative Analysis	Md. Mazharul Anwar

**Annex-1****1. Knowledge Exposure and Practices of Rural School-going Children against COVID-19**

*Md. Abdul Alim (Assistant Director)*  
*Md. Ferdous Hossain Khan (Director)*

**Background of the Study**

A greater part of morbidity and mortality in developing countries is recognized to communicable diseases and 31% of all deaths in Southeast Asia are caused by infectious disease. Poor health among school children is the results from lack of consciousness of the health benefits of personal hygiene (Sachan B et al; 2012). Lack of proper hygiene and sanitation services increases burden of communicable diseases among developing countries (Vivas AP et al; 2010).

Previously many of the research conducted about hand hygiene indicated that children with proper hand washing practices are less likely to report gastrointestinal and respiratory symptoms. Previous reports suggests that hand washing with soap reduces morbidity due to diarrheal diseases by 44% and respiratory infections by 23%. WHO reports that every year, 3.8 million children aged less than five die from acute diarrheal diseases and acute respiratory tract infections. Globally, 88% of diarrheal deaths are associated with use of unsafe water, inadequate sanitation and poor hygiene practices (Pati S et al; 2014).

Communicable diseases are one of the most common problems faced by school going children. Use of contaminated or unsafe water, poor sanitation and poor hygienic practices are the primary causes of infections. Lack of personal hygiene along with poor sanitation practices usually favors human-human transmission of infection. Hence, Infection and malnutrition becomes a vicious circle and affects physical development of children adversely (Sarkar M, 2013).

Safely managed sanitation and hygiene services are an essential part of preventing and protecting human health during infectious disease outbreaks, including the current COVID-19 pandemic. Good sanitation and hygiene services along with waste management practices, that are consistently applied, serve as barriers to human-to-human transmission of the COVID-19 virus in homes, communities, health care facilities, schools, and other public spaces (World Bank, 2020). Safely

managed sanitation and hygiene services are also critical during the recovery phase of a disease outbreak to mitigate secondary impacts on community livelihoods and wellbeing. These secondary impacts—which could include disruptions to supply chains, inability to pay bills, or panic-buying—have negative impacts on the continuity and quality of water and sanitation services, the ability of affected households to access and pay for sanitation and hygiene services and products (for instance, soap, point of use water treatment or menstrual hygiene products) and the ability of schools, workplaces and other public spaces to maintain effective hygiene protocols when they re-open. If not managed, secondary impacts can increase the risk of further spreading water borne diseases, including potential disease outbreaks such as cholera, particularly where the disease is endemic (World Bank, 2020).

### Justification of the Study

Current evidence indicates that the COVID-19 virus is transmitted through respiratory droplets or contact. Contact transmission occurs when contaminated hands touch the mucosa of the mouth, nose, or eyes; the virus can also be transferred from one surface to another by contaminated hands, which facilitates indirect contact transmission. Consequently, hand hygiene and sanitation are extremely important to prevent the spread of the COVID-19 virus. It also interrupts transmission of other viruses and bacteria causing common colds, flu and pneumonia, thus reducing the general burden of disease.

Frequent and correct hand hygiene is one of the most important measures to prevent infection with SARS-CoV-2. WASH (water, sanitation and hygiene) practitioners should work to enable, inform and motivate more frequent and regular hand hygiene by building a supportive environment to improve and sustain access to hand hygiene facilities and by using a multimodal strategy (refer to hand hygiene practices) to support good hand hygiene behavior. Performing hand hygiene at the right time, using the right technique with either alcohol-based hand rub or soap and water is critical. Existing WHO guidance on the safe management of drinking-water and sanitation services also applies to the COVID-19 pandemic. Many other infectious diseases can be prevented and health co-benefits realized by safely managing water and sanitation services, and by applying good hygiene practices and waste management.

We often consider that school is a place where a child spends most time of his childhood at school after home. Schools are important places in their lives since they provide an environment for development of skills, intelligence, which can help them to achieve their potential goals and develop as a good human being (Sunitha S et al; 2014). Research tells us that schools can have a major effect on children's health, by promoting healthy behaviors among them (Mhaske MS et al; 2013, Deb S et al; 2010). Hence this study aims at assessing knowledge exposure and attitude on hygiene and sanitation of school going children against covid and post covid health security that secured to unlocking the school in rural setups.

### Research Objectives

1. To identify the present knowledge and practice on hygiene & sanitation of school going children.
2. To evaluate the present knowledge on social distancing and personal hygiene that effect on Covid-19.

3. To assess the present knowledge on sanitizer using among school going children to protect Covid-19.

### Methodology

#### Area of study

The study will be conducted at Sherpur and Sahjahanpur upazila of Bogura district. The studies areas will be selected where covid-19 affected largely and we want to focus school going children knowledge and attitude on hygiene & sanitation which will help us to understand the current scenario as well as how to stop community transmission of corona virus due to poor hygiene and sanitation system.

#### Study Design and Study Period

The study will be a descriptive cross-sectional study, which will be focused on present knowledge and attitude on hygiene & sanitation of school going children and evaluate the present scenario of hygiene & sanitation among school going children. It is also helps us to build awareness among school going children through peer counseling and community mobilization for ensuring healthy society and unlocking the schools.

Total duration of the study will be 1 (one) year from July, 2020 to June, 2021.

#### Questionnaire Design and Development

A standard questionnaire will be developed to obtain the relevant information regarding the general information, clinical and good hygiene and sanitation practice information and also individual information on attitude and behavior that contribute good health. A Questionnaire will be developed containing both closed & open ended Questionnaire to obtain relevant information on health and hygiene, dietary & clinical information. All Questionnaires will be presented & modified as required.

#### Data Collection Procedures

Individuals wishing to participate in the study will be invited to attend the study on a pre-arranged date or software based questionnaire via online. All the individuals will be selected for the studies who are students below higher secondary level. After received consent from subject, data will be collected through a self-reported information questionnaire.

#### Collection of health and hygiene related information

All of the respondents will be interviewed about health and hygiene related information. The health and hygienic related information such as frequent hand washing face washing, and bathing with soap and water will be collected. All of the information's will be recorded in the respective places of the questionnaire.

#### Collection of Clinical and good personal health Information

All of the respondents will be interviewed about clinical and good personal health information. The clinical and good personal health information such as toilet hygiene, shower hygiene, hand



hygiene, nail hygiene, sickness hygiene and dress hygiene will be collected. All of the information's will be recorded in the respective places of the questionnaire.

#### **Collection of general information about social distancing, mask using and sanitizer using by children**

All of the respondents will be interviewed about social distancing, mask using and sanitizer using during this pandemic situation. All of the information's will be recorded in the respective places of the questionnaire.

#### **Data Collection Tools**

Data will be collected by using pre-coded and open ended questions contained questionnaire and others tools for data collection.

#### **Data collection, management and analysis**

Data will be collected from pre-trained sample population by well-trained interviewer. Focus Group Discussion (FGD) and meetings will be conducted by maintaining all rules and regulations of FGD guideline. Data will be analyzed by appropriate statistical software. Data management will be included documentation, storage, data editing, and entry and data cleaning prior to data analysis. The frequency distributions of the entire variables will be checked by using SPSS 16 windows program. For tabular, charts and graphical representation Microsoft word and Microsoft excel will be used.

#### **Expected Outcome from the Research**

The present research mainly focuses on present knowledge exposure and attitude on hygiene & sanitation of school going children which contribute the positive healthy society especially during and after covid-19 that secured to unlocking the schools in rural setups. The research also focuses on present scenario of hygiene & sanitation among school going children especially social distancing, mask and sanitizer using for ensuring healthy society as well as open schools facilities.

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## **2. Small & Medium Entrepreneurship Development through Value Addition of Jackfruit as Chips**

*Md. Abdul Alim (Assistant Director)*  
*Md. Ferdous Hossain Khan (Director)*  
*Monirul Islam (Assistant Director)*

### **Background of the Study**

Tropical fruits form some of the most important constituents in the daily diets of billions of people. The fruits are harvested from wild trees or locally cultivated ones. Many such fruit trees have multi-purpose uses and their plant products satisfy apart from food several non-food purposes ranging from timber to forest. Among the tropical fruits, Jackfruit is an important underutilized fruit and often called the poor man's fruit because of its affordability and availability in large quantities during the season (The Crop, 2020).

Jackfruit (*Artocarpus heterophyllus*) is the biggest edible fruit in the world and is the national fruit of Bangladesh. It is a very popular fruit in Bangladesh. The poor people of Jackfruit growing area, used to eat this fruit instead of rice, for one of their daily meals. Hence, Jackfruit is called "poor man's food". People consumed it mostly as a fruit when ripe but also as vegetable in the unripe stage. The jackfruit significantly contributes to the nutrition of the people of this country as a source of vitamins, minerals and calories. Both tender and ripe fruits as well as the seeds are rich in minerals and vitamins (M. M. Molla et al; 2008). At present (BBS, 2006) Bangladesh produces 719920 tons of Jackfruit annually from an area of 9145 hectares of land at the rate of 78.72 tons per hectare. It ranks second in production among the fruits grown in Bangladesh. It is grown and sold in the market almost everywhere in the country. However, the fruit is perishable and cannot be stored for long time because of its inherent compositional and textural characteristics. In every year, a considerable amount of jackfruit, specially obtained in the glut season (June-July) in every year goes waste due to lack of proper postharvest knowledge during harvesting, transporting and storing both in quality and quantity. Proper postharvest technology for prolonging shelf life is, therefore, necessary. Besides, alternate ways of using jackfruits in on-season plays significant roles in reducing postharvest losses. Among them, processing is important ones. It adds diversified and attractive food items in dietary menu as well as contributes to generation of income and employment. Preservation of fruits by processing has been the research pursuits of many developed and developing countries and has yielded quite a number of technologies. However, processing techniques of jackfruit is very scanty in Bangladesh. There has been a little research worth mentioning to find possibility of processing of jackfruit into durable and nutritious food products. Chips are the most popular snack item in many fast food outlets. Fried jackfruit

chips may be one of the important potential jackfruit products in Bangladesh. Jackfruit chips may be also easily salable snack food in the markets. For longer shelf life, crispiness and chips quality moisture content is the most important factor as far as storage stability is concerned. Bacteria and other microorganism cannot grow easily in lower percentage of moisture content in chips (*Anand et al., 1982*). Packaging and storage condition are the most important quality control factors of chips preservation. Storage stability depends on packaging. Good packaging and storage condition extend the storage duration of chips. Chips are packed in packages of various dimensions and materials, including cellophane and waxed glassine (Ahmed, 1977).

### Justification of the Study

Small and medium-sized enterprises (SMEs) are the backbone of the national economy in Bangladesh. The role of SMEs sector is immense to alleviate the poverty from the country as well. The International Monetary Fund (IMF) Country Report (2012) indicated that SMEs in Bangladesh accounted for more than 99% of private sector industrial establishments and created job opportunities for 70%–80% of the nonagricultural labor force.

About 1 million tonnes of jackfruit cultivated per year and it ranks second in production among the fruits grown in Bangladesh (The Prothom Alo, 2019). There are 25,110 ha of land under jackfruit having about 22% of total fruit production in the country. It is grown and sold in the market almost everywhere in the country. However, the fruit is perishable and cannot be stored for long time because of its inherent compositional and textural characteristics. Jackfruit chips is the new idea in Bangladesh to utilize the large amount of jackfruit and vacuum frying machine is appropriate technology for making jackfruit chips because technology is safe and produce high quality jackfruits chips instead of normal deep frying process. A vacuum fried jackfruit chip is new products in Bangladesh and has great demand in Country as well as in foreign country. This product creates an opportunity for new small and medium entrepreneur because raw materials are available in season and low production cost motivates them to include it in their choice. But there is little research in vacuum frying process as well as jackfruit chips in Bangladesh. If we can identify opportunity, challenges and prospects of jackfruit chips as well as product development it would be opened new window for small and medium enterprise and contributes in our GDP and reduces unemployment problems in country. Keeping this in view, the research program was undertaken to study the prospects, challenges, processing, packaging and quality aspect of chips from jackfruit and thus suggest ways and means for production of good quality jackfruit chips for the development of small and medium enterprise.

### Research Objectives

- To Produce Jackfruit chips as value added product to reduce the seasonal loss.
- To explore the losses of Jackfruits in season by reviewing journals and periodicals.
- To assess the probability of jackfruits suitable for small and medium enterprise.

## Methodology

### Study location and materials

A study will be conducted in the laboratory of Agro-processing shed, Agro-processing, Preservation and Marketing Unit, Rural Development Academy (RDA), Bogura. Temperature and relative humidity of the laboratory will be considered in this study. Fully mature jackfruit (Ripe and unripe), vegetables oil, salt, tasting salt, seasoning materials will be used in the experiment. For processing, vacuum frying machine, de-oiling machine and packaging machine and materials will be used. Different types of instruments will be used for this study like knife, electric weigh balance, cartoon box, refrigeration system, tray, plastic tape, drum, LPG gas connection etc.

### Sample collection

For the development of vacuum frying chips, fully mature (unripe) and ripe jackfruit will be collected from RDA and local area of Bogura districts and after processing it will preserve in temperature control refrigeration system for making chips.

### Measurement of raw materials and study sample

Whole fully mature and ripe jackfruit will be weigh by electronic balance and after sample collection from whole jackfruit it will be measured by following way:

Sample Weight= Initial weigh of whole jackfruit (Kg) – Final weigh of the processed flesh (kg)

### Preservation of study sample

After collection of sample (ingredients) we will preserve it in freezer (below 0 degree Celsius) overnight for crispiness of the chips. Time for freezing will depend on types of fruits and vegetables however for jackfruits fruits it will take around 12 hours before processing.

### Sample preparation and study protocols

After collection of sample it will be transfer into processing shed where processing protocols should be followed. Proposed protocols will be listed below:

- Collection of fully mature and ripe jackfruit. After collection and sorting it will be cleansing carefully.
- Peeling, slicing will be done & soaking in brine water for raw vegetables
- Raw materials will be preserved overnight in deep freezer (12 to 14 hrs depends on raw materials)
- After overnight freezing processing will be started and give the oil in oil tank (65 litre)
- We will start the gas line for rising temperature around 70-80 degree C and put the materials for processing.
- Vacuum pump will be started and wait until pressure rise to 60 mmHg and mixing the materials with oil.
- After the pressure 70 mmHg then we will open the light bulb to see the bubbles size in the

oil and bubbles sizes indicates the completion of the process.

- After completion of the process inner pressure bulb will be open slowly and collect the final product and put into de-oiling machine for 5 min
- After De-oiling we will add seasoning materials
- Finally packaging will be done for long term storage.

### Determination of frying time

The moisture content of freshly prepared fried chips should be 4.0%. So, the frying time is determined as the time required to obtain 4% moisture content in fried chips from initial moisture content of dried slices (75%).

### Determination of oil content

The percentage of oil content will be calculated as follows:

$$\% \text{ Oil content} = \frac{\text{Weight of oil}}{\text{Weight of sample slice}} \times 100$$

### Determination of final weight (%)

The percentage of weight gain will be calculated as follows

$$\% \text{ Weight gain} = \frac{\text{Final weight} - \text{Initial weight.}}{\text{Initial weight}} \times 100$$

### Determination of moisture content

Moisture content will be determined by Ranganna (1991) method for several times as in fresh jackfruit bulbs, freshly prepared slices, dried chips and stored chips.

### Determination of frying temperature and pressure

Development of colour depends on frying temperature. Prepared slices will be fired at below 100 degree Celsius and 70 mmHg pressures will be used. Usually vacuum frying machine used the mention time and temperature.

### Sensory evaluation

Sensory evaluation of all the prepared chips will be done by taste testing panel. The taste testing panels will be consisting of 12 members. They will be asked to evaluate the crispiness, taste, flavour, colour and overall acceptability by a scoring rate on a 9- point hedonic scale. 9=Like extremely, 8=Like very much, 7=Like moderately, 6=Like slightly, 5=Neither like nor dislike, 4=Dislike slightly, 3=Dislike moderately, 2=Dislike very much and 1=Dislike extremely. The different preferences as indicated by scores will be evaluated by statistical methods.

### Packaging materials used to preserve the jackfruit chips

Proposed following pouch will be used for the long time storage

P<sub>1</sub> = Polypropylene pouch (0.8 mm), P<sub>2</sub> = High density polyethylene pouch (0.9 mm), P<sub>3</sub> = Metalex foil pouch. (0.10 mm)

### Storage and shelf life studies

The prepared jackfruit chips will be stored at room temperature (25-32°C) for storage studies. The changes in moisture content (%), weight gain (%), crispiness, taste, flavour, colour and gas formation during 2 months storage of chips will be observed under room temperature (25-32°C) at 0 day, 30 days and 60 days of storage.

### Data analysis

Data will be analyzed by appropriate statistical software. Data management will be included documentation, storage, data editing, and entry and data cleaning prior to data analysis. The frequency distributions of the entire variables will be checked by using SPSS 16 windows program. For tabular, charts and graphical representation Microsoft word and Microsoft excel will be used.

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### 3. COVID-19: Technology adoption behavior towards online teaching methods of secondary school teachers' in Bangladesh

*Asim Kumar Sarker (Deputy Director)*

### Introduction

The COVID-19 pandemic has resulted in schools shut across the Globe estimated over 1.2 billion

students are being out of the classroom (We Forum, 2020). As a result, education system has changed dramatically, with the distinguishing rise of online class or e-learning platform. It changed the teaching method undertaken remotely and on digital platforms during the pandemic situation. The studies on the significance and efficacy of implementation of online learning stated that the universities across the world are trying to promote online learning method which is being widely appreciated by the learners. In Bangladesh, the secondary school teachers are continuing their online classes through using various ICT tools and social Medias. The government of Bangladesh has emphasized to ensure the continuation of the learning process towards the COVID-19 pandemic. As the using pattern of ICT tools for teaching method was limited in pre-pandemic situation, the study would focus to explore the technology adoption behavior towards online teaching methods of secondary school teachers' in Bangladesh

## Objectives

To assess the traditional way of teaching methods used by secondary school teachers' in different schools of Bangladesh.

To assess the behavior of technology usage on teaching methods by the secondary school teachers' prior COVID-19 pandemic.

To analyze the technology adoption behavior towards online teaching methods of secondary school teachers' during COVID-19 pandemic in Bangladesh.

## Methodology

The study would select three (03) secondary schools each in urban and rural areas.

A total of 120 teachers (20 in each school) of selected secondary schools would be interviewed with structured questionnaire.

In-depth interview (in online platform) would be used for qualitative analysis.

The Unified Theory of Acceptance and Use of Technology (UTAUT) model would be applied to analyze the data based on the given hypothesis tests.

Relevant tools would be used for analyzing the hypothesis tests suitable for UTAUT model.

## 4. Feasibility study of the freshwater prawn (*Macrobrachium rogenbergii*) culture in biofloc system

*Md. Ashraf Alam (Assistant Director)*

*Macksood Alam Khan (Joint Director)*

## Introduction

Aquaculture is a sector with rapid growth and represents almost 50% of global seafood products, growing approximately 6.3% from 2010 to 2015. Shrimp farming contributed 6.9% of total production (FAO, 2016; FAOFIGIS, 2018). High demand and price of shrimp have encouraged the development of new production systems to ensure bio-security (Lightner et al., 2012). One such

super-intensive system with low or no water renewal is known as biofloc technology (BFT) (Crab et al., 2012). Biofloc systems consist of clusters of algae, protozoa, bacteria, and organic and inorganic detritus (Avnimelech, 2015), which, in addition to controlling the nitrogen compounds in the water, can serve as a food supplement for animals such as shrimp (Avnimelech and Kochba, 2009). Biofloc forms naturally in pond water as aggregates of nitrifying bacteria, organic material, inorganic flocculants, and suspended algae. These ingredients serve as food for the stock under cultivation and promote direct use of nitrogenous compounds in feces, urine, and food waste. Activity of nitrifying bacteria increases with addition of carbon sources and constant aeration, which maintains or significantly improves water quality during cultivation. Thus, the large volume of water required in intensive aqua farming is greatly reduced (Schryver et al. 2008). Recently, the biofloc technology has introduced in Bangladesh. People not properly aware about the biofloc technology and cultivated different type of species of low price fishes like tilapia and vitetnamee koi (personal observation), consequently loses their capital.

## Justification

The shrimps assimilate only 15–30% of the nitrogen added in the feed in a pond environment, the remaining quantity is lost to the system as ammonia and organic-N in the form of faeces and feed residue. The organic-N in faeces and uneaten feed undergoes decomposition resulting in ammonia production. Therefore, a high protein level in shrimp feed contribute to high concentration of ammonia in the water column which is detrimental to the cultured animals, and needs to be minimized. To rectify the above mentioned constraints, the biofloc technology (BFT) systems were developed to minimize effluent discharge, protect the surrounding water bodies and improve farm bio-security (Avnimelech 2007). Farming of shrimps is generally conducted extensively in grow-out ponds, and has been developed in indoor high-intensive farming system to meet the growing world demand (Zhou 2001). With rapid expansion and intensification, however, there is also a growing concern about the ecological sustainability of shrimp farming (Naylor et al. 2000). The cultured shrimps retain only 20–30% of feed nutrient; therefore, 70–80% of high dietary protein is excreted and accumulated in water, which leads to deterioration of water quality (Avnimelech & Ritvo 2003).

Moreover, deteriorated water quality has resulted in disease outbreaks and heavy financial losses (Samocha et al. 2004). Such environmental issues have created a large demand for productive, efficient and sustainable shrimp farming systems that have low impact on the environment and are more likely to be disease free (Horowitz & Horowitz 2001). Addition of carbon sources into shrimp culture system can significantly reduce the TAN and NO<sub>2</sub>-N concentrations. Therefore, the study aims to develop microbial biofloc for culture of *Macrobrachium rogenbergii* by using carbohydrate materials as a carbon source to boost the production by improving the conversion of nutrients into harvestable products while maintaining good water quality. The objectives of the study is-

## Objectives

- To determine the growth and survival performance of freshwater prawn in biofloc system
- To monitor water quality parameters during culture period in biofloc tank
- To calculate the cost-benefit analysis of freshwater prawn culture in biofloc system.

## Methodology

### Experimental conditions

The experiment will be conducted at the fish hatchery of Rural Development Academy (RDA), Bogura, Bangladesh. To evaluate the effect of stocking density on productive performance of the freshwater prawn *M. rosenbergii*, an experimental system with bioflocs will use consisting of 09 rectangular experimental aquarium with 100 L water volume. In each experimental unit two plastic screens will transversally attached to the bottom and the sides of the tanks. Such structures will be used as substrates for the development of natural biota, representing an additional source of feed for the prawns, assisting in nitrification and distribution of prawns and reducing the relative density (Ballester et al., 2007). All tanks were covered with 50% shading cloth, to prevent animals from escaping.

Thirty days before the start of the experiment, another tank will fill with clear water and 50 L of water rich in microorganisms (green water) from external tanks. Then 100 prawns will be stocked in each tank (230 shrimps m<sup>-2</sup>) to stimulate and maintain the development of bioflocs (Avnimelech, 1999). Furthermore, a daily addition of 7.5 g of probiotic in the matrix tanks will be performed. The probiotic will be matured for eight hours in a container with 10 L of water.

### Stocking densities

Experimental units with different stocking densities are (50, 70 and 90 shrimp m<sup>-2</sup>) in with three replications per treatment (density) for 90 days duration.

### Feeding

Shrimp will be fed (40 crude protein commercial diets) three times a day, with an initial feeding rate equivalent to 7% of their biomass. In the morning (8:00) shrimp will be fed in the proportion of 30% of the established daily amount; in the afternoon (13:30) they will be received another 30% of the daily amount and remaining amount will feed 17:30 pm with the proportion of 5.0 g kg<sup>-1</sup> of diet.

### Water quality monitoring

Temperature, dissolved oxygen and pH of the water will be measured daily in each experimental unit. Total ammonia nitrogen (TAN) concentrations will be measured three times per week, while nitrite (NO<sub>2</sub>), alkalinity and hardness will be monitored weekly, following the methods described by Macedo (2003). To keep the water hardness above 20 mg/L, calcium carbonate (0.5 g/L) will be added periodically in the experimental tanks (Arana 2010).

### Determination of Productive performances

At the end of the experiment, the remaining shrimp in the experimental units will be counted to determine the survival rate. To determine the weight gain (WG), specific growth rate (SGR) and feed conversion rate (FCR), the total individual weight of shirmp in each experimental units will be measured using an analytical digital scale (0.01 g accuracy – Marte). The individual length will be measured with a digital calliper 402 150 BL-King Tools.

## Statistical analysis

Productive performance data will be evaluated using t-test after being confirmed the homoscedasticity of the variances and the normality in the distribution of data. The water quality data will be evaluated using repeated-measures ANOVA, evaluating the likelihood of significant differences at the level of 5% ( $\alpha = 0.05$ ). When identified significant differences, Tukey test will be applied ( $P < 0.05$ ). All statistical analysis will be performed with the Software IBM SPSS Statistics for Windows, Version 21.0.

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## 5. Identification of Existing Cropping Pattern in Char land areas and Generalization of Crop Rotation Decisions

*Dr. Md. Abdul Majid (joint Director)*  
*Rebeka Sultana (Deputy Director)*  
*Noor Muhammad (Assistant Director)*

### Introduction

Bangladesh is an agricultural country where agriculture provides employment to nearly about 38.58 percent of its total labor forces. In 2019, the share of agriculture in Bangladesh's gross domestic product was 12.68 percent (BER, 2019). The country has a population of 155.8 million encompassing an area of 147570 sq. km (BER, 2015). About 63.37 percent of total population of this country lives in rural areas (BBS, 2018).

Crop rotation is the practice of growing a sequence of plant species on the same land (Bullock, 1992). Crop rotation is characterized by a cycle period, while crop sequence is limited to the order of appearance of crops on the same piece of land during a fixed period (Leteinturier *et al.*, 2006). The choice of crops and their allocation to plots is at the core of the farming system management. These decisions concentrate all the complexity involved in cropping system design and selection at the farm level because of their many involvements at different stages of the crop production processes (Nevo *et al.*, 1994; Aubry *et al.*, 1998a; Navarrete and Bail, 2007).

Crop rotation decisions are indeed crucial steps in crop production processes and have considerable effects on the annual and long-term productivity and profitability of farms. A suitable cropping-plan must satisfy multiple and conflicting objectives, and take into account a large number of factors and their interactions (Nevo and Amir, 1991). Many models dealing with cropping system design have been based on cropping-plan selections represented through the choice of cropping-plan or that of crop rotation. These two concepts, i.e. Cropping-plan and crop rotation, describe the cropping-plan decision problem in space and time respectively. However, all these models allow the selection of one or several cropping-plans within a given context and objectives which somehow represent a decision (not necessarily that of the farmers).

### Importance of the Study

Bangladesh consists mainly of riverine and deltaic deposits of three large and extremely dynamic

rivers entering the country: the Brahmaputra, Ganges and Meghna rivers. The total area of the country is 147570 square km. In the total area of Bangladesh, around 5% of the land is considered as char-land and from the total number of the population about 6.5 million people live in char-land (Sarker *et al.*, 2003). The economics of the char lands are largely based on agriculture, fishing and livestock rearing.

Lands created by the side of the rivers can be divided into two groups. The one created in the middle of the river-flows may be called temporary char or delta and the other, created by the side of the rivers called permanent or attached char. Temporary chars completely drown during the rainy season. Water depth used to be so great that any crops remain there is completely damaged. During the dry season, farmers move there to cultivate lands and make temporary shelters, which they remove during the rainy season. This type of char may be demolished by the river within a few years or a decade. On the contrary, permanent chars are submerged during the rainy season, but there is a less probability of complete crop damage, as farmers are habituated to grow such type of crops as can survive in that situation. So, year-round crops suitability is very much important due to best productivity. This piece of research will generate an idea to about crop rotations in the char land areas.

### Objectives of the Study

The objectives of the study will be as follows:

1. To identify general practices of cropping pattern in char land areas
2. To verify the economic profitability of different cropping pattern
3. To generalize best patterns and develop guidelines for char suitable crop rotation.

### Methodology

#### Locale of the study

Bogura and Sirajganj district will be selected purposively as the research area. From this two districts four upazilas will be selected having char land areas. Experimental plots will be set up among the selected four upazilas.

#### Research tools and techniques

To collect data open and closed form questionnaire will be used. Data will be collected in both questionnaire surveys as well as directly from experimental plot.

#### Identification general practices of cropping pattern

Normal practices of cropping pattern will be identified by face to face interviewing of the selected farmers of char land areas. For this reasons a list of char farmers will be collected from upazila agriculture office of the selected upazilas. From the list 26 farmers from each upazila will be considered as the sample of the study. A total number of 104 farmers will be selected as sample of the study. Data will be collected by questionnaire survey from the selected farmers. Key informants Interview will be conducted at policy level.

### Measurement of economic profitability of different cropping pattern

Economic profitability of different cropping pattern will be measured in two ways. Firstly, collection of opinions of farmers about their previously practiced cropping pattern. Farmers will be asked about the profitability about different cropping pattern by structured interview schedule. Secondly, experimental trial will be done in order to know cost and returns of different cropping pattern. Three experimental plots will be set up for a year where different cropping pattern will be experimented under trial. Both fixed cost and variable cost will be taken into account in calculating the cost and return of different cropping pattern. Land use cost was calculated on the basis of per year existing lease value of land. The profitability of different cropping pattern will be examined on the basis of gross margin, net return, and benefit cost analysis. The collected data will be edited, summarized, tabulated, and analyzed to fulfill the objectives of the study. Tabular method using descriptive statistics will be used in the study.

### Data Processing and Analysis

After completion of the primary data collection, the raw data will be coded, edited and data entry will be completed by using latest statistical packages for social sciences (SPSS). Some simple statistical tools like frequency table, cross table with hypothesis testing will be used for data analysis.

### Report writing

After completion of all analytical works the research report will be written by the researchers and will be submitted to respective authority.

### Expected outcome from the research

An effective crop rotation in char land areas will provide benefit in two ways. Firstly it will cover year round vegetation in the char areas followed by favors favorable climatic condition as well as improve soil type. Better crop rotation will enhance the improved residual effect. For that reason residues of crop left in the soil may use as manures for the succeeding crop. Secondly, continuous cultivation will enhance farm profitability. Short duration crops will instantly supply profits from farm enterprise which will ultimately improve livelihood status of the farmers. After completion of the research, recommendations will enable to take decisions regarding best practices of crop rotation that will increase the soil productivity, crop yield, increases income of farmers and finally contributed to national food production and national GDP to agriculture.

### Gantt chart of research activities

The activities of the study will be started from the month of September 2020 and ends on December 2021. Total breakdown of the activities are given below-

Activities	Months																
	Sep,20	Oct	Nov	Dec	Jan,21	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
Research proposal preparation, Submission and approval																	

Activities	Months															
	Sep,20	Oct	Nov	Dec	Jan,21	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Review of literature study																
Data collection																
Conducting field level Experiment																
Data entry and analysis																
Draft report writing																
Report finalization and submission																

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## 6. Precision of irrigation water for upland crops under conservation tillage and mulching management

*Md. Abdul Kader (Assistant Director)*

*Md. Ferdous Hossain Khan (Director)*

### Background

Rapid increase of the world population, pollution of natural resources, global warming and climate change are putting increasing pressure on limited water resources (Colak et al., 2015). Agriculture is the largest water consumer in the world that accounts 70% of total use (Qin et al., 2018). Approximately 80% of worldwide cropland is rainfed (non-irrigated) that produces 60–70% of the world food (Chen et al., 2018). Considering the growing water shortage, rainfed crop cultivation plays a prime role in the worldwide food supply. Thus, agricultural water management is a major concern to save water in cultivated land. Therefore, conservative and efficient water use has been practiced for many years in arid and semi-arid regions of the world with a great success. The goal of all the water conservation systems is to maximize yield by minimizing water use. Therefore, conservation of water by using appropriate soil management practices may be an efficient option to save water as well as raising production in agricultural farming.

On farm water management of upland fields have a special attention globally by considering increase productivity with higher profitability. To increase the efficiency of water use in agricultural field, conservation tillage and various mulch materials can be applied to upland field which may significantly contributes the crop productivity. Conservation agriculture plays a vital role in conserving soil and water, enhancing biodiversity which needs to investigate for upland crop cultivation. In contrast, mulching is a coating material spread over the soil surface for controlling soil hydrothermal environment and microclimate modifications (Kader et al., 2017). Mulching technique establishes a linkage between soil and agrometeorology, which can modify the crop growing environment. Therefore, the combine effects of conservation tillage and mulching needs to be investigated for upland crops considering the water-saving and farm profitability under changing climates.

### Objectives

1. To quantify the effects of conservation tillage and different mulching for cultivating upland crops.
2. To investigate the accuracy of water use in upland field under tillage and mulching practices.

### Methodology

This study will be conducted on upland vegetable crop (potato) at RDA demonstration farm, Bogura, Bangladesh. Two years field experiments will be investigated on winter potato fields. The effects of conservation tillage using various machine and different (organic and plastic) mulching will be investigated under potato field using various irrigation management. Six different irrigation and mulching treatments will be employed with three number of replications under each treatment.

The white color polyethylene non-woven sheet with 200 µm thickness used for plastic mulching. In this study, we will introduce a flexible drip tubing method for utilizing the maximum benefits of irrigation and fertilizer applications. The drip tube irrigation will be inserted below the mulching sheet surrounding the crops with specified lateral spacing.

Several sensors/probes and dataloggers will be employed to record meteorological data at study site and hourly soil moisture, and soil temperature data of each treatment will be collected from 5, 15, 25, 35 and 50 cm soil depths considering the depth of root zone. To determine soil physical properties, undisturbed soil samples will be collected from the experimental fields at different soil layers using core samplers. Soil physical properties like porosity, saturated hydraulic conductivity, soil texture, and densities will be analyzed at laboratory for the soil profile of 0–50 cm with 10 cm intervals. Soil hydraulic properties characterizing soil water retention and hydraulic conductivity will be described using the analytical functions. Statistical software R (Foundation for Statistical Computing) with Mixed Effect Model (lme4) package will be used to quantify the effect of mulching system.

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## 7. Rural Development Reconsidered: A COVID-19 Effect on Workers' Migration in Bangladesh

*Dr. Md Shafiqur Rashid (Joint Director)*

### Introduction

Millions of people, particularly daily wage laborers migrate to big cities in search of work due to fewer livelihood options in rural areas. The livelihoods of wage workers are hard hit during COVID-19 pandemic lockdown period. The pandemic caused them to fall between two fires. On the one hand their livelihoods were locked up in cities and their return to rural areas offered them no work on the other. A good number of wage workers might have secured their livelihoods in rural areas provided that on and off farms and enterprises were facilitated to flourish. In this study, the promoting of on and off farms and enterprises has been considered key intervention area in rural development.

The thrust of the study are what pushed them to migrate and what could have been done to



ensure their livelihoods under rural development intervention. Mismatches among rural development initiatives and failure of national development to establish a proper link between rural and urban development could be responsible. Viewed from this perspective, this study is an effort to answer the question: Did a carefully designed rural development intervention accommodate a good number of rural-to-urban migrant workers in rural areas?

## Literature Review

In developing countries, rural-urban migration (RUM) is considered as the main driving force of rapid growth. Since 1950, urbanization has had a tremendous effect on developing countries. In Bangladesh urban population as percentage of total population was 19.81 per cent in 1990 and it stood at 36.63 in 2018.

Urban and rural development should go hand in hand. They are not mutually exclusive – each needs the other. An imbalance may reverse the direction of progress. If we neglect rural areas, persistent poverty and hunger will continue to drive migration flows, not only to urban areas, but also to neighboring and nearby countries and destinations farther abroad.

Urban-explosion in developed and developing countries differs. In developed countries, it takes place when the development of industry and industrial production expands spatially. Such urban-explosion requires labor force the most part of which comes from agriculture sector. The funds used for the urban-explosion mainly focus on industrial development. The migrants coming from rural to urban areas change their livelihoods and their demographical and behavioral habitude.

In contrast, urban-explosion in developing countries results from over-population of rural areas rather than industrial development that is very slow. As a result, urban areas cannot support the migrants who come from rural areas and a significant part of urban society finds no chance to escape from poverty. The migrants do not alter demographical and behavioral habitude. In addition, problems get intensified by waves of poor rural migrants.

Urban-explosion or urbanization is an expansionist land-based economic development process from rural areas to urban centers. It is a process through which people leave rural areas, which misshapes rural population and makes the rural economy unviable. Leaving rural areas behind will not move developing countries forward. Unfortunately, this line of reasoning as to rural development has remained ignored in developing countries. The effect of COVID-19 on reverse migration (from urban to rural areas) has resurrected the near-forgotten fact. The study intends to fill this gap and search an evidence based answer to establish that a carefully designed rural development intervention accommodate a good number of rural-to-urban migrant workers in rural areas. Consequently, meeting the demand of laborer in rural area and preventing the overflow of migrant worker putting pressure in urban area could be well managed.

## Study Assumption

The study assumes that the potential of agro-based on and off farm and other MSMEs to absorb labor in rural area is yet to be utilized in full swing. The expansion of these farms and enterprises supported by communication facility, capital investment etc. are being neglected and much attention has been put on urbanization. Labor-shortage in rural areas and overflow of migrant worker in urban areas result from the imbalance in national development failing to design and articulate

rural and urban development to the exact ratio of necessity.

## Study Objective

To investigate whether a carefully designed rural development intervention accommodate a good number of rural-to-urban migrant workers in rural areas, the study sets the following specific objectives.

- To assess the extent of developmental disparity between rural and urban areas;
- To explore correlation among GDP, rural and urban population growth rates and analyze labor force migration looking for work in rural and urban areas;
- To identify the frequency and the severity of the problems rural-to-urban migrant workers encountered to secure their livelihoods in rural area;
- To identify the frequency and severity of problems of running on and off farms and enterprises by farm owners;
- To assess whether the farms and enterprises face labor deficit in rural areas; and
- To analyze whether there is room for establishing new farm and enterprise in rural areas.

## Justification

The prime concern of rural development is to uplift the standard of livelihoods of rural people. Migration is considered as a livelihood option. The workers migrate to cities to secure their livelihoods. Migration should be a choice rather than a compulsory option. This holds true for most of the migrant workers, which points to underdevelopment in rural areas. Rural development and urban development should be complementary and well aligned, adjusted and weighed in proportion to developmental needs under the banner of national development. The overemphasis on urbanization therefore gives rise to mismatch and results into multifaceted problems such as labor deficit in rural area and overflow of migrant workers in urban area. The study findings could be useful for designing national development policy and goal. The study findings could be ancillary to develop a model for any development intervention in rural area.

## Scope of the study

The study intends to explore the severity of the problems (if any) the workers faced in their home places (rural areas) to understand how favorable the rural phenomena was as to securing livelihoods for workers. The purpose is to relate these phenomena to the assessment of the severity of problems of establishing and conducting farms and enterprises at different stages of business cycle in rural areas. The effort is to capture whether the farms and enterprises absorb more labors if their full potentials are utilized.

## Data Collection and Analysis

Both qualitative and quantitative data will be collected. Migrant workers, farm and enterprise owners and specialized persons such as Bankers, development specialists and local businessman will be regarded as respondents. The respondents will include 40-50 migrant workers, 15

farm owners, 25 entrepreneurs, 5 bankers and 10 local businessmen. All the respondents will be selected through purposive sampling. Interview along with open and close ended questionnaire and focus group discussion will be conducted for collecting data.

**Table 2.3: Data collection and analysis against each research objectives are presented in the table below**

Research Objectives	Type of Data	Data Collection Tool	Analysis	Presentation
Assessing the extent of developmental disparity between rural and urban areas	Quantitative Light Night Intensity data	Secondary source	Light Night Intensity data analysis	Night light intensity data on map of Bangladesh
Exploring correlation among GDP, rural and urban population growth rates and analyze labor force migration looking for work in rural and urban areas.	Quantitative	Secondary source	Inferential and Descriptive Analysis	Graphical Presentation
Assessing the frequency and severity of the problems faced by the workers in securing livelihoods at their home places	Qualitative & quantitative (ordinal data)	Interview and questionnaire method	Qualitative enquiry and descriptive statistics	Pareto diagram and Radar chart
Assessing the frequency and the severity of problems of running farms and enterprises in rural areas	Qualitative & quantitative	Questionnaire method	Qualitative enquiry and descriptive statistics	Pareto diagram and Radar chart
Exploring potential of establishing new farms and enterprises in rural areas	Qualitative & quantitative	Interview and focus group discussion	Qualitative enquiry and descriptive statistics	Matrix table/ diagram

## 8. Evaluate the Characteristics of Building Blocks in Comparison to Traditional One (Bricks)

*Md. Ferdous Hossain Khan (Director)*

### Introduction

Bangladesh is the fourth largest producer and consumer of bricks in Asia after China, India, Pakistan and Vietnam, according to various industry studies. There are more than 6000 traditional brick kilns which cater for 99 per cent of the 17 billion pieces of the country's annual brick requirement. In the process, the kilns emit large quantities of environmental pollutants into the atmosphere causing harmful impact on agricultural yields, climate and health.

Although the traditional brick sector contributes about 1 per cent of the country's \$246 billion GDP, it is characterized by low energy efficiency due to outdated technology, prevalence of small-scale kilns with limited financial capacity, dominance/overuse/dependence on a single raw material (clay). Therefore, developmental transformation is urgently needed in the brick industry by gradually shifting it towards cleaner processes, efficient technology and better product portfolio. Given this backdrop, non-fired bricks/blocks (often cited as alternative bricks or AB) have the required potential to become the next phenomenon in the brick field industry of Bangladesh.

A concrete block is one of several precast concrete products used in construction. Most concrete blocks have one or more hollow cavities, and their sides may be cast smooth or with a design. A concrete block is primarily used as a building material in the construction of walls. In use, blocks are stacked one at a time and held together with fresh concrete mortar to form the wall similar to conventional bricks.

The blocks materials are economical, better functional efficiency, better durability, ease of construction, better finish, minimum waste, less maintenance cost, less energy intensive, no salt leaching (low maintenance), fire resistant, provide thermal and sound insulation, environment-friendly, indigenous sand used as raw materials, reduction in dead load, reduced air conditioning load, faster construction, assured quality and size, recommended for earthquake resilient buildings.

### Objectives of the study

This study will be conducted with the aim to

- Make comparison and evaluate of all characteristics of building blocks with traditional bricks for rural infrastructure;
- Review the size and shape of existing building blocks and assess the suitability of size and shape for rural housing;
- Calculate the economic benefits (cost benefit analysis) of blocks over traditional bricks in all aspects.

## Justification of the study

Bangladesh is a severely land-scarce country with per-capita cultivable land of only 12 decimals. Bangladesh loses one percent agricultural land annually mainly because of unplanned rural settlements and production of clay burn bricks using fertile topsoil. Such high rates of land loss will not only hamper agricultural production but will have adverse impact on food security. Moreover, production of bricks is destroying forests due to the burning of wood as fuel. Annual brick production is over 25 billion against our national demand of around 20 billion, emitting 20 million tonnes of carbon which is about 20 percent of the country's total emission. Studies reveal that 58 percent of total pollution in Dhaka is due to over 1,200 brick kilns operating in and around the city during the months of November to February and 1,250 children die every year in the capital city alone.

Benefits of using blocks in construction are immense. Hollow concrete blocks are substitutes for conventional bricks and stones in construction. They are lighter than bricks, easier to place and also cut costs of construction and consumption of cement. They help construct lightweight buildings, give protection from salinity, insulation from heat and sound, and ensure durability. At the same time, the use of such blocks reduces construction costs by 10-15 percent.

## Methodology

Existing building blocks producing factories will be visited in order to measure the current shapes and sizes of the blocks. The ease of construction, wastage, maintenance cost, energy intensiveness, functional efficiency, used raw materials and the quality will be compared over the traditional bricks. Samples of building blocks will be collected from different places to measure the compressive strength, fire resistance, capacity of thermal and sound insulation, air conditioning load and dead load will be analyzed in the laboratory. Finally, impact on environment and cost benefit analysis of using building blocks will also be done over the traditional bricks.

## 9. Fish farmer's practices for the management of common problems and diseases: A study of freshwater pondaquaculture in northern Bangladesh

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*Md. Ashraful Alam (Assistant Director)*

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*(Project Manager and researcher, Single Spark, Netherlands)*

*Abu Bin Azad (Technical Officer, SKF)*

*Dr. Md. Harunur Rashid (Professor BAU)*

## Introduction

During the last fiscal year 2017-18 a total of 4.277 million metric ton fish was produced in Bangladesh and was declared as a self-sufficient country in fish production. Among this huge production, aquaculture contributed about 56.25% of the total production and ranked as fifth in aquaculture production of the world (DoF 2018). Again lion's share of the aquaculture production comes from rural freshwater aquaculture. Total pond area and annual fish production/ha of pond was 1.83

million ha and 4.77 MT/ha respectively during the year 2016-17 (DoF, 2017). Farmers of Bangladesh are hardworking that's why the production of inland aquaculture sector is increasing day by day. Other reasons behind increasing aquaculture production in Bangladesh are dissemination of adaptive and new technologies and need-based extension services by the Government, various donor agencies and NGOs.

In fact freshwater aquaculture plays a significant role in the livelihoods of rural people in Bangladesh (Mazid, 2002). Aquaculture is now a profitable initiative comparing to other agricultural cultivations. A large number of people have improved their socioeconomic conditions through aquaculture (Ara, 2005). Therefore, many rice farmers are now converting their fields into fish culture ponds (Islam et al., 2002; Islam et al., 2017). Success in aquaculture production depends on its proper management of fish health and the environment of the water body in which fish live in. Conversely, failures occur due to improper management, overstocking, and unplanned use of feed and fertilizer. Improper management of water body creates stresses on fish health and deteriorates the water quality which enhances susceptibility to be infected by various pathogens led to diseases. Lack of maintenance of water quality leads fishes towards parasitic invasion and bacterial, fungal, protozoan and monogenean infections (Hossain et al. 2011). The noticeable effect is mortalities in the fish population, followed by economic losses. In a study, Faruk et al. (2004) found that the average economic loss of BDT 20,615/ha/year (equal to US\$ 344) occurred in rural freshwater fish farming due to fish disease in Bangladesh. Such loss affects the livelihood of poor people who are involved in the aquaculture sector. Disease is considered one of the important factors to decrease in fish production, both in farming system and in wild condition. There are a few fish health diagnostic laboratories in Bangladesh and all of these laboratories are placed in universities or governmental research centers which are far away from rural fish farms.

In view of the fact, farmers do not understand the signs of diseases and water quality problem. The majorities of disease symptoms and effects in rural aquaculture sector became unobserved. Laboratory analysis is preferred for the detection of disease and their causing pathogens. The government fisheries officers diagnosed a limited number of samples, which is insufficient for the country. Field survey is the most practical method in collecting such information directly from a vast area and a large number of farmers. A few data are available on the status and consequences of fish disease in fresh water aquaculture of the northern part of Bangladesh.

## Objectives

The objectives of this study are:

- To document water quality related problems and fish diseases of freshwater pond aquaculture in northern Bangladesh
- To record general practices of the commercial fish farmers for the management of common problems and diseases
- To prepare scientific recommendations for the control of those problems and diseases in freshwater pond aquaculture

## Materials and methods

This study will be conducted by collecting both primary and secondary data. Primary data will be collected through semi-structured interviews (SSI), focus group discussion and using some other

PRA tools. Besides, personal observations will be included during collecting the primary data. A total of 60 farmers will be interviewed from three districts of northern Bangladesh named Bogura, Natore and Rajshahi as most of the fish farms of these districts are running as commercial basis. From each district 20 farmers from two upazilas will be selected as respondents and they will be selected by following purposive sampling method after consulting with respective Upazila Fisheries Officer. A preplanned interview notes will be developed for SSI, besides the study will also document signs, symptoms of the fish health related problems. Two focus group discussions will be conducted with 8-10 fish farmers in each district. Again, some pharmaceutical companies are working in fisheries sector. At least five field level officials will also be interviewed for this study. Other PRA tools like Seasonal calendar, Problem ranking, Venn diagram will be practiced for collecting additional information.

In addition, secondary data of fisheries resources and fish production will be collected from Department of Fisheries (DoF), Bangladesh Fisheries Research Institute (BFRI) and Universities.

## 10. Prospects of Commercial Soybean Cultivation in Char area of Jamuna River Basin

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*Md. Khalid Aurangozeb (Joint Director)*  
*Rebeka Sultana (Deputy Director)*

### Background

Chars are the lands that emerge as islands within the river channel or as attached land to the riverbanks as a result of the dynamics of erosion and accretion in the rivers of Bangladesh (Sattar and Islam, 2010). The area of char land is estimated to be 1.82 m ha in Bangladesh (MPO, 1986) in Bangladesh which is about 5% of the country area and about 6.5 million people (5% of the country's population) live there (EGIS, 2000). It is mentionable that 64 to 97% of the char areas are cultivable (Ahmed et al., 1987). The Char dwellers mainly depend on agriculture and agriculture related activities. Other opportunities such as off farm activities are marginal there. So, to increase cropping intensity and crop productivity in stress prone areas like char land is urgently needed. In crop production systems, screening and introducing adaptable crop varieties for char land ecosystem would be needed to address the climate change issues. Generally farmers in char lands cultivate potato, hybrid maize, sweet potato, mustard, lentil, grass pea, field pea, blackgram, chilli, proso millet, muskmelon, bitter gourd, sweet gourd, groundnut, sugarcane etc. in rabi season and aus rice, jute, foxtail millet and sesame etc. in kharif season with local variety and low management practices. As a result, much lower yield is achieved in char areas (Islam et al., 2012). Introduction of new crops with modern varieties (MV) along with appropriate agronomic management practices would boost up the farm productivity that will reduce the poverty level of resource poor farmers of that area. Improvement of crop productivity and livelihood pattern as well as enhancement of food security of all char land people is very cumbersome in relation to climate change situation such char area under Jamuna river basin. Information relating adaptability of soybean in the char land eco-system under climate change situation is meagre. It is encouraging to note that soybean cultivation on sandy river shoals has succeeded in eradicating poverty in

Noakhali and Laxmipur districts. According to a report local people say soybean is referred to as the "golden crop" in Laxmipur, (The independent, 27th March 2019). In Bangladesh the production of oilseeds is very low and there is an increasing demand of oilseeds. Soybean, *Glycine max* (L.) Merrill has a good prospect among the important oil yielding crops of Bangladesh and also an excellent source of protein. The prospect of soybean cultivation is good in Bangladesh. It can be cultivated throughout the year (Khaleque and Siddique 1982). It also improves soil fertility by fixing atmospheric N<sub>2</sub>. It can play a vital role in balancing the protein deficiency of our diet (Mondal and Wahhab, 2001; Rahman, 2003). At present, the domestic oilseed production of Bangladesh is 0.63 million tons, which gives only 0.20 million tons of edible oil and can meet 25-30% requirement (Hossain and Rahman, 2008). To fulfill the requirement, Bangladesh is to import 1.20 million tons of edible oil annually at a cost of nearly Tk. 40 billion. Bangladesh has to depend upon other countries for the supply of soybean oil. According to Department of Agricultural Extension (DAE), Bangladesh could meet 40 percent of the soybean oil demand by producing soybean locally. There is a possibility of producing 1.6-1.8 million tons of soybeans from 0.7 million hectares of char land and from other seasonal fellow land in Bangladesh. At present a total 8 edible oil industries processed crude soybean oil and soy cake. These industries need more soybeans as raw materials. This will be met by own production and from import. The potentiality is more in this sector now as the fish and livestock sector is growing and this soy-cake is the main food for fish and livestock. These soybean factories will not only reduce import-dependency but also will create export opportunities. Locally produced soy-cakes from soybean seed are mainly exported to Nepal and India. In the last fiscal year, the export of soybean including mustard-seeds was of USD 1 crore and 26 lakhs. The potential importing countries from Bangladesh are India, China, Myanmar and Cambodia. In recent times, the import of crude soybean oil has declined as the local production has increased. Other than the portion that is to be used as cooking oil, the rest portion of the total production is used as food for fish, livestock and poultry. So there is a need for expansion of soybean production area in this time. This agro processing industries will help in reducing import dependency; create employments in both soybean production and processing industry (Prothom Alo, 29 August 2020).

### Justification of the study

Char lands of Bangladesh are not suitable for all crops and all seasons. Nutrient status of char land is poor due to coarse textured soils, low water holding capacity, low nutrient capacity, river bank erosion and flooding. Soybean has the ability to fix atmospheric nitrogen (N) through root nodule bacteria (*Bradyrhizobium japonicum*) and thus it enriches the soil fertility (Mahabal, 1986). Reports indicated that *B. japonicum* can fix about 300 kg N ha<sup>-1</sup> year<sup>-1</sup> in symbiosis with soybean (Keser and Li, 1992). Soybean an important oil seed producing crop is called "Protein hope of future" for its nutritional value. It contains 40-45 % protein, 18-20 % edible oil, 24-26 % carbohydrate and a good amount of vitamins (Kaul and Das, 1986). Soybean accounts for approximately 50 % of the total production of oilseed crops in the world (FAO, 2007). As a grain legume, it is gaining important position in the agriculture of tropical countries including Bangladesh. Now, soybean producing areas are Barisal, Bhola, Faridpur, Patuakhali, Meherpur, Jessore, Rangpur, Kurigram, Thakurgaon, Tangail, Mymensingh, Chandpur, The Agriculturists 12(2): 98-102(2014) ISSN 2304-7321 (Online), ISSN 1729-5211 (Print) A Scientific Journal of Krishi Foundation Indexed Journal Feni, Noakhali and Laxmipur (Chowdhury *et al.*, 2013). The average yield of soybean in the world

is about 3.0 t ha<sup>-1</sup> while in Bangladesh, it is only 1.2 t ha<sup>-1</sup> (SAIC, 2007). If the government support is available, 7-8 lakh hectares of lands in char areas could be brought under soybean cultivation from where 1.7-1.8 million tons of soybeans could be produced (Mollah, 2011). The crop Soybean has a lot of impending possibility in Bangladesh but in present the production is not sufficient. This is mainly due to use of low yield potential varieties, poor agronomic management practices, climatic conditions, pest concerns and low fertility requirements. Introduction of improve variety along with the application of optimum dose of fertilizer are important for increasing the yield of soybean, but very limited information regarding char area of Jamuna river basin is available in Bangladesh. Therefore, the present study has been undertaken to evaluate feasibility of commercial soybean cultivation in char area of Jamuna River Basin.

### Objectives of the study

- To conduct the varietal performance trial for commercial soybean cultivation in char area of Jamuna river basin
- To assess the cost benefits of soybean cultivation with existing commercial crop of selected char area
- To explore the scope of marketing in local market

### Methodology

The study will be carried out in three parts. The first part dealt with a field survey with semi structured questionnaire in selected char districts. Second part covered the farmer's participatory research in the farmer's field and third part will be a purposive survey to explore the market opportunities of soybean in local markets.

### Location

The farmer's participatory researches will be carried out in the farmer's field in 2 chars (river islands) under Shariakandi of Bogra district and Kazipur of Sirajgonj district with a group of farmers who are interested to conduct the research as stakeholders.

### Farmer's participatory experiment

Second part was the farmer's participatory research in the farmer's field. Two chars will be selected purposively. Varietal performance trial of soybean will be conducted in association and/ or cooperation with the selected farmers of each.

### Duration of the experiments

The field experiments will be conducted at two chars during the Robi season from October, 2020 to May, 2021. Profitability and Market study will be continue after June 2021.

### Design of the experiment

The field experiments will be arranged under Randomized Complete Block Design (RCBD) with three replications. The plot size will be 15 x 10 m<sup>2</sup>.

### Varieties used for performances trail

1. BU soybean-2
2. BINA soybean 1
3. BINA soybean 1
4. BARI Soybean 5
5. BARI Soybean 6

### Plant measurements and sampling

Parameters observed were plants per square meter, plant height, numbers of branch per plant, numbers of pod per plant, numbers of seed per pod, 100 seed weight and yield per ton per hectare.

### Data collection

The field experiments were conducted at three chars during the Robi season from October, 2020 to May, 2020. Data on yield and yield contributing characters of soybean will be collected from the experiment plots and cost benefits will also be analyzed. Cost benefits of soybean cultivation with existing commercial crop will be recorded by interviewing the farmers in the selected char area. Two separate field days will be arranged for collecting the farmers' perceptions about soybean variety preferences. Marketing channel of the produced soybean will be explored through local market survey. Beside these data and relevant knowledge on soybean production and marketing will be gathered from KII, FGD and Expert consultation.

### Data Analysis

After having the data collected from various sources, the raw data will be gathered and inserted in a database system. The data identified and defined by the specific indicators will systematically be utilized and categorized. Then, the validity of data will be tested. Collected data and information will then be categorized and examined in the light of theory and knowledge about the data context. Analysis-inferences and conclusions will be drawn based on the broad questions what, how and why affects. The recorded data on the different parameters of the study were analyzed statistically using excel data sheet and SPSS software to find out the significance of the difference among the varietie

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The independent, 27th March 2019

## Work Plan

The activities of the study will be started from the month of November, 2020 and ends on November 2021. Total breakdown of the activities are given below-

Activities	Time	Remarks
Proposal preparation and approval	September, 2020	
Farmer Survey	November 2020	

Activities	Time	Remarks
Farmers Participatory Research	November 2020- April 2021	
Market Survey, KII, FGD and Expert consultation	March – June 2021	
Data entry analysis and Processing	July- August, 2021	
Draft Report writing	September-October, 2021	
Draft Report submission	November, 2021	
Draft Final	December, 2021	

## 11. Public-Private Partnership for Agribusiness Development in Bangladesh: A Step towards Sustainable Agriculture

*Maruf Ahmad (Assistant Director)*  
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### Background of the study

Public-Private Partnerships (PPPs) are increasingly used in agricultural innovation to leverage public funds (Moreddu, 2016). Agri-PPPs are broadly promoted as having the potential to help modernize the agriculture sector and deliver multiple benefits that can contribute towards the pursuit of sustainable agricultural development that is inclusive of smallholder farmers (WEF, 2011; WEF & McKinsey and Company, 2013). It's an interesting option to facilitate between innovation actors at national and international levels (OECD, 2010a, 2010b, 2013). PPP can help the Government to bridge the financial gap by stimulating private sector investment. PPP in agribusiness is designed to address sustainable agricultural development objectives by ensuring that the public benefits anticipated from the partnership. Bangladesh is traditionally an agriculture dominant economy. The majority of her population lives in the rural area where the primary means of livelihood is agriculture. This traditional sector has contributed significantly to the rise of the gross domestic product (GDP) of the country before other sectors take its place (Miah et al., 2020). The farmers are facing severe challenges of climate change, pest and diseases, irrigation, water, credit and mostly product marketing etc. Production, processing and marketing in agriculture are dynamic in nature due to continuous change in consumer's demand and expectation. An innovative approach is essential to meet the current challenges of agriculture (Ponnusamy, 2013). Agribusiness is one of the most challenging businesses in the world. Bangladesh depends heavily on agriculture, but the prospects and potentials for agribusiness for this country is yet to be adequately understood, studied, and its enormous potential explored. This sector is at best in an emerging but nascent stage of development. Bangladesh cannot sustain long-run macroeconomic stabilization and economic progress without having a strong agricultural sector accompanied by a dynamic agribusiness sub-sector (Ali and Islam 2011). Given the high importance of this topic, this exploratory study has been undertaken the following objectives.

### Objectives of the study

- To explore the knowledge of partnerships experience in the agribusiness sector of Bangladesh.

- To draw lessons from them in order to provide recommendations for policy intervention regarding PPP.

## Justification of the Study

Marketing of agricultural commodity is inextricably related to its production. But the Department of Agricultural Marketing (DAM) remains as the weakest of all the existing organizations in the agriculture sector. Markets for agricultural commodities are generally under middlemen's control, which is very discouraging for the farmers. This is not at all favourable for boosting agricultural production. To develop agricultural marketing system, Public-Private Partnership can be a solution. Proper marketing network will be established to facilitate timely marketing of agricultural commodities. To this end, development programmes will be taken up to promote processing of agricultural commodities and ensure fair prices of crops to both the growers and the consumers. Public-Private Partnership is not new development concept for Bangladesh. It's working to implement infrastructure-related mega projects for near about 25 years. But the PPP policy of Bangladesh overlooked a wide field related to the sector of agribusiness. No Agri-PPP initiatives have yet been taken by the Government of Bangladesh which could be a firm step towards sustainable agricultural development.

## Methodology of the Study

A mixed method approach of the study which includes the qualitative as well as quantitative approach will be followed for the study. The mixed method is designed for having comprehensive results from both of the approaches which may support to supplement as well as to complement to each other through triangulation of the related data and information.

## Data Collection Techniques

Both primary and secondary data will be collected for the study. Primary data will be collected through direct interview following a semi-structured questionnaire and guideline. In addition, the ongoing agricultural marketing projects activities will be observed for collecting in depth information. Relevant experts and policy makers working in these fields will also be consulted for gathering details information. Secondary data will be collected from relevant publications, books, articles, newspapers, scholarly articles, published and unpublished documents, websites of related ministries and organizations.

**Personal Interview:** Primary data will be collected using semi-structure questionnaire through personal interview. Both the public and private sector officials involved in agribusiness sector will be the respondents in this study.

**Key Informants Interview:** To grasp the real situations and explore the perspectives of this particular area, there will be arranged 6 KII with PPP expert, PPP law practitioner, public sector officials (government officials), private sector officials and PPP authority.

**Focused Group Discussion:** A total 6 FGD will be conducted with 6 private organizations involved in agribusiness sector in Bangladesh.

## Data Analysis

After having the data collected from various sources, the raw data will be gathered and inserted

in a database system. The data identified and defined by the specific indicators will systematically be utilized and categorized. Then, the validity of data will be tested. Collected data and information will then be categorized and examined in the light of theory and knowledge about the data context. Analysis-inferences and conclusions will be drawn based on the broad questions what, how and why affects. For the processes, there will be used the Statistical Package for Social Sciences (SPSS).

## Research outline

The total research will cover the following steps

<b>Case Study</b>	Case study collected from two partnership agriculture marketing project implemented by Government of Bangladesh
<b>Data Analysis</b>	Using SPSS software

## Limitations of the study

Due to scarce resources and shortage of time at the disposal of the researchers the study will be limited to only few cases. The relevant agencies may not furnish us to all necessary data. Moreover 'PPP in Agriculture' is a new concept for our economy. Another important point to be mentioned that, one of the secondary sources of data will be newspapers and online portals. These data may not be fully authentic, because they do not always collect news from authentic sources. Therefore the result of the study should be viewed keeping the limitations in mind.

## Expected Outcome of the study

After concluding this research we will provide a guideline for agribusiness development regarding public private partnership. It will create another window for Policy maker, PPP expert, Law practitioner, Private sector, Public sector, PPP authority as well as rural development practitioner. The findings of the study will be helpful for the government to take more development initiatives and work with the private sectors on PPP basis in the agribusiness sector.

## Work Plan

The activities of the study will be started from the month of October, 2020 and ends on November 2021. Total breakdown of the activities are given below-

Activities	Time	Remarks
Proposal preparation and approval	September, 2020	
Data Collection	October 2020- May 2021	
KII, FGD and Expert consultation	October 2020- May 2021	
Data entry analysis and Processing	June-July, 2021	
Draft Report writing	July –August, 2021	
Draft Report submission	September, 2021	
Draft final	November, 2021	

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## 12. Social Safety Net Programmes to Fight against Pandemic in Bangladesh : A Study on Some Selected Union Parishad in Bangladesh

*Maruf Ahmad (Assistant Director)*  
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### Introduction

Social safety net programmes are working for the poor groups and fight against poverty, food uncertainty, and malnutrition. Social safety net programmes have performed a main role in the COVID-19 pandemic in the last five months and also played effective responsiveness during the crisis. Many countries of the world have adopted social safety measures during this crisis like cash transfers. This reaction has integrated an increase in the quantity of social safety beneficiaries. Basically, social protection programs have recognized their helpfulness in defensive food security, human capital etc. include in the crisis. Safety net programmes can also get better health and nutrition for newborns. To improve health and nutrition programs, a high policy enacts during this pandemic. It also transfers assist to substitute missing income for poor families by providing a financial stimulus so that they may create positive multiplier things during their recovery. A short-term increase in money transfers during this pandemic can make ethical and political intelligence, protecting their need and creating trust in the administration. Social protection and social assistance have developed in reputation as a most important comeback to poverty. Many developing countries make money transfer programs during the crisis situation. The government of Bangladesh has taken various initiatives to deal with its outbreak across the country. In fact, corona viruses themselves are not new; they are implicated in anything from the common cold to more severe conditions such as MERS (Middle East Respiratory Syndrome) and SARS (Severe Acute Respiratory Syndrome). However, in times of crisis, such as the current COVID-19 pandemic and its economic and social repercussions, public governance matters more than ever (Rahman, 2020). The corona virus pandemic has spread rapidly around the world. The virus, which originated in China's Wuhan province, has infected more than 200 countries, with a total of 216,110 people infected in Bangladesh as of July 23, of whom 119,210 have recovered and returned home 2,801 people died (IEDCR, July 2020). Local government agencies such as city corporations, municipal corporation's district councils, Upazila councils and union councils can coordinate all of such activities to make this effort successful as they are elected representatives (Hossen, 2020). Every union council member or ward councilor has every possible information such as who is new in the locality and who is suffering from what types of health problems. The task, stay-at-home or lockdown, can be easier with their active roles. As this is an emergency time, parliament members can coordinate with the local government to fight this virus. Here, local non-governmental organizations and civil society can actively take part in this coordination committee. The army can be an active part of this committee to ensure good governance in relief distribution and in implementing the stay-at-home order. SDGs desire to confirm that 'No One Is Left Behind' in the world (GoB, 2019). SDG-16 wishes to build effective, accountable, and inclusive institutions at all levels (UN, 2016). Moreover, Ensure responsive, inclusive, participatory, and representative decision-making at all levels. Broaden and strengthen the participation



of developing countries in the institutions of global governance. In Bangladesh Maintaining partial lockdown with business and economic activities with social distancing and public health guidelines is the best strategy to maintain (Shammi, *et al.* 2020). However, as the government withdrew the partial lockdown, inclusive, and transparent risk communication towards the public should be followed. Recovery and strengthening of the health sector, economy, industry, agriculture, and food security should be focused on under the “new normal standard of life” following health guidelines and social distancing. Proper response plans and strategic management are necessary for the sustainability of the nation. This research is an effort to explore how participatory local governance can fight pandemic in Bangladesh and find out what strategies and mechanism is needed for coping COVID-19 period. During COVID-19 pandemic this year, many countries have taken many initiatives like the compensation mechanisms, poverty registries, and various local selection committees to rapidly expand benefits and renovate program target.

### Statement of the Problem

Health and financial shocks are staggering against the COVID-19 pandemic. Whereas the disease indoors afterward and has extended more slowly like developing countries, COVID-19 is frightening the lives and livelihoods of many poor people. As early several significant challenges are remain using social safety nets to the pandemic. In most cases, the financial cost and its continuing transfers will be so difficult due to the risk of corona virus. Till now the pandemic consequences are very serious. Social distancing procedures create obstacles to target new person or beneficiaries. This characteristically involves in person interviews or meeting to partition applicants. Transferring cash can also raise the danger of corona virus spread. COVID-19 was confirmed to have spread in Bangladesh on 08 March and the first death on 18 March 2020. It was started with not understanding of the extent and severity of the pandemic. Overall messages to citizens were confusing and unclear. Delay in installing a scanning machine at the airport. Almost 650,000 NRBs were entering the country between January and mid-April 2020 (Islam, 2020). Quarantine effort failed in hajj camp due to good condition and contact tracing. In the decision-making process, public health expert was absent. Generalist bureaucrats and politician, was face to face. The army was playing a very limited role. Most people are not receiving health care for Covid-19. Non-COVID ailments are not being treated. The health care system is completely disarranging. Before COVID-19, Bangladesh had the second-fastest growing economy in south-East Asia, with an annual GDP growth rate of 8.1% and 7.9% in the 2018 and 2019 fiscal calendar, with a GDP value of \$286 billion in 2019 and the country's growth is projected at 7.2% in 2020 and 7.3% in 2021 (World Bank, 2019).

Now the economic growth could be down by 2% the fiscal year. Two million additional people are being slipped to below poverty from 34 million to 36 million. In the first 03 months of COVID-19, urban laborers' income, decreasing by 80% and 164, 00000 citizens became poor (BIDS, 2020). Crime and violence are increasing. Social fabrics and network are being disarticulations. Vulnerable groups (elderly and disabled) are being more vulnerable. Women are being victimized by violence. (Oxfam, 2020) warning that more people could die as many as 12,000 people dying every day from hunger linked to corona virus than from the respiratory disease itself. In an entitled The Hunger Virus, the charity cautions an estimated 122 million more people could be pushed to the brink of starvation this year as a result of the social and economic fallout from the pandemic including through mass unemployment, disruption of food production and supplies, and declining aid.

### Rationality of the Study

The helpless groups are facing misery due to the negative consequences of COVID-19 virus. In reaction, many governments of different countries are rapidly increasing social safety programs. At this moment, social safety net programs are necessary tools in the global crisis, and take measures how to adapt these programs easily and make to raise their instant effectiveness. It provides a connection to more rapidim provement of domestic, communities, and economies. The governance approach is dynamic. Governance arrangements have played a critical role in countries' immediate responses. These arrangements will continue to be crucial both to the recovery and to building a “new normal” once the crisis has passed (Rahman, 2020). At the beginning of the pandemic, various school feeding programs stopped operating due to closed schools. In India, numerous school systems provided on-site food with rations distribute to homes. During this situation, they are supplying take-home food initially with the risk of coronavirus. Decision and execution strategies may be revised depending on field-level feedbacks of different professional groups such as health service providers, law enforcement agencies, army, and other service providers to reduce the infection and make people's life normal in terms of health care and access to food (Hossen, 2020). Definitely, encountering new experiences of every day and this will be helpful in reviewing our understanding of vertical and horizontal governance about the institution, participation, research, development, environment, and humanity in the context of before, during, and after corona virus emergency perspectives. A social support program provides a rigid foundation to build up safety net plan and become accustomed to fit altering circumstances. These proceedings can progress social safety nets and facilitate to counter several of the most evil effects of COVID-19 pandemic.

### Conceptual Framework and Literature Review

#### Social Safety Nets

The International Labour Organization (2001), describe social safety netprogrammes as “a privilege to settlement that society supply to persons and households through community and collective procedures aimed to defend against low living standards starting out of risks and wants” (page, 8). In the same way, the United Nations define social safety nets as the policy interference that are planned to decrease poverty and weakness and to progress human welfare (UN, 2001). Many social safety measures to sustain the poor and helpless groups, which consist of the young, working and non-working elderly, to handle with financial hardships (Zhang, Thelen & Rao, 2010). Coudy (2004) establishes that it is extensively accepted that helpful social safety netprogrammes are significant mechanism of any inclusive poverty mitigation strategy, in reality, for many poor. These programmes look forward to free from continual poverty, starvation, and disease. Barrientos and Hulme (2008) established that social protection creates a strong hub on poverty decline and for the poorest people in the developing countries.

#### Corona Virus Disease-19 (COVID-19)

Corona virus disease is a contagious disease originated by a recently discovered coronavirus. The whole world is functioning to tackle it. It is a quickly growing and emerging condition. In five months past the first appearance of the virus in December 2019, almost two million citizens have been predictable as definite cases of corona virus disease (Dong E, Du H, Gardner L, 2020).

The anticipated basic reproductive quantity of the disease is extensively higher than contagious diseases, and it can potentially effect in the ability of health services becoming beleaguered. Younger individuals and adults (60 years) are most susceptible group. Till now, there are no proper vaccines permitted for this disease and therefore, non-therapeutic intrusion to control the spread of the disease. The most successful measures are not created to control the virus (Li Q, Guan X, Wu P, Wang X, Zhou L, Tong Y,2020).

## Pandemic

The pandemic is defined as “an epidemic occurring worldwide, or over a very wide area, crossing international boundaries and usually affecting a large number of people”. The classical definition includes nothing about population immunity, virology or disease severity (Kelly, 2011).By this definition, pandemics can be said to occur annually in each of the temperate southern and northern hemispheres, given that seasonal epidemics cross international boundaries and affect a large number of people. However, seasonal epidemics are not considered pandemics.

## COVID-19 Pandemic in Bangladesh and Its Movement

The World Bank stated that the expansion of GDP in Bangladesh could fall significantly from the tallness of over 8% in 2018-19 to as low down as 2-3% in 2019-20 and 1.2%-2.9% in 2020-21, yet if strict blackout lasts from 2 to 4 months. If this were to persist for longer, development could be harmful, consequential in a go down in GDP (World Bank, 2020: p.36).

Bangladesh did not have a noteworthy health sector policy and legislative structures to combat COVID-19 like a pandemic. On 5 March 2020, “National Preparedness and Response Plan for COVID-19, Bangladesh” was released to facilitate planning and identify response levels and risk assessment (IEDCR/ DGHS/GOB, 2020). There are only 399 Intensive Care Units (ICUs) in the government hospitals in Bangladesh—of which 218 are in the Dhaka city alone. Although 20% of COVID-19 patients require ICU, due to its shortage of it the hospitals are unable to provide it (TBS News, 2020).Community transmission of COVID-19 is happening in Bangladesh which did not have a noteworthy health policy and legislative structures to combat a pandemic like COVID-19 (Shammi, *et al.* 2020).

According to the WHO, globally as of 26 July 2020, there have been 15,785,641 confirmed cases of COVID-19, including 640,016 deaths (WHO, 2020a). Despite its rapid transmission rate (Gautam and Trivedi, 2020) national emergency response plans, public health efforts and public guidelines have slowed its development and reduced the scale of COVID-19 outbreak, preventing hundreds of thousands of cases within 50 days in China, South Korea, Taiwan, Vietnam, New Zealand and elsewhere (Business Insider 2020; Tian,*et al.* 2020; Zhang,*et al.* 2020.Strengths (S), weaknesses (W), opportunities (O), and threats (T) (SWOT) analysis method identifies a strategic basis and assesses a relevant and relative approach to prevent and control the COVID-19 pandemic (Wang and Wang 2020).The use of evidence-based strategic emergency control measures in the epidemic areas and the integration of resources from multiple systems, including business, community, technology, education, and transportation, across China was successful in the containment (Liu,*et al.* 2020).

Fear and anxiety about the pandemic are causing overwhelming stress for everyone(Cao, *et al.*, 2020),(Xiao, *et al.*, 2020).While receiving mixed messages piles up the stress, sharing the real facts, and understanding the actual risk reduces the stress. Moreover, this helps the authorities to organize better and manage the crisis. Social activists, television and print media, social workers, and religious

and political leaders should come forward to help in the dissemination of scientifically factual information on COVID-19 among the mass population of Bangladesh(Anwar, 2020).THE government is trying to avoid this emergency with preventive and curative approaches. The government, thus, needs to have the coordination among different stakeholders: (i) health care practitioners, (ii) the law enforcement agencies, (iii) local government, (iv) civil society and, (v) non-governmental organizations at the ground level under the directive of the prime minister and with strong coordination of the health ministry(Anwar, 2020).

A lot of valuable studies have been done in using cross-section data on the changes in the world of pandemic COVID-19 situations over the last six months (Shammi, et al. 2020; Gautam and Trivedi 2020; Wang and Wang 2020; Anwar, 2020; etc), all of which present evidence on a number of effects, scenario, and characteristics of COVID-19. However, none of these studies provides a picture of the local government’s role in pandemic situations or the bottom-up planning approach for managing this type of state crisis in Bangladesh.Therefore, this research initiative is an effort to suggest a guideline for local government institutions with a bottom-up decision-making approach to tackling the crisis situation like pandemic COVID-19 in Bangladesh.Now the government of Bangladesh can choose the economy, public health, or both. Bangladesh is a weak state in a strong society (Migdal, 1988), strong, and deeply held belief about the ‘legitimacy’ of the state. The protection of food security and livelihoods is the essence of ‘social contract theory (Rousseau, 1762) in Bangladesh.

## Objective of the Research

- To find out the present status and coverage of social safety-net programmes in Bangladesh.
- To find out impact of social safety programmes on the livelihood of people at Union level in COVID-19 situation.
- To find out the challenges in serving safety-net facilities to the people.
- To suggest some strategies to provide safety-net services for coping the situation of COVID-19 period.

## Research Variables

Based on the COVID-19 emergency governance with a participatory approach and strategic assessment of pandemic in Bangladesh related literature review the objectives, research problem, and research variables have been developed to be empirically tested (Figure-01).

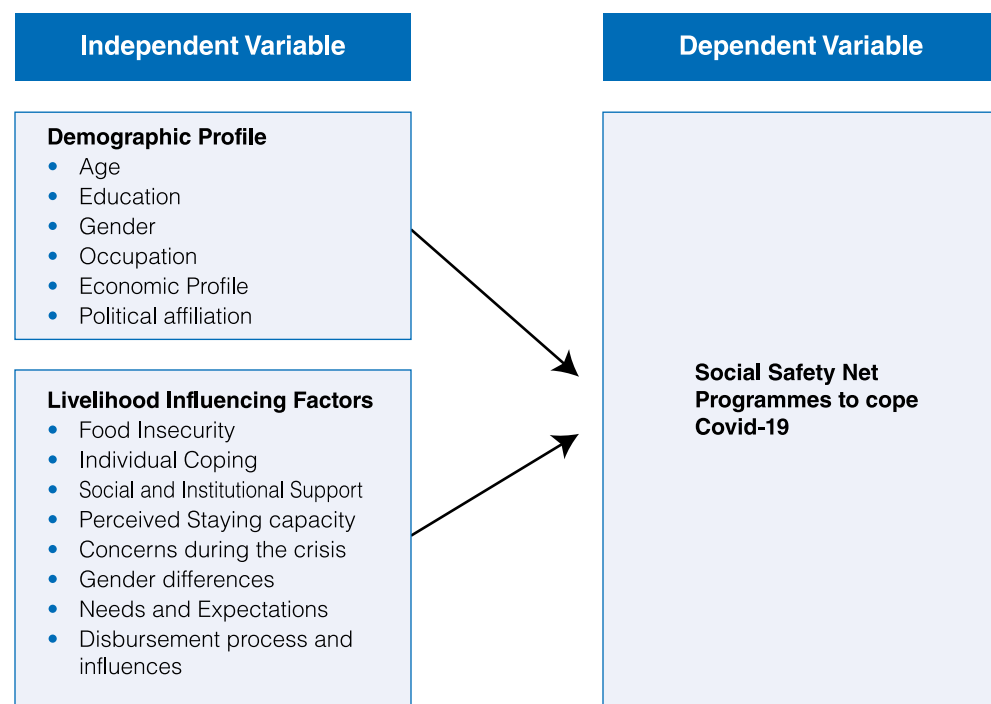


Figure 1: Analytical Framework of the Study.

## Methodology of the study

This research is entitled “Social Safety Net Programmes to Fight against Pandemic in Bangladesh: A Study on Some Selected Union Parishad in Bangladesh” which will be included vigorous field work in six (03) UPs of Cumilla, Cox’s Bazar and Bogra District. Research purpose delivers draw to the researchers to circumnavigate the cruise in the field level. The views of Creswell (2003) research design are classified into 3 groups- i) Quantitative ii) Qualitative and iii) Mixed method. The present study will apply a mixed method effort. The qualitative method is utilized as a leading approach as the research is directed at its usual placing where the quantitative approach will be operated to examine the data. The mixed method affects the complexity of qualitative and quantitative approaches and advantages of the benefits of respectively. An online-based questionnaire, as well as a field survey method (where is applicable), will be applied for collecting data to keep in mind the covid-19 situation.

## Sampling Method and Sample Size

Purposive sampling technique is employed to pick the sample therefore the maximum diversity of individuals with diverse socio-economic settings like age, religion, gender, education; occupation can be included in the research. The most important motive after this type of sampling was to comprise all possible individuals connected to the research function and those who can

be certainly accessible. An online database of target Bangladeshi participants will be prepared by reviewing different online social platforms of different expert groups in Bangladesh, considering their current activities, responsibilities, and engagement related to COVID-19 response in socio-economic sectors, planning, and policymaking. The sample-size will be 120 comprising and this area of study is selected to backing the variety of extent ideas and diversity of respondents.

**Table 2.4: Study Area and Criteria of Respondents** It is sum up below in the table 2.4

Study Area			Criteria of Respondents		Total	Grand Total
Division	District	Union	Bureaucrats and Local Politicians	Citizens		
Chattogram	Cumilla	2 no Durgapur Union	10	30	40	120
	Cox’s Bazar	Pokkhkhai Union	10	30	40	
Rajshahi	Bogura	EruliaUnion	10	30	40	

## Sources of Data

Commonly primary and secondary data have been collected so as to accomplish the actual details of this research. The facts for the exploration are attained from numerous bases comprising papers, articles, thesis resources, key informant interviews and survey etc. The specific resources which are exercised for this study are:

### a. Primary Data

Primary data will be collected by investigator for the study scheme at hand. The primary data desired for this investigation will be gathered through questionnaire survey with diverse respondents at unions, at the source of purposive sampling. There will be key informant interview (KII) scheduled for staffs and local level political representatives.

### b. Secondary Data

Secondary data will be amassed from different books, studies, journals, publications, and reports on websites and official documents, etc. Moreover, the secondary sources will be facilitated in arranging theoretical structure for this research.

## Data Collection Technique

Mainly, this research has operated questionnaire survey means as a determinant method for data collection. This instrument of data gathering is very efficient and therefore is operated most frequently. Moreover, it expedites in accumulating data from a big, distinct and extensively dispersed clusters of individuals (Aminuzzaman, 1991). Additional bases of data collection will be a key informant interview (KII).

## Data Processing, Analysis and Validation

The collected data will be accumulated, categorized and analyzed of quantitative data of the stated sources will be done with the help of statistical tools like SPSS, MS Excel etc. and interpretations of data are likely to be based on statistical generalization. The qualitative information will be presented in a narrative or tabulated form. Moreover, in some cases, charts and tabature

presentation will be used to present the findings of the data in a graphic manner. Quantitative method will be used to generalize and identify prevalence from the data provided by the informants. Qualitative methods will be used to explain the significant phenomenon, causalities, social realities and experiences.

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## Work Plan

The activities of the study will start from the month of August 2020 and ends on September 2021. Total breakdown of the activities are given below-

Activities	Time	Remarks
Proposal preparation and approval	September 2020	
Data Collection	October 2020-January 2021	
KII, FGD and Expert consultation	March-May 2021	
Data entry analysis and Processing	June 2021	
Draft Report writing	July 2021	
Draft Report submission	August 2021	
Draft final	September 2021	

### 13. Protocol development for disease free plantlets production of local banana (*Musa spp.*) cultivars through micropropagation

*Md. Mizanur Rahman (Joint Director)*  
*Md. Asaduss Zaman (deputy Director)*

#### Introduction

The banana and plantains (*Musa spp.*) belonging to the family Musaceae are one of the world's most important subsistence crops. It is originated in Malaysia through a complex hybridization process (Novak, 1992). It is widely grown in the tropics and subtropics in all types of agricultural system, from small, mixed, subsistence gardens, to large commercial monocultures. The crop serves in many developing countries as a staple food or the cornerstone of the country's economy. The largest producers are Latin America and Asia, however, much of the South American production is exported to the developed world.

In Bangladesh, banana, which is rich in carbohydrate, minerals, phosphorus, calcium, potassium and vitamin-C is popular for its year-round availability, abundant production as well as high acceptability to the consumers. In addition, it has importance for tannin, latex and fiber production.

Banana ranks first in terms of production and second in terms of area among the fruit crops and so has commercial value in Bangladesh. It contributes nearly 42% of the total fruit production of the country. It occupies an area of 43 thousand hectares of land with total production of 606 thousand metric tons with an average yield of 14.16 t/ha (BBS, 2003). This yield is quite low compared to that in other banana growing countries of the world like Argentina (34 t/ha) and Costa Rica (33 t/ha) (FAO, 2002).

Banana is also the premier fruit of Asia and the Pacific. It is the most important fruit of Indonesia, Thailand, Bangladesh, Vietnam, the Philippines, the South Pacific island countries and also India, where recently banana has been surpassing mango, traditionally the dominant fruit. Banana also occupies an important position in the agricultural economics of Australia, Malaysia, Taiwan, Sri Lanka and South China. Taiwan and the Philippines derive substantial earnings from their banana export. The great bulk of bananas produced in our country are traded and consumed in domestic markets.

Many biotic and abiotic factors are responsible for low yield and production of banana in Bangladesh. Virus is one of the major problems. The traditional clonal propagation method appears to be unable

to supply the increasing demand for disease free and healthy planting materials of banana. The productivity of vegetatively propagated banana and plantain is greatly reduced by virus disease (Lepoivre, 2000). Moreover, 5-10 suckers can be obtained per plant per year which may be of uniform size and virus free.

To minimize the above mentioned problems, micropropagation could be an alternative for propagation of planting materials for banana. In this method, over a million of plant can be grown from a small or even a microscopic piece of plant tissue within a year (Mantell et al., 1985). Moreover, the shoot multiplication cycle is very short (2-6 weeks), each cycle resulting in an exponential increase in the number of shoots and plants multiplication can be continued throughout the year irrespective of the season (Razdan, 1993). Meristem culture offers an efficient method for rapid clonal propagation, production of virus free materials and germplasm preservation in plants (Cronauer and Krikorian, 1984a; Hwang et al., 2000 and Helloit et al., 2002).

As regards yield performance, tissue cultured plants have been reported to produce 39% higher yield than plants from sword suckers (Pradeep et al., 1992). Under Bangladesh conditions, tissue culture derived plantlets of banana performed better than the conventional sword suckers (Faisal et al., 1998).

#### Objective

Specific objectives of the research are to:

- Establish a suitable protocol for Sagor, Sabri, Kobri, Chini Champa, Mehersagar, Agniswar, Gerasundari, Kanthali Kola, BARI Kola-1 cultivars of banana micropropagation;
- Hardening under field condition;
- Performance testing of plants produced under artificial condition.

#### Justification

The main advantage of tissue culture technology lies in the production of high quality, disease free and uniform planting material that can be multiplied on a year-round basis. Traditional seed production systems have some drawbacks. It often fails to offer disease free quality seeds so tissue culture technology is a time demanded issue.

The traditional banana farming encountered various problems like non-availability of disease-free uniform suckers, high mortality in the field during establishment due to excessive flood irrigation, long gestation period and low yield. The reasons behind this could be adduced to non-availability of disease-free quality planting material and lack of hi-tech farming awareness among the growers. Mass propagation of disease-free high yielding clones to produce consistently uniform and true to type plants by tissue culture is the only alternative for banana plantations.

#### Materials and Methods

The experiment will be conducted at the Biotechnology laboratory at RDA, Bogura. Starting materials (explants) will be collected from RDA's demonstration farm. Culture will be established on to MS medium combination with different plant growth regulators (PGRs) after sterilizing of the starting materials. Various growth data will be recorded such as the number of multiple shoot

formation, shoot length, number of roots, root length, survival of plants during acclimatization and hardening in order to determine the best combinations of plant growth regulators.

## Data analysis

Standard statistical tools will be used to analyze significant effect, less significant difference (LSD) will be used to compare means at 5 % level of significance.

### Time line (2020-21)

Activities	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
Literature review												
Collection of explants and establishment of culture												
Growth of explants on artificial media												
Data collection												
Data analysis												
Draft report												
Final report												

## 14. Searching a New Applicable Model towards Sustaining of Rural Women e-Commerce System: Study on Entrepreneurship of Rural Traditional Products based Rural Women e-Commerce School (RWE)

*Monirul Islam (Assistant Director)*  
*Shamal Chandra Hawlader (Deputy Director)*  
*Dr. Mohammad Munsur Rahman (Director)*  
*Dr. Hasneen Jahan (Professor, BAU)*

### Background and Justification of the Study

Electronic commerce (e-commerce) refers to buying, selling or transmitting data of goods and services over electronic network. It has become popular over the years due to getting the services from home or office with comfort to shop (Andam et al., 2003; Nanekaran, 2003). As Bangladesh is in the process of digitization some selected segments of the Bangladeshi business community has embraced technology with reasonable success in spite of having a developing country (Hossain, et al., 2013; Hossain, 2000). These positive indicators are favorable for the prospects of e-commerce in Bangladesh. Till 2018, the number of e-commerce business sites and e-commerce pages equalled 2,500 and 150,000 respectively. According to Bangladesh telecommunication

regulatory commission (BTRC) in 2016, internet penetration rate was recorded at 13.2 per cent, and the number of internet users was 66.6 million. Only 10% of young women between the ages of 15-29 use the internet in rural areas, whereas the rate is 20% in urban areas, most people in Bangladesh use their mobile phones to access the internet. Household computer access in rural areas is 4% while the rate is 12% in urban areas according to Dhaka Tribune news 22 August, 2020. According to financial express news (21<sup>st</sup> September 2020) a wide range of technologies is used in e-commerce that includes electronic data interchange (EDI), electronic mail (e-mail), electronic funds transfer (EFT). In case of Electronic Data Interchange (EDI) there needs to be an agreement between trading partners. EDI is a standard method for exchanging business data. E-mail and fax are also forms of EDI. In Bangladesh small, medium and big enterprises have taken up e-business platforms. When compared to developed countries, developing countries have a higher potential for improving the business structure and raise productivity by using e-commerce as a medium. M-Commerce (Mobile Commerce) and F-Commerce (Facebook Commerce) are very popular in today's e-business world. Over the years, the number of online transactions has been on the rise. According to BTRC officials the number of internet subscribers in Bangladesh had crossed 80 million in 2017. At present there are approximately 2,000 e-commerce sites and 50,000 Facebook-based outlets delivering almost 30,000 products a day. Currently, 80 per cent of the online sales are taking place in Dhaka, Chattogram and Gazipur. Delivering goods all over Bangladesh has not been possible yet for most of the ecommerce business organizations although e-commerce is an internet based business. Ecommerce business organizations are mainly dependent on getting feedback regarding customer satisfaction through website rating and facebook review. Popular marketing strategies for e-commerce industry in Bangladesh include facebook, campaign, fest participation, attractive offers, print media, offline campaign etc. (Almeida, 2007).

Rural e-commerce, as a new form of commerce, has rendered new opportunities for rural development. Being hidden and fuzzy, rural e-commerce's profit model fails to deliver many benefits to farmers. The backward rural economy impedes the e-commerce development and its profits. As it turns out, five potential variables, i.e., profit point, sources of profit, profit leverages, production and business scope exert influence on the profits of rural e-commerce. This conclusion can provide some theoretical basis and experience for increasing facebook marketing.

In present situation for covid-19 it is predicted that the pandemic will increase the number of less educated unemployed people. According to ILO, Bangladesh has more than 85.0 per cent informal labour who are extremely vulnerable. The hardest hit of the impact would involve marginalized low-income people, many of whom are daily wage-earners and self-employed. While the opportunity for skills development is already shrunk for the youth, the pandemic has made the whole situation even more difficult. It will narrow the upcoming employment opportunity for the fresh graduates. The current massive economic disruption is hurting the 20.0 million youth labour force of Bangladesh. For this reasons researchers' are trying to involve and give support self-employed or unemployed with introduce an income generating activities based on a virtual platform through Rural Women e-Commerce (RWE) School. Rural Women e-Commerce (RWE) School is a facebook base public group for small entrepreneurs especially for female established in 12<sup>th</sup> August 2020. There are eight thousand six members involve with this group till 23<sup>rd</sup> September 2020. Among them 60% women and 40% men from different part of the country and aboard. RWE arranged weekly online class, workshop for the group members. Apart from this RWE fascinated online exposure for small scale entrepreneurs such as identity, products display weekly selling and buying scope. The aim

of the Rural Women e-Commerce School is to provide participants with practical demonstrations of successful practices that will be introduced by rural e-commerce experts for rural enterprises to take advantage of e-commerce opportunities.

Bangladesh is in the process of digitization but e-commerce seems to be concentrated in big cities only. Therefore, it is a big challenge to include the mass people in this process who are staying outside mega cities. Rural e-commerce can play a vital role in this regard through reaching to the mass people from remote areas and districts far from capital Dhaka. That is why it is highly required to expand the e-commerce in both the urban and rural areas (Molla & Hecks, 2007) to make the digital Bangladesh concept true. At this moment, e-commerce is excessively dependent on Facebook which seems vulnerable for e-commerce industry in long run. There, a business expansion model with related facilities needs to be developed so that e-commerce can reach to mass people in the network economy.

## Research Objectives

The primary objective is to assess skills of small scale entrepreneurs, find out the way to promote the e-commerce among rural entrepreneurs through digital networking and address issues of supports in relation to rural women e-commerce. For the purpose of this research e-commerce is defined broadly as any business activity or practice conducted by means of electronic communications especially social media. Small farms including farm enterprises in rural areas have slow adoption with e-commerce. The project aims to visualize the importance of e-commerce in a wider spectrum and grow the interest in e-commerce among entrepreneurs, especially rural women entrepreneurs. Apart from this the project will identify the strengths, weaknesses, opportunities and threats of rural e-commerce industry in Bangladesh and recommend a comprehensive business expansion model of rural women e-commerce to reach the mass people using digital platform. To ensure the sustainability of rural women e-commerce is the ultimate goal of this research.

### The specific objectives are

1. Assess skills of the small scale entrepreneurs and address issues of supports in relation to rural e-commerce.
2. Find out the way to promote the e-commerce among rural entrepreneurs through digital network.
3. Explore and ensure the sustainability of the area of rural e-commerce.
4. To identify the strengths, weaknesses, opportunities and threats of rural e-commerce industry in Bangladesh.
5. Recommend a comprehensive business expansion model of rural e-commerce to reach the mass people using digital platform.

## Research methodology

Identifying appropriate research methods is crucial for any research project. A key feature of the present project was the preparation of suitable case studies illustrating practical e-commerce practices in rural sector. The study will be conducted through primary and secondary data. The

study area will be around the country of Bangladesh. The respondents will be the members of RWE School. The study will be designed to analyze and ensure the sustainability of rural e-commerce. The study also focused on to find out a way to promote the e-commerce among rural entrepreneurs through digital network. It is a descriptive and qualitative study. Primary data will be collected from direct interview method followed by questionnaire through 300 respondents for RWE school members on random sample basis. Focus Group Discussion (FGD) will be done by Zoom online meeting respondents from RWE School. Survey monkey will be used for collecting data from e-Commerce entrepreneurs. Some observational data and information will be collected from RWE School. Secondary data will be collected through various sources of public statistics such as; research paper, articles, previous report and related websites.

The choice of case studies will be guided by the objective to select cases demonstrating a range of practical applications capable of being adapted widely in rural activities. The case studies will be presented in a sequence illustrating increasing involvement with e-commerce practices and the benefits arising therefrom. School participants will be given the opportunity to provide feedback to the organizers on priorities for desirable ongoing research in this area. The participants will identify several research issues and assigned priorities to them. The development of hands-on e-commerce training, of a practical 'how to' e-commerce guide and of a methodology for the valuation of e-commerce benefits will be considered to be of high priority. Other priority topics for research included the development of e-commerce initiatives for marketing authorities and farm organizations, development of applications suitable for different sectors, and the collection of information on issues such as government support for e-commerce and sources of advice for those planning e-commerce initiatives.

The selected case will be studied thoroughly so that the motivation, challenges, and way of success can be present to the respected authority including government, donor agencies, and mass media. SWOT analysis will be used to identify the strengths, weaknesses, opportunities and threats of rural e-commerce industry in Bangladesh. At the same time, the networking among buyers and sellers of rural entrepreneurs will be strengthened through digital networking system which is now a days is considered as a part of network economy. Since, social media based platform is vulnerable, to make the e-commerce sustainable, a digital platform for buyers and sellers will be established where people can sell their products and buyers can purchase by comparing prices and give feedback. The electronic payment system will be introduced in the platform. In this way, both the buyers and sellers can avoid the hassle of physical marketing channels and they can reach to each other beyond boundary. Considering and evaluating all these aspects, a comprehensive business expansion model of e-commerce will be developed in Bangladesh perspective which will be the major contribution of this project to the e-commerce sector. Other countries experience will be studied thoroughly for this purpose and by reviewing significant business models an appropriate model of rural e-Commerce for Bangladesh will be developed.

## Probable outcome from this research

A series of research books and e-commerce guidelines, story of rural entrepreneurs, video documentary of rural entrepreneurs will be published based on the case studies and contribution of experts. Finally, a comprehensive report will be prepared from RDA based on the project objectives and outcome. The results will be published and disseminated through different electronics media,

Social media programme and news. Through this research findings its will be clearly understandable how to use digital platforms for the expansion of rural e-Commerce, how to effectively operate the business in digital marketing platform and how to promote rural and traditional products to reach the mass people. The participants will also be accommodated in the developed rural entrepreneurship model so the success of this research will be treated as sustainable model for rural e-Commerce in Bangladesh.

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## 15. Sequestration Trial of Biochar as an Exceptional Bioresource Energy for Enhancing Soil Productivity in Rice

*Noor Muhammad (Assistant Director)*

### Introduction

Bangladesh is one of the most vulnerable countries in the world in terms of global climate change (Karim, 2015; Rahman, 2010; Huq and Ayers, 2007; Rahman and Alam, 2003). The country has been suffering frequent natural disaster because of global climatic fluctuation (Karim and Thiel, 2017). Around 84 percent households use fuel wood and crop residues for traditional cooking stove locally known as Chula, while fuel wood constitutes 41 percent of total biomass energy (BCAP, 2013). Heavy reliance on fuel wood and crop residues is highly responsible for the reduction of forest and organic matter, respectively (Miah et al.,2009). Natural disaster and crop diversification through modern farming system are subsequently interlinked (Karim and Muhammad, 2018). The

benefits of organic farming seemed to be environmentally friendly and helpful for climate change mitigation (Karim, 2018).

Biochar is charcoal made from organic residues that are carbonized at temperatures between 450-750 degree centigrade in the absence of oxygen (pyrolysis) or with restricted oxygen (gasification). People have known for millennia that the ash and charcoal are good for plant growth (BBI, 2015). Biochar is produced in an environmentally friendly manner by recycling plant waste into fertilizer (Cui, 2015, McLaughlin et al.,2009 and Lehmann, 2009). There are various types of Biochar based on the raw materials (woody fuel, agricultural wastes, forest residues, organic wastes materials) from which it is made. There is evidence that the Amazonian basin farmers in Latin America used a soil amendment similar to what is today we called as biochar, and thus created the renowned Terra Pretasto improve their agricultural production, as far backas 6000 years ago (Barrow, 2012). The existence of these „dark earths with high levels of soil fertility is often used to support modern research on biochar as a soil amendment (Leach et al.,2010). Moreover, the development of biochar producing stoves, which provides efficient energy and healthy cooking resulting biochar used for soil improvement and Green House Gas (GHG) reduction (Barrow, 2012).

Biochar is an emerging multi-purpose innovation which is rapidly attracting the attention of researchers. Biochar systems are usually carbon-negative and sequestering carbon dioxide from the atmosphere. It increases the water-holding capacity, pore size and distribution on beneficial microbial communities in the soil (FAO, 2010).

### Importance of the Study

Rice is one of the world's most consumed cereal crop. It is a staple food for many Asian, African, Latin American and Caribbean countries; with approximately 90% of the world's production and consumption of rice coming from Asia (Facts and Figures on Food and Biodiversity). Rice provides 21% of global human per capita energy and 15% of per capita protein. Although rice protein ranks high in nutritional quality among cereals, protein content is modest. Rice also provides minerals, vitamins, and fiber, although all constituents except carbohydrates are reduced by milling.

During cultivation of rice a common rice fertilization scheme that is used by a great number of rice farmers involves 2 major fertilizer applications: The first application takes place at roughly the same time with planting or transplanting (or about 20 days later) and the second takes place about 45-60 days after the first application. It increases the costing which is ultimately decreases benefit cost ratio. So, organic sources will be the major ways to decrease costing and increasing long term soil productivity. Biochar may play such a role to increase soil productivity. But a very few researches are available about the extent of increasing soil productivity. So, this piece of research will try to measure the extent of increasing soil productivity using biochar as well as recommend the doses need to be applied in rice field.

### Objectives of the study

1. To assess energy output from biochar calculating soil productivity
2. To conduct field level experiment using biochar in comparison with normal fertilization
3. To propose probable doses and time of using biochar in rice field.



## Methodology

### Locale of the study

Bogura district will be selected purposively as the research area. Shahzahanpur upazila under Bogura District and RDA demonstration farm will be selected as purposively to conduct field level experiment.

### Research tools and techniques

To collect data open and closed form questionnaire will be used. Data will be collected directly from experimental plot.

### Experimental setup

A total number of nine experimental plots will set up to fulfill the research objectives. In eight plots different treatment of Biochar will be given whereas in one plot normal fertilization will be provided. Doses of biochar will be marked as T<sub>1</sub> to T<sub>8</sub> and normal fertilization will be marked as T<sub>0</sub>. The research will identify which doses provide best output from soil.

### Data Processing and Analysis

After completion of the primary data collection, the raw data will be coded, edited and data entry will be completed by using latest statistical packages for social sciences (SPSS). Some simple statistical tools like frequency table, cross table with Hypothesis testing will be used for data analysis.

### Report writing

After completion of all analytical works the research report will be written by the researchers and will be submitted to respective authority.

### Expected outcome from the research

Generally farmers are very much interested to use inorganic fertilizer in their field. This ultimately hampers soil health and will decrease soil productivity in long run. For these reason organic fertilizers especially biochar may be very good options to cope up with this matter. Using biochar is already started but farmers are not very much aware about its doses of application. After completion of the research, recommendations will enable to take decisions regarding best doses with proper time of application that will increase the soil productivity, crop yield and ultimately contributed to national food production and national GDP to agriculture.

### Plan of work

The activities of the study will be started from the month of September 2020 and ends on August 2021. Total breakdown of the activities are given below-

Activities	Time	Remarks
Proposal preparation and approval	August 2020	
Review of literature study	September-November 2020	

Activities	Time	Remarks
Field Experiment and Data Collection	October 2020 to March 2021	
Data entry analysis and Processing	April- May 2021	
Draft Report writing	June- July, 2021	
Report finalization and submission	August, 2021	

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## 16. In COVID-19 pandemic situation the Role of ICT in the education system in Bangladesh (A case study in the northern part in Bangladesh)

*Sk. Saeem Ferdous (Deputy Director)*

### Introduction

Bangladesh has a large education system with 38.6 million students: 3.6 million in pre-primary; 18 million in the primary; 13 million in secondary and 4 million in tertiary education<sup>3</sup>. According to the 2018 Bangladesh Education Statistics, there are 0.17 million primary-to- tertiary educational institutions including 0.13 million primary education institutions. Around 75.2 percent are enrolled in government primary schools among primary level students, and only 48.9 percent of primary schools are government schools. Economic growth in the country is strongly related to ensuring good educational achievement, learning outcomes and skill development.

When Bangladesh identified the first case of COVID-19 on March 08, 2020. In the first week of April 2020, the outbreak began spreading rapidly. Bangladesh has detected 12,425 confirmed cases as of May 07, 2020, and 199 deaths<sup>2</sup>. Several steps have been taken by the government to restrict transmission. The country has been facing a national shutdown (with the exception of emergency services) and restrictions on public transport since 26 March 2020, extended until 15 May 2020.

As the situation remains unpredictable, it is difficult to accurately predict the course of this pandemic in the future. Accepting the fact that there are no alternatives to schools and educational facilities, there should be readily accessible mechanisms and means of coping with crisis circumstances that cause uncertainties around continuous learning and maintaining pupils' health, protection, and hygiene. The situation of COVID-19 has highlighted the fact that the mechanism is inadequately prepared to deal with a crisis such as this one. Some ad hoc initiatives were taken with limited success during the crisis period, either because of the lead time required to implement the plans and because of limited access to resources, making it difficult to achieve the expected goals. COVID 19 reiterates the need for a structured and robust learning plan and for pupils' fitness, safety, and hygiene.

Globally, however, the pandemic COVID-19 led to about 1.6 billion school children and young people in 193 countries leaving school, accounting for over 90 percent of total enrolled learners.<sup>6</sup>

There was also an end to education from around 38.6 million Bangladeshi students when a country-wide school closures were announced on March 17, 2020, when the COVID-19 pandemic was launched. It has resulted in the suspension of the exam for the first term in all primary schools in the region, while the exam for the Grade 12 / Equivalent Terminal exam for the academic year has been postponed. By September 2020, authorities expect to extend the closure of educational institutions. A short, medium and long-term effect on education and the creation of human resources in the country is anticipated for the continuation of school closure and disruption. I realize the importance of planning and resolving the COVID-19 pandemic in Bangladesh education in the report. So, I am interested to do the research "In the COVID-19 pandemic situation the Role of ICT in the education system in Bangladesh" in education sector.

### Objectives

1. To enlighten various measures taken by Govt. of Bangladesh for the education sector during this pandemic;
2. To highlight the various positive impact of COVID-19 on education;
3. To enlist some negative impacts of COVID-19 and to put some effective suggestions for continuing education during the pandemic situation.

### Methodology

The research methodology of the study focuses on the quantitative and qualitative approaches. Data from this research work will be collected from two main sources; the primary and the secondary sources. Primary data will be first-hand data collected directly three Upazila in Bogura District in the field selected three schools from each Upazila and also through an online survey and have not been used by anyone. Such data will be obtained using the questionnaire, observation, and online interviews. Meanwhile, secondary data are those items that have been originally collected and worked by another research that the present researcher may need for her research work. It is second hand in nature and less reliable. This type of data can be collected using newspapers, textbooks, journals, magazines, and even the internet.

## 17. Existing situation and Future challenges of Micro-Credit Programmes for Poverty Reduction towards Government and Non-government Organizations in the Northern region of Bangladesh: An Comparative Analysis

*Md. Mazharul Anowar (Deputy Director)*

### Introduction

#### Background of the Study

Bangladesh is an agro-based developing country where 80 percent of the population lives in rural areas. The people of this country are suffering from wide spread unemployment and poverty. The situation is more alarming in the case of landless and asset less people who constitute more than 50 percent of the rural population. In view of these socio-economic realities, alleviation of

poverty has been given the main thrust in the first five years plan. Bangladesh is considered as a developing country yet, almost one-third of Bangladesh's 150m people live in extreme poverty. In the last decade, the country has recorded GDP growth rates above 5 percent due to development of microcredit and garment industry. Although three fifths of Bangladeshis are employed in the agriculture sector, three quarters of exports revenues come from producing ready-made garments. The biggest obstacles to sustainable development in Bangladesh are overpopulation, poor infrastructure, corruption, political instability and a slow implementation of economic reforms. The Gross Domestic Product (GDP) in Bangladesh expanded 7.24% in 2018 from the previous year. This indicator has been discontinued and replaced by Bangladesh GDP Annual Growth Rate. GDP Growth Rate in Bangladesh averaged 5.69 % from 1994 until 2018, reaching an all time high of 7.24% in 2018 and a record low of 4.08 % in 1994. The magnitude and the depth of deprivation are extremely high with the majority living under the poverty. The main cause of poverty in Bangladesh is the lack of productive employment opportunities for the huge number of unemployed and under employed work force, which is tremendously increasing and posing serious problems for the country. The employment opportunity in agriculture is seriously constrained by the scarcity of land. Therefore self-employment creation through micro-credit led strategy in the rural areas can play a significant role in reducing the rural unemployment and acute poverty.

In this backdrop, the government and non-government organizations are trying to involve the rural poor through micro-credit operation in different types of income generating activities. So that they can create their own employment and generate sufficient income as an entitlement to food security, water, sanitation, creating employment opportunity, quality education and other necessities of life, since the poor are moving along the path of various circles of poverty. They are not in a position to make investment by them in income generating activities; as a result they need micro-credit to run the activities to be undertaken by the credit delivery organizations both of GOs and NGOs.

Credit has always been used as a key element in the development strategy of Bangladesh. It is also an important input which enables the rural people to buy other inputs necessary for increasing production in the farm and non-farm sectors in the rural areas. Government of Bangladesh initiated some credit programmes in the early 70's to make the fund available to the rural people. During the Mid 80's a number of government and Non-government organizations (NGOs) particularly the Grameen Bank Pioneered alternative credit delivery mechanism for the rural poor that consisted of small amount of collateral free, affordable loans popularly known as micro-credit. These micro-credit programmes unlike previous government efforts have been successful in providing commendable access to credit by landless and asset less women and men (usually defined as those with a land holding of less than half an acre), and in achieving high

repayment rates of up to 98%. Several impact studies on multiple credit programmes have substantiated the important role of credit in the development process of Bangladesh. A BIDS study on Rural Poverty (1996) notes the higher rates of growth in per capita income observed for micro-credit recipients when compared to that of non-recipients. For more information on micro-credit it can be said that, micro-credit has become a long way, Prof. Yunus, Managing Director of Grameen Bank, promoted it in 1974 in Jobra, a village in Chittagong district in Bangladesh and it has spread all over the world. The strength of micro-credit lie in its ability to organize idle women into a productive work force with their proven worldwide are now uses micro-credit to undertake income generating or self employment activities. Micro-credit is an important financial instrument

to generate economic activity. About more than 1200 Micro Finance Institution (MFIS) are now operating in Bangladesh. Finally it can be said that micro-credit is not merely an instrument for credit extension to the poor Borrowers; it is a movement to emancipate the poor people to reduce their poverty, improve their quality of life and build their capacity and awareness and to integrate them economically and socially into the main streams of the economy. The benefits of micro-credit are go beyond the quantifiable ones. There are other benefits, which are seen, but are evident in the socio-economic transformation of Rural Bangladesh. In Bangladesh, several numbers of studies have been carried out on loan disbursement, utilization and repayment but none was carried out to assess the existing situation and impacts of GOs and NGOs credit programme. In this study, an attempt has been made to examine various aspects to reduce poverty with the micro-credit supports of government and Non-government organizations as well.

### Objectives of the Study

The broad objective of the proposed study is to investigate the overall existing situation and future challenges of micro-credit programmes for poverty reduction in the 21st century which is implementing by government and non-government organizations in Bangladesh. The specific objectives are as follows:

1. To investigate how and what extents micro-credit recipients are mobilized and organized through GOs and NGOs micro-credit activities;
2. To observed the existing situation and future challenges of micro-credit programmes implementing through GOs and NGOs
3. To explore the benefits, necessity, accessibility, utilization and control of micro-credit through credit recipients;
4. To examine the impacts of micro-credit programmes implementing by GOs and NGOs;
5. To compare the various development activities of micro-credit programmes among GOs and NGOs; and
6. To identify various problems of GOs and NGOs micro-credit programmes make future recommendations and suggestions for further study

### Justification of the Study

A lot of government and non-government organizations have been implementing micro-credit programmes for poverty reduction since the last five decades. In fact, few researches had earlier been conducted for poverty reduction in rural Bangladesh through government and non-government organizations regarding this issue. Though the role and impact of micro-credit is tremendous and it is well known to rest of the world that

Bangladesh is the pioneer of introduce micro-credit to the assetless and landless rural poor without any collateral. Micro-credit has also been treated as an important factor towards poverty reduction. The present study is an attempt to investigate the existing situation and future challenges of micro-credit programmes implementing through credit delivery organizations both GOs and NGOs in Bangladesh. Finally the results of the present study will help the government Policy maker, researchers, GOs/NGOs professionals, research students to formulate effective policy and programme for the micro-credit recipients to identification of the various problems of micro-credit and future challenges and their effective way forward.

## Research Methodology

### Resign Design

Research design of various socio-economic researches plays an effective role for conducting and making fruitful output for any research projects. So, this proposed research study will be carried out on the basis of exploratory research design both on qualitative and quantitative research methods, because this study will be focused to investigate existing situation and future challenges of micro-credit programmes through government and non-government organizations for poverty reduction in Bangladesh.

### Location of the Study Areas

The Proposed research study will be conducted in ten districts under northern region of Bangladesh specially at Rajshahi and Rangpur Division as well. Bogra, Sirajgonj, Naogoan, Rajshahi, Natore, Rangpur, Kurigram, Nilphamary, Panchagar and Dinazpur will be selected study areas for the proposed research.

### Rationale of the Selection of the Study Areas

Micro-credit is a powerful financial instrument to generate economic activities and to reduce poverty. There are many government and non-government organizations those who are implementing micro-credit programmes for the vulnerable rural poor for their better livelihood and improving the living standard as well. In this regards, a lot of GOs and NGOs specially RDA, BARD, BRDB, Grameen Bank, ASA, PROSHIKA, TMSS and others have been implementing micro-credit programmes through credit delivery organizations both on GOs and NGOs as earlier mentioned as well. Though this proposed study will be conducted on both GOs and NGOs micro-credit programmes in the northern region of Bangladesh for the vulnerable rural poor, and as well a lot of GOs/NGOs have been implementing micro-credit programmes not only in the northern region but also whole over the Bangladesh. It will be very difficult to conduct this study in whole over the Bangladesh because of time constraints and other difficulties. For this reason the proposed study will be conducted only the northern region of Bangladesh like Bogra,

Sirajgonj, Naogoan, Rajshahi, Natore, Rangpur, Kurigram, Nilphamary, Panchagar and Dinazpur have been chosen as the study areas respectively.

### Sampling Procedure

Credit delivery organizations both GOs and NGOs have been implementing micro-credit programmes since last five decades in Bangladesh as well. The proposed research study will be conducted only northern region of Bangladesh like Bogra, Sirajgonj, Naogoan, Rajshahi, Natore, Rangpur, Kurigram, Nilphamary, Panchagar and Dinazpur. The population for the proposed study will be micro-credit recipients among all the selected areas as well. There are a lot of credit recipients in the northern region of Bangladesh among all the selected districts where population is known. At first, 10 (Ten) districts will be selected among two divisions in the northern region of Bangladesh by using purposive sampling method as well. In second stage 10 (Ten) upazilas like shariakandi, kazipur, naogoan sadar, tanore, godagari, singhra, pirgonj, fulbari, dimla, panchagor sadar and parbotipur will be selected among all the 10 (Ten) districts by purposively. In third stage, from each

upazilas 50 credit recipients (50@10 upazilas) 500 credit recipients will be selected through simple random sampling method by using random number table as well. Finally 500 credit recipients will be the sample size for the proposed study.

### Methods of Data Collection

The proposed research study is an exploratory research and will be carried out both on qualitative and quantitative research design. Both primary and secondary data will be collected for the proposed research study in the selected study areas as well. The following data collection tools will be used for the proposed studies which are as follows:

- Structured Questionnaire
- Field visit and Observations
- Key information collection
- Focus Group Discussion (FGD) and
- Case Studies

### Methods of analysis

For the proposed research study, after completion of both primary and secondary data collection, the raw data will be edited, coded and cross-checked for validation. Later after the data entry and analysis will be completed by using the latest statistical software like SPSS (Statistical Packages for Social Sciences) as well.

# CHAPTER 3



# ANNUAL ACTION RESEARCH PLAN 2020-21



### 3.1 Introduction of Action Research

Action research is one of the major functions of the academy. The main objective of action research is to find out appropriate solutions of rural socio-economic problems. It has also aims to develop replicable models for rural development. RDA has fixed up its action research target in Annual Performance Agreement (APA). Based on the target of APA, RDA is conducting its action research activities.

Nine action research projects are being implemented by the academy. Out of these, eight are GoB Funded Projects (ADP) and One is Non-ADP funded Project. In addition, seven Self Assisted Centres, Demonstration Farm and RDA Lab. School and College are managed by RDA, Bogura. This paper deals with the updated progress of Action Research Projects and the Centres for the fiscal year 2019-20. Moreover, 11 in-coming and proposed projects are also highlighted herewith for the next fiscal year 2020-21.

In this chapter, Academy has tried to give a short account of the major achievements of all the projects. Discussion of this chapter is divided into two parts. The first part is about the introduction to the project titles under different categories depend on the nature and sources of funding. The second part is devoted to discussion on project-wise activities and achievements.

### 3.2 Incoming Projects (GoB)

- |       |   |
|-------|---|
| I.    | Action Research Project on Sustainable Livelihood Improvement and Women Empowerment through RDA-Developed Women in Seed Entrepreneurship (WISE) Model               |
| II.   | Project on Strengthening of physical facilities through Capacity building of RDA, Bogura  |
| III.  | Action Research Project on Sustainable Socio-economic Development of Rural Farmers Through Farm Mechanization with Cost Saving Integrated Agricultural Technologies |
| IV.   | Action Research Project on Creation of Entrepreneurship and Employment Generation through Skill Development   |
| V.    | Establishment of Rural Development Academy (RDA) at Jashore   |
| VI.   | Project on Solar based Livelihood Improvement and Enlightened Village   |
| VII.  | Action Research Project on Strengthening and Expansion of Cattle Research and Development Centre under RDA, Bogura  |
| VIII. | Project on Establishment of Most. Amina Begum Rural Development Training & Research Center at Barishal  |
| IX.   | Action Research Project on Community Based Livestock and Waste Management for Better Livelihood.  |
| X.    | Action research project on converting municipal dumping ground waste into asset using environmental friendly Trichoderma technology.                                |
| XI.   | Making Markets Work for the Chars (M4C) Phase- 2  |

### 3.3 In-coming Projects (GoB Funded)

A total of 11 projects proposal (DPP) have been submitted in the financial year 2020-21 for implementation nationwide by Rural Development Academy (RDA), Bogura. The in-coming project list is given below:

(Taka in Lakh)

SL. No	Project Name (Implementing Period)	Estimated Cost	Present status
১.	আরডিএ উদ্ভাবিত গ্রামীণ নারী কর্তৃক ফসলের বীজ ব্যবসা মডেল (ওয়াইজ) সম্প্রসারণের মাধ্যমে টেকসই জীবিকায়ন ও নারীর ক্ষমতায়ন শীর্ষক প্রায়োগিক গবেষণা প্রকল্প। (জুলাই ২০২০- জুন ২০২৩)  Action Research Project on Sustainable Livelihood Improvement and Women Empowerment through RDA-Developed Women in Seed Entrepreneurship (WISE) Model.	৪,৯৯৯.০০	১৮/০৮/২০১৯ অর্থমন্ত্রণালয়ের উন্নয়ন প্রকল্পের পদ/জনবল নির্ধারণ বিষয়ক আন্তঃমন্ত্রণালয় কমিটির সভার সিদ্ধান্তের আলোকে ডিপিপি পুনর্গঠন আলোকে ডিপিপি পুনর্গঠনপূর্বক ২১ নভেম্বর ২০১৯ তারিখে প্রশাসনিক মন্ত্রণালয়ে জমা দেয়া হয়েছে।
২.	আরডিএ, বগুড়া'র অবকাঠামো শক্তিশালীকরণের মাধ্যমে সক্ষমতা বৃদ্ধি শীর্ষক প্রকল্প। (জুলাই ২০২০- জুন ২০২৩)  Project on Strengthening of physical facilities through Capacity building of RDA, Bogura	৪,৯৯৬.০০	পউসবি'র স্মারক নং ৪৭.০০.০০০০.০৪৫.১৪.০০৪.১৯-৪৩; ২৯/০৬/২০২০ খ্রি: তারিখের পত্রের আলোকে পুনর্গঠন করে গত ১৯/০৭/২০২০ খ্রি: তারিখে পল্লী উন্নয়ন ও সমবায় বিভাগে প্রেরণ করা হয়েছে।
৩.	কৃষক জনগোষ্ঠীর আর্থ-সামাজিক উন্নয়নে খামার যান্ত্রিকীকরণসহ ব্যয় সাশ্রয়ী সমন্বিত কৃষি প্রযুক্তি ব্যবহার করে টেকসই উন্নয়ন শীর্ষক প্রায়োগিক গবেষণা প্রকল্প।  Action Research Project on Sustainable Socio-economic Development of Rural Farmers Through Farm Mechanization with Cost Saving Integrated Agricultural Technologies.	১,৩০,৭৫৪.০০	প্রকল্পের আওতায় জনবলের পদ সৃষ্টির প্রস্তাব ০১ নভেম্বর, ২০১৯ তারিখে পউসবিতে প্রেরণ করা হয়েছে।
৪.	দক্ষতা উন্নয়নের মাধ্যমে উদ্যোক্তা ও কর্মসংস্থান সৃজন শীর্ষক প্রায়োগিক গবেষণা প্রকল্প।  Action Research Project on Creation of Entrepreneurship and Employment Generation through Skill Development	৪,৯০০.০০	ডিপিপি প্রণয়নের কাজ চলমান
৫.	যশোরে পল্লী উন্নয়ন একাডেমী (আরডিএ) প্রতিষ্ঠাকরণ শীর্ষক প্রকল্প  Establishment of Rural Development Academy (RDA) at Jashore	১৯,৯৬৬.৭২	প্রকল্পের আওতায় জনবলের পদ সৃষ্টির প্রস্তাব ০১ মার্চ, ২০২০ তারিখে পউসবি'তে প্রেরণ করা হয়েছে।
৬.	সৌর শক্তির নির্ভর "আলোকিত গ্রাম ও জীবিকায়ন" শীর্ষক প্রকল্প। (জুলাই ২০২০- জুন ২০২৩)  Project on Solar based Livelihood Improvement and Enlightened Village	৪,৯৯০.০০	ডিপিপি প্রণয়নের কাজ চলমান
৭.	আরডিএ, বগুড়া'র আওতায় ক্যাটেল গবেষণা ও উন্নয়ন কেন্দ্রের জোরদারকরণ ও সম্প্রসারণ শীর্ষক প্রায়োগিক গবেষণা প্রকল্প। (জুলাই ২০২০- জুন ২০২৩)  Action Research Project on Strengthening and Expansion of Cattle Research and Development Centre under RDA, Bogura	১০,৯৯৭.০০	১৫/০৯/২০১৯ ইং তারিখে অর্থমন্ত্রণালয়ের উন্নয়ন প্রকল্পের পদ/জনবল নির্ধারণ বিষয়ক আন্তঃমন্ত্রণালয় কমিটির সভার সিদ্ধান্তের আলোকে ডিপিপি পুনর্গঠনপূর্বক ২৯ আগস্ট ২০১৯ তারিখে প্রশাসনিক মন্ত্রণালয়ে জমা দেয়া হয়েছে। অগ্রাধিকার তালিকায় অন্তর্ভুক্ত করার সুপারিশ করা যায়।
৮.	বরিশালে মুসাম্মৎ আমিনা বেগম পল্লী উন্নয়ন প্রশিক্ষণ ও গবেষণা কেন্দ্র স্থাপন (জুলাই ২০২০- জুন ২০২৩)  Project on Establishment of Most. Amina Begum Rural Development Training & Research Center at Barishal	২০,০২৫.০০	পউসবি'র নির্দেশনার আলোকে ২৫ অক্টোবর ২০১৮ তারিখে ডিপিপি মন্ত্রণালয়ে জমা দেয়া হয়। বর্তমানে পরিকল্পনা কমিশনের সচিব মহোদয়ের চাহিদার প্রেক্ষিতে পুনরায় ডিপিপি পুনর্গঠনের প্রক্রিয়া চলমান।

SL. No	Project Name (Implementing Period)	Estimated Cost	Present status
৯.	কমিউনিটি ডিস্ট্রিক গবাদিপশু পালন ও বর্জ্য ব্যবস্থাপনার মাধ্যমে জীবিকা উন্নয়ন শীর্ষক প্রায়োগিক গবেষণা প্রকল্প। (জুলাই ২০২০-জুন ২০২৩)  Action Research Project on Community Based Livestock and Waste Management for Better Livelihood.	১৭,৪৯৫.০০	পউসবি'র গত ১৪/০৮/২০১৮ তারিখের নির্দেশনার আলোকে প্রকল্পের জরিপ/সম্ভবতা যাচাই সম্পন্ন ডিপিপি পুনর্গঠন করা হয়েছে যা মন্ত্রণালয়ে দাখিল করণের প্রক্রিয়াধীন রয়েছে।
১০.	পরিবেশ বান্ধব ট্রাইকোডার্মা প্রযুক্তি ব্যবহারের মাধ্যমে পৌর এলাকার স্থপকৃত বর্জ্য সম্পদে পরিণত করা শীর্ষক প্রায়োগিক গবেষণা প্রকল্প। (জুলাই ২০২০-জুলাই ২০২৩)  Action research project on converting municipal dumping ground waste into asset using environmental friendly Trichoderma technology.	২,৭৯০.০০	ডিপিপি প্রণয়নের কাজ চলমান।
১১.	Making Markets Work for the Chars (M4C) Phase- 2 (July 2020 to June 2024)	Total- 5,986.00 Lac (GoB: 1,476.00; PA: 4,510.00 Lac)	প্রকল্পের টিএপিপি'র উপর গত ২৩/০৮/২০২০ খ্রি: তারিখে যাচাই কমিটির সভা'র সিদ্ধান্তের আলোকে টিএপিপি পুনর্গঠন করে ১৫ সেপ্টেম্বর ২০২০ তারিখে মন্ত্রণালয়ে দাখিল করা হয়েছে।

Table 3.1: List of Involved Faculty Members

SI. No.	Name of the Project	Faculty Member
<b>Ongoing Projects (GoB &amp; Non ADP Funded)</b>		
1.	Action Research Project on Extension and Dissemination of Modern Water Saving Technologies and Management Practices to Increase Crop Production	Abdullah Al Mamun Md. Ferdous Hossain Khan
2.	Action Research Project on "Construction of Co-operative based Multistoried 'Palli Janapad' Housing with Modern Urban Amenities for Livelihood Improvement of the Rural People"	Md. Delwar Hossain Md. Abid Hossain Mridha Shaikh Shahriar Mohammad
3.	Establishment of Rural Development Academy (RDA) at Rangpur	Abdullah Al Mamun Dr. Md. Abdul Majid Pramanik Md. Abid Hossain Mridha
4.	Establishment of Rural Development Academy at Jamalpur	Md. Abid Hossain Mridha Md. Asaduss Zaman Md. Al Mamun
5.	Comprehensive Village Development Programme (CVDP) – RDA Part (3 <sup>rd</sup> Phase)	Dr. Mohammad Munsur Rahman
6.	Livelihood Improvement of the Poor People in the Char Islands of Sariakandi and Sonatola Upazilas under Bogura District	Dr. Samir Kumar Sarker Md. Mohiuddin
7.	Action Research Project on Disseminating Two-storied Agriculture with Solar Power Irrigation Technology and its Multipurpose Uses.	Md. Ferdous Hossain Khan Md. Khalid Aurangozeb
8.	Project on Poverty Reduction of Marginalized People of Kurigram and Jamalpur Districts	Dr. Md. Nurul Amin Dr. Shaikh Mehdee Mohammad Dr. Md. Riazul Islam Maruf Ahmed Md. Ashraf Islam

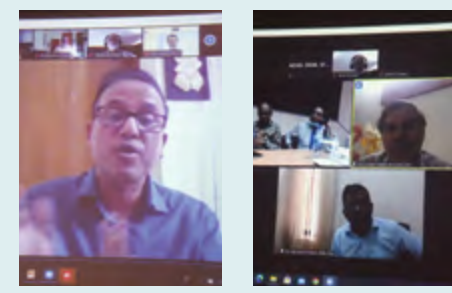
Sl. No.	Name of the Project	Faculty Member
9.	Livelihood Enhancement of the small farmer in SAARC region through small scale agro-business focusing on value chain development.	Md. Ferdous Hossain Khan Md. Abdul Alim
<b>Incoming Projects</b>		
1.	Action Research Project on Sustainable Livelihood Improvement and Women Empowerment through RDA-Developed Women in Seed Entrepreneurship (WISE) Model	Md. Khalid Awrangojeb Dr. Md. Abdul Majid Pramanik Rebeka Sultana
2.	Project on Strengthening of physical facilities through Capacity building of RDA, Bogura	Md. Abdus Samad Md. Ferdous Hossain Khan Md. Abid Hossain Mridha Md. Asaduss Zaman Md. Abdul Kashem
3.	Action Research Project on Sustainable Socio-economic Development of Rural Farmers through Farm Mechanization with Cost Saving Integrated Agricultural Technologies	Abdullah Al Mamun Md. Ferdous Hossain Khan Md. Asaduss Zaman
4.	Action Research Project on Creation of Entrepreneurship and Employment Generation through Skill Development	Dr. Md. Abdul Majid Pramanik Rebeka Sultana Al Mamun
5.	Establishment of Rural Development Academy (RDA) at Jashore	Md. Ferdous Hossain Khan Md. Abid Hossain Mridha Md. Asaduss Zaman Maruf Ahmed
6.	Project on Solar based Livelihood Improvement and Enlightened Village	Md. Ferdous Hossain Khan Md. Asaduss Zaman
7.	Action Research Project on Strengthening and Expansion of Cattle Research and Development Centre under RDA, Bogura	Dr. Samir Kumar Sarker Dr. Muhammad Riazul Islam Dr. Sultana Faizun Nahar
8.	Project on Establishment of Most. Amina Begum Rural Development Training & Research Center at Barishal	Md. Ferdous Hossain Khan Md. Asaduss Zaman Samal Chandra Hawlader Al Mamun
9.	Action Research Project on Community Based Livestock and Waste Management for Better Livelihood.	Dr. Samir Kumar Sarker Md. Ferdous Hossain Khan Md. Asaduss Zaman
10.	Action research project on converting municipal dumping ground waste into asset using environmental friendly Trichoderma technology.	Md. Mizanur Rahman Md. Asaduss Zaman
11.	Making Markets Work for the Chars (M4C) Phase- 2	Sufia Nazim Md. Ferdous Hossain Khan Dr. Md. Abdul Majid Pramanik Md. Asaduss Zaman Rebeka Sultana

Sl. No.	Name of the Project	Faculty Member
<b>Self Assisted Centers</b>		
1.	RDA Demonstration Farm	Abdullah Al Mamun Md. Ferdous Hossain Khan Md. Mizanur Rahman Md. Macsood Alam Khan Md. Khalid Aurangozeb Md. Abid Hossain Mridha Md. Asaduss Zaman Rebeka Sultana Suvagata Bagchi Dr. Muhammad Riazul Islam Noor Mohammad Md. Abdul Alim Md. Ashrafal Alam Dr. Sultana Faizun Nahar
2.	Centre for Irrigation and Water Management (CIWM)	Md. Ferdous Hossain Khan Dr. Md. Abdul Majid Pramanik Md. Delwar Hossain Md. Abid Hossain Mridha Md. Abdul Kader
3.	Seed and Biotechnology Center (SBC)	Md. Mizanur Rahman Md. Asaduss Zaman Suvagata Bagchi
4.	Renewable Energy Research Center (RERC)	Dr. Samir Kumar Sarker Md. Ferdous Hossain Khan Md. Abid Hossain Mridha Asim Kumar Sarker
5.	Cattle Research and Development Centre (CRDC)	Dr. Samir Kumar Sarker Dr. Muhammad Riazul Islam
6.	Chars Development Research Centre (CDRC)	Dr. Md. Abdul Majid Pramanik Md. Khalid Aurangozeb Rebeka Sultana Andalib Mahejabin Asim Kumar Sarker
7.	Center for Community Development (CCD)	Dr. Mohammad Munsur Rahman Md. Mohiuddin
8.	Palli Patshala Research Centre (PPRC)	Abdullah Al Mamun Md. Tanbirul Islam
9.	RDA Lab. School and College	Shaikh Md. Abdul Mannan Dr. Shafiqur Rashid Md. Tanbirul Islam









# ANNUAL REPORT 2019-20

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# CHAPTER 4



## ANNUAL TRAINING REPORT 2019-20



## 1.1 Introduction to RDA training

Training is one of the mandated functions of Rural Development Academy (RDA), Bogura. It provides training to the employees from nation building departments, public representatives, NGO workers, cooperators and farmers with a view to creating a cadre of professionals in the field of rural development. Since its inception in 1974 the academy has been working relentlessly towards human resources development in rural development through training.

## 1.2 Categories of training course

The wide variety of training and related programs of RDA are classified into following broad categories

- Skill Development Training
- Management Training
- Foundation Training Course (FTC)
- International Training
- PGDRD
- Internship
- RDA Technology Extension
- Seminar/ Workshop

## 1.3 Training activities during 2019-20

During July 2019 to June 2020 the academy organized 258 training courses attended by 18397 participants creating a total of 73618 training person-days. From June, 1974 to June, 2020 RDA provided training to 609718 participants on different courses.

### 1.3.1 Skill Development Training

Training is bringing change in a person's skill, knowledge, practice and attitude that relate to specific useful competencies. Training has specific goals of improving one's capability, capacity, productivity and performance. RDA provides different skill development trainings on on-farm and nonfarm activities. Skill development training courses are usually proposed at the Annual Planning Conference (APC) and later on designed and conducted by the faculty members of the academy. These courses are financed by the GoB from the revenue budget of RDA and different partner organizations.

During the reporting period 37 skill development training courses in 76 batches were organized for 2440 participants making a total of 21190 training person-days. With the ultimate aim of reducing poverty in the rural areas, the majority of the courses were intended to provide skill to the unemployed rural youth and farmers –both male and female to enable themselves to get involved in different IGAs (Annex -1).

### 1.3.2 Management Training

Management training focuses on improving an individual's management skills as a leader and manager. There may be an emphasis on soft skills, such as communication and empathy, which enables better team work and more progressive relationships with the people they manage. Generally, RDA provides these types of training to staffs from different organizations for their staff as good manager.

Under the management training category, 19 training courses in 71 batches were organized for 3253 participants making a total of 8686 training person-days during the reporting period. Training courses were organized by RDA from revenue budget and collaboration with partner organizations (details are given in Annex -2).

### 1.3.3 Foundation Training Course (FTC)

Foundation Training Course is compulsory for all new entrants to the Bangladesh Civil Service according to Bangladesh Civil Service Recruitment Rule 1981. The content and method of this course are designed in such a way that the participants can enhance their basic knowledge on various theories, concepts and issues in administration and development in general and of rules, regulations, and procedures in public service delivery in particular. This course aims at building personality, stimulating creativity and instilling leadership qualities into trainee officers. This course also provides an opportunity to the officers to familiarize themselves with various dimensions of history, culture and socio-economic development of the country.

The Academy plans and organizes training courses for the interested government and non-government agencies on requisition. These programmes are arranged through mutual discussion and under agreed conditions for meeting the mutual interest of the collaborating agencies. In such training programmes, course contents, course management, methodology and financial modalities are settled in consultation with the sponsoring agencies. Under this category one regular BCS foundation training courses of six months duration for the officers of different cadres were organized in collaboration with BPATC and sponsored by the Ministry of Public Administration. Besides these two months long foundation training course for BBS officials also organized at RDA sponsored by BBS.

RDA also organized rural development attachment Programme for the participants of BCS officials attending foundation course at BPATC, BARD, NATA, BCS Admin Academy, BIAM, RPATC and NAEM.

During the reporting period foundation courses (including RDA attachment Program) in 18 batches were organized for 1371 participants making a total of 21485 training person-days. (Details are given in Annex -3).

### 1.3.4 International Training

RDA in partnership with different national and international organizations conducts international training courses to meet the global demand for quality skill training and exchange ideas, views and replicable models among countries.

The Academy hosted two training programmes in three batches attended by 65 participants making a

total of 318 training person-days proposed by external agencies during the reporting year (details are given in Annex -4).

### 1.3.5 Post Graduate Diploma in Rural Development (PGDRD)

Rural Development Academy (RDA), Bogura and Bangabandhu Sheikh Mujibur Rahman Agricultural University (BSMRAU) have been jointly offering Post Graduate Diploma in Rural Development (PGDRD) for the last Six years to produce mid-level practice-oriented service providers. The program is designed to enable students to identify and understand rural problems and find realistic and workable solutions. Management of rural resources sensibly and efficiently is also one of the objectives of this course. The aim of this course is to groom-up students with analytical and constructive approach to work, advantageous cumulative skills and confidence to work independently in any relevant sector of nation building particularly rural development. RDA has a huge practical experience to work in this sector on the other hand BSMRAU has reputation as a dynamic and unique academic institute for agricultural development in Bangladesh. These two excellent organizations jointly offering this interdisciplinary program to address diverse issues related to agriculture and rural development.

In this diploma program the students undergo a one-year course comprising three courses from soft skills, six courses from managerial skills, and three courses from technical skills including internship. This course also allows capacity building of the students in terms of theoretical foundation, learning by doing, research and development, challenge taking and much interest of rural development issues. After successful completion of the program the diploma holders generally show a positive attitude towards self-employment.

#### Progress

In the reporting year RDA and BSMRAU jointly designed a more effective curriculum for the PGDRD. The newly developed curriculum covers the following major are;

- a. Soft skill development
- b. Management skill development
- c. Technical skill development and
- d. Internship

A total number of 21 fellows have been awarded Post Graduate Diploma in Rural Development (PGDRD) among which 14 were male and 7 were female. With the supervision of BSMRAU the 5<sup>th</sup> batch has been completed their post graduate diploma course during reporting period. (Details are given in Annex -5).

### 1.3.6 Internship

RDA offers practical skill oriented education to students of different universities as internship training program. Under this program students from different universities have been attached with RDA technologies at field level during their intern periods. During this period RDA provides reduced notes, accommodation and food for the interns.

Under Internship category, six batches were organized for 108 participants making a total of 926

training person-days during the reporting period. In this internship programme graduate of Animal Husbandry, Veterinary, Urban Planning from different university namely HSTU, BAU, BSMRAU, Sylhet Agricultural University, Khulna University, IUB were attended (Details are given in (Annex -6).

### 1.3.7 RDA Technology Extension

RDA has developed several green technologies for rural development. Different government organizations, NGO's, farmer groups, school, colleges and universities arrange study tour, seminar, and motivational visit to learn those green technologies.

During the reporting period study tours/field visits/ motivational tours conducted in 63 batches attended by 9039 participants making a total of 10555 training person-days (details are given in Annex -7).

### 1.3.8 Seminar/ Workshop

RDA has organized different seminars, workshops on different issues of rural development. Seminars and workshops are also jointly organized with different organizations. The Academy has hosted 20 workshops/seminars attended by 2130 participants making a total of 2898 training person-days proposed by external agencies during the reporting year (details are given in Annex -8).

## 1.4 Training performance during 2019-2020

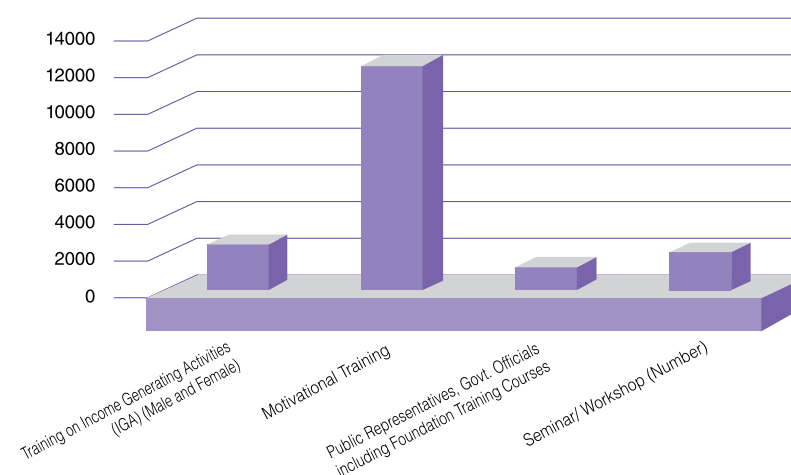
The Academy organized a total of 258 training courses with the number of participants of these courses were 18397. A summary of achievement of courses, participants and training person-days against the target is presented in the following table:

**Table-1.1: Target and achievement of training activities during 2019-2020**

APA Target		Achievement					
Training Category	Target (Person/no.)	Training Category	No. of Course	Male	Female	Total Participant	Total TPD
Training on Income Generating Activities (IGA) (Male and Female)	Male-4000 persons Female-1500 persons	Skill Development Training	76	1612	828	2440	21190
		PGDRD	1	14	7	21	7560
		Internship	6	67	41	108	926
<b>Sub Total -1</b>			<b>83</b>	<b>1693</b>	<b>876</b>	<b>2569</b>	<b>29676</b>
Motivational Training	5600 persons	Management Training	71	2731	522	3253	8686
		International Training	3	48	17	65	318
		RDA Technology Extension	63	5625	3414	9009	10555
<b>Sub Total -2</b>			<b>137</b>	<b>8404</b>	<b>3953</b>	<b>12327</b>	<b>19559</b>

APA Target		Achievement					
Public Representatives, Govt. Officials including Foundation Training Courses	480 persons	Public Representatives, Govt. Officials including Foundation Training Courses	18	1042	329	<b>1371</b>	21485
Seminar/ Workshop (Number)	21	Seminar/ Workshop (Number)	20	1540	590	<b>2130</b>	2898
<b>Grand Total=</b>			<b>258</b>	<b>12679</b>	<b>5748</b>	<b>18397</b>	<b>73618</b>

**Target and achievement of training activities during 2019-2020**



**Figure 1: Achievement of Training activities during 2019-20 according to number of participants**

## 1.5 Training programmes/workshops/seminars/attended by RDA faculty members

During the reporting period, **25** faculty members attended 12 foreign training programmes/ study tour and RDA faculties are nominated to 36 in-country training programmes which has been presented in Table 2 and 3.

**Table-1.2: Foreign trainings/workshops/seminars attended by RDA faculty members during 2019-20**

Sl. No	Title	No. of Participants	Country
1.	Training and Demonstration of Vacuum Frying Machine and its Application Duration: 28 July-03 August 2019 Sponsor: SDF Funded Project	1	India
2.	Action Research for SDGs Localization in Bangladesh, Curtin University, Perth, Australia Duration: 3-28 July 2019	1	Australia
3.	CIRDAP-Ministry of Agriculture and Cooperatives Collaborative Regional Workshop on Sufficiency Economy Philosophy and One Tambon One Product (OTOP), Thailand During: 5-8 August 2019	1	Thailand
4.	Training Programmes on "Sustainable Rural Development (SRD)" Seongnam & Ansan, Republic of Korea During: 22 September-12 October 2019	1	Korea
5.	Seminar on Agriculture Management for Bangladesh, Wuhan, China During: 09 to 28 October, 2019	5	China
6.	RGNIYD CIRDAP-RDA Collaborative International Training-cum-Exposure Programme, Chennai, India During: 20-27 October 2019	2	India
7.	Geo-informatics and Modern Survey Techniques for Planning Managements, NIRD&PR, Hyderabad, India During: 20-29 November 2019	1	India
8.	Exposure visit for an Official Team, NIRD&PR, Hyderabad, India During: 28 Nov. – 02 Dec. 2019	5	India
9.	AARDO Webinar on Land Consolidation Legislation: FAO Legal Guide and its Application at the Country Level During: 18 June 2020	2	India
10.	AARDO-NPC Collaborative Webinars on Agriculture and Its Allied Subjects – Facilitating Compliance to Food Safety and Quality for Cross-Border Agri-Food Trade During: 16 June 2020	2	India
11.	AARDO-NPC Collaborative Webinars on Agriculture and Its Allied Subjects – Post COVID-19: Entrepreneurship Opportunity in Dairy Sector During: 20 June 2020	2	India
12.	AARDO-NPC Collaborative Webinars on Agriculture and Its Allied Subjects – Changing Scenario of Dairy Industry During: 26 June 2020	2	India
<b>Total</b>		<b>25</b>	

**Table 1.3: In country training/workshop/seminar attended by RDA faculty members 2019-20**

Sl No.	Title	Number of Participants	Place of meeting
1.	40 <sup>th</sup> Foundation Day of CIRDAP, Dhaka Duration: 7-8 July 2019	2	Dhaka
2.	52 <sup>nd</sup> APC, BARD, Comilla Duration: 27-28 July 2019	1	BARD

Sl No.	Title	Number of Participants	Place of meeting
3.	Review meetings aimed at implementing the D3M Project, a2i, Dhaka Duration: 9 July 2019	1	Dhaka
4.	Training on "Introduction to Formulation and Analysis of Business Plans and Small Investment Projects" funded by FAO Duration: 21-25 July 2019	5	Dhaka
5.	Training on Institutional Repository Software D-Space Training, CIRDAP, Dhaka Duration: 26-27 July 2019	1	Dhaka
6.	Training on the 20 <sup>th</sup> "Budget Management Specialist (BMS)", IPF, Dhaka Duration: 19 Day August 2019 (3 <sup>rd</sup> weeks)	1	Dhaka
7.	"Food Safety in South Asia Region: Current Status, Policy Perspective and Way-Forward" SAARC Expert Consultation Meeting, SAC, Dhaka Duration: 26-28 August 2019	1	Dhaka
8.	In a national workshop titled 'My Village - My Town: Expansion of Modern Urban Facility in Every Village', Shabug, Dhaka Duration: 12 September 2019	1	Dhaka
9.	"Research Review 2018-19 and Research Program 2019-20 on Agricultural Engineering of NARS Institutes"-Workshop, BARC, Dhaka Duration: 18-19 September 2019	1	Dhaka
10.	Action Research for SDGs Localization in Bangladesh, Follow-up Meeting, Prime Minister Office, Kabari Hall Duration: 30 Sept. 2019	1	Dhaka
11.	Engaging University Faculties for Capacity Building in Achieving SDGs on Sustainable Food and Agriculture Duration: 13-17 Oct. 2019	1	BARD, Comilla
12.	ToT Training, Upazila Governance and Development Project Duration: 3-6 Oct 2019	21	Dhaka
13.	Conference on 70 <sup>th</sup> Foundation Training Course, BPATC, Savar, Dhaka Duration: 22 Oct 2019	2	Dhaka
14.	"Veterinary Reproductive Ultrasonography" Training, (BAU), Mymensingh Duration: 2-7 November 2019	1	Mymensingh
15.	70 <sup>th</sup> FTC – Conference, BPATC, Savar, Dhaka Duration: 14 November 2019	1	Dhaka
16.	Digital Service Roadmap-2021, Dhaka Duration: 28 November, 2019	2	Dhaka
17.	Seminar on Amar Bari Amar Khamar Project Duration: 18 December 2019	1	Dhaka
18.	Seminar a2i & SDG-D3M Project Duration: 21-23 December 2019	1	Sri Mongol
19.	Sonjiboni Training Duration: 22-23 December 2019	2	Dhaka
20.	70 <sup>th</sup> FTC – Conference, BPATC, Savar, Dhaka Duration: 22 Oct 2019	1	Dhaka
21.	ToT-Review of Content of Training Curriculum of Training Centers Duration: 01 January 2020	1	Dhaka



SI No.	Title	Number of Participants	Place of meeting
22.	Workshop on Promoting Bio Solutions for Soils and Crops in Bangladesh Duration: 20 January 2020	2	Dhaka
23.	Annual Research Review Workshop-2019, BLRI, Savar, Dhaka Duration: 26-27 January 2020	1	Dhaka
24.	EFT- Payment process, Ministry of Finance, IPF, Segunbagicha Duration: 27 January 2020	2	Dhaka
25.	Special Training Workshop on 'Impact on Climate Adaptation and Mitigation' in the Budget Circular-1 of the Fiscal Year 2021-27 Date: 30 January 2020	1	Dhaka
26.	RuralInvest Introductory Training Course: Introduction to Formulation and Analysis of Business Plans and Small Investment Projects Training, Funded by FAO Date: 2-6 February 2020	3	RDA
27.	"Knowledge sharing on action research for SDGs", Korobi Hall, Prime Minister's Office, Date: 10 February 2020	1	Dhaka
28.	National Integrity Strategy (NIS) Meeting Date: 25 February 2020	1	Dhaka
29.	Annual performance contract training Date: 4 May 2020	26	RDA
30.	Training on the Application of STATA on DATA Management and Analysis Date: 5-9 May 2020	26	RDA
31.	Training on job rules and good governance Date: 10-12 May 2020	27	RDA
32.	Training on Public Procurement Act & Rules Date: 13-15 May	27	RDA
33.	Training Course on Citation and Referencing Skills Date: 16 May 2020	27	RDA
34.	Training course on participatory village survey –PRA Date: 17-19 May 2020	27	RDA
35.	Training on Sustainable Development Goals (SDGs) Date: (7-11 June 2020) (14-18 June 2020)	31	RDA
36.	Training courses on financial management and resolution of audit objections Date: 21-23 June 2020	33	RDA
<b>Total=</b>		<b>284</b>	

## 1.6 Physical Facilities of RDA

### 1.6.1 Accommodation facility

Our total seat capacity was 646 in different hostels and guest house. The table below shows the details of RDA accommodation capacity and other facilities.

**Table 1.4: Accommodation capacity**

SI. No.	Type of accommodation	No. of Seat	Training person-days (TPDs)	Utilization (TPDs)	Percent of Utilization (TPDs)
1.	General Hostel (Non-AC room with common toilet)	182	33146	16988	51.25
2.	VIP Hostel (Non-AC room with attached bath room)	140	23671	14129	59.69
3.	IWM, International Hostel and Guest House (AC room)	324	49571	26565	53.59
<b>Total</b>		<b>646</b>	<b>106388</b>	<b>57682</b>	<b>54.22</b>

Our accommodation-based capacity in training person-days throughout the year was 106388. The utilization of our physical facilities was 57682 training person-days (54.22%).

## 1.7 Training facilities

RDA has sophisticated training facilities with proper training venue and other training facilities which have been presented in Table 5.

**Table 1.5: Training facilities of RDA**

SI. No.	Type of facilities	No.
1	Conference room	14
2	ICT center	1
3	Auditorium	1
4	Cafeteria	4
5	Computer laboratory	1
6	Indoor sports complex	5
7	Play ground	2
8	Day care centre	1
9	Swimming pool	1
10	Children park	1
11	Demonstration farm	1

## 1.8 Audio-visual services (2019-20)

Audio-visual section of the academy provides different kinds of support-service in order to conduct various training and action research activities under the categories of graphic works, photographic works, mass communication and audio-visual support services. Performance of audio-visual services during the reporting period is shown in Table 6.

**Table-1.6: Audio-visual services (2019-20)**

Sl. No.	Services	Volume of work (No./Hours)
	<b>Photographic works and Mass Communication</b>	Roll/No.
	Digital photo exposed	13000
1.	Picture distributed (hard copy)	5098
	Picture distributed (soft copy)	730
	Picture display supplied CD to press/newsletter	175
	Video camera	30
	<b>Audio-visual support services</b>	Hours
	P.A system	4585
2.	Cordless P.A. System	16425
	Conference system	8250
	Multimedia projector	20320
	Laptop	19500

### 1.9 Library Services (2019-20)

The academy has a rich library with more than 29,401 reports and journals on rural development and related fields. It supplies relevant books, periodicals and research materials for the faculty members, staffs and participants of different training course. During 2019-2020 a total of 128 books, reports and periodicals were collected from different sources presented in Table 7.

**Table-1.7: Books, reports and periodicals collected by the library during 2019-20**

Sl. No.	Sources	Books	Reports	Periodicals	Total
1	Donation	19	-	10	29
2	Local Purchase	67	-	-	67
3	Exchange	-	11	-	11
4	RDA Publication	06	15	-	21
	<b>Total</b>	<b>92</b>	<b>26</b>	<b>10</b>	<b>128</b>

#### Other activities of the library during the year 2019-20 were as follows:

During the period total 94 books, periodicals were issued among the faculty members and staffs of the Academy. A total of 358 news clippings of different subjects had been compiled and preserved in the library and 303 books were catalogued. Total 790 books reports and periodicals workshop papers were bound. In total 3503 readers used the library. A list of bibliography of newly arrived books, journals had been prepared and supplied to the faculty members and 08 newsletter and bulletins were collected from different sources. Recently, with the financial support of SDC, RDA Library has already started its programme to be digitalized. As a part of this programme the data base of RDA library management system already completed.

## Annex-1

## Skill development training courses organized during 2019-20

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
1.	Beef fattening	05	112	81	193	03	579	Beneficiaries of Amar Bari Amar Khamar Project
2.	Cattle rearing	03	83	36	119	03	257	Beneficiaries of Amar Bari Amar Khamar Project
3.	Milch cow rearing	02	46	34	80	03	240	Beneficiaries of Amar Bari Amar Khamar Project
4.	Milk product production and marketing	01	09	0	09	06	54	Beneficiaries of LIP Project
5.	Training on farm water management	01	25	03	28	03	84	Beneficiaries of RERC, CIWM, RDA, Bogura
6.	Nursery management	01	20	0	20	07	140	Beneficiaries of Amar Bari Amar Khamar Project
7.	Poultry rearing	01	29	11	40	03	120	Beneficiaries of Amar Bari Amar Khamar Project
8.	iBASS++ training course	01	28	03	31	01	31	Employees of RDA, Bogura.
9.	Basic Cooperative, Institutional (WMCA), Micro Credit and Accounts Management, FMC Formation, WMCA By-Laws Drafting	04	77	32	109	4	436	Members Of WMCA, LGED, Dhaka
10.	Training Course on Agricultural Technology Transfer to Char Dwellers to Combat Climate Resilience Risk (Shariakandi, Bogura)	02	64	21	85	02	170	Rural Unemployed youth
11.	Training Operations of Power Tiller Mechanics	01	14	0	14	01	14	Staffs of Haque Corporation, Dhaka.
12.	Training on Agricultural Machineries Operation	02	32	0	32	02	64	Beneficiaries of water savings project, RDA, Bogura
13.	Training Course of Women on Trailoring and Garments	05	00	190	190	30	5700	Beneficiaries of CVDP, RDA, Bogura

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
14.	Divisional Distributor Meet 2019	01	14	0	14	01	14	Beneficiaries of Bayer Crop Science Ltd., Dhaka
15.	Training Course on Survey and Data Management	01	22	18	40	05	200	Employees of Data Management Aid, Dhaka
16.	In house Training Course on Life Skill and Gender of New Gender Promoters	01	0	20	20	07	140	DD office, Department of women affairs, Bogura
17.	Training on House Keeping	01	01	17	18	45	810	Participants of self Help Group, RDA, Bogura.
18.	Training on Hair Cutting	01	02	0	02	45	45	Participants of Self Help Group, RDA, Bogura.
19.	Training on Handicrafts	01	0	20	20	45	900	Participants of Self Help Group, RDA, Bogura.
20.	Training Food Processing	01	06	10	16	45	720	Participants of Self Help Group, RDA, Bogura.
21.	Training on Driving	01	19	0	19	45	855	Participants of Self Help Group, RDA, Bogura.
22.	Training on Electrical	01	19	0	19	45	855	Participants of Self Help Group, RDA, Bogura.
23.	Training on Plumbing and Pipe Fitting	01	15	0	15	45	675	Participants of Self Help Group, RDA, Bogura.
24.	Skill Development Hands-on Training of Journalists for Business Reporting Focusing on Char Issues	01	28	02	30	03	90	Faculty Member of RDA, Bogura and Beneficiaries of M4C Project
25.	Herd Production and Health Program Training Course	21	413	221	634	05	3170	Employees Livestock and Dairy Development Project (LDDP), DLS, Dhaka

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
26.	Training of Livestock Service Providers	04	116	45	161	21	3381	Livestock Service Providers under LDDP project, DLS, Dhaka
27.	Training on Entrepreneurship Development	01	83	22	105	02	210	Staff of Bangladesh Agro Based Product and Memchants Association (BAPMA) Dhaka.
28.	Solar System Operation and Maintenance	01	27	0	27	05	135	Beneficiaries of Solar Project, RDA, Bogura.
29.	Training Course on Service Rules and Good Governance	01	36	06	42	01	42	Employees of RDA, Bogura.
30.	Training Course on Livestock Raring and Primary Treatment	01	42	03	45	07	315	Employees of RDA, Bogura.
31.	Training Course on Financial Management	01	37	04	41	02	82	Employees of RDA, Bogura.
32.	Training on the Application of STATA on Data Management and Analysis	01	23	03	26	05	130	Faculty Members of RDA, Bogura
33.	Training on Public Procurement Act & Rules	01	39	04	43	03	129	Employees of RDA, Bogura
34.	Training Course on Citation and Referencing Skills	01	24	04	28	01	28	Employees of RDA, Bogura
35.	Government employees service rules and regulation	01	28	04	32	03	96	Employees of RDA, Bogura
36.	Training Course on Participatory Rural Appraisal	01	28	05	33	03	99	Employees of RDA, Bogura
37.	Training Course on Financial Management and Audit	01	51	09	60	03	180	Employees of RDA, Bogura
<b>Total =</b>		<b>76</b>	<b>1612</b>	<b>828</b>	<b>2440</b>	<b>460</b>	<b>21190</b>	

## Annex-2

## Management training courses organized during 2019-20

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
1	Training on Orientation and Management of WSP Project	04	99	01	100	03	300	Beneficiaries of WSP Project
2	Training Course on Service Rules and Good Governance	03	142	13	155	01	155	Employees of RDA, Bogura.
3	Training Course on Sustainable Development Goal	02	47	13	60	05	300	Employees of RDA, Bogura and Teacher's of RDA Laboratory School.
4	Training on organizational management & ERP system'	01	22	03	25	02	50	Employees of Swisscontact-M4c, Sherpur Bogura
5	Awareness training against corruption, drug etc.	01	350	100	450	01	450	Officer Incharge of Sherpur Thana, Bogura
6	National Youth Camp	01	72	46	118	02	236	Good Neighbours Bangladesh, Khilkhet, Dhaka
7	Annual Partners Meeting	01	32	06	38	04	152	HEKS EPER Country Office, Bogura
8	Annual Program	01	39	0	39	01	39	Khan Agriculture Program Ltd, Dhaka
9	Planners Session of Youth Representatives Of Jago Foundation	01	40	42	82	01	82	Jago Foundation, Dhaka
10	Training Course on Basic Project Management	01	23	01	24	05	120	Employees of Planning Commission, Dhaka.
11	Basic Training for Upazila Parishad Planning and Service Delivery	40	1438	217	1655	03	4965	Officers under Nation building departments and public representatives of Bangladesh.
12	Basic Cooperative, Institutional (WMCA), Micro Credit and Accounts Management, FMC Formation, WMCA By-Laws Drafting	02	39	16	55	04	220	Beneficiaries of WMCA, LGED, Dhaka

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
13	Training Course on Orientation for Elected Representative (Mayor) on Fundamental Issues of Paurashava Administration and Governance	01	16	0	16	03	48	Elected representatives of local Government, Bogura
14	Training Course on Orientation for Elected Representative (Mayor) on Fundamental Issues of Paurashava Administration and Governance	01	21	0	21	04	84	Elected representatives of local Government, Bogura
15	Training Course on Micro Credit Operation and Management	07	160	47	207	05	1035	Beneficiaries of WMCA, LGED, Dhaka
16	Training Course on Database Management	01	18	08	26	04	104	Employees under strengthening monitoring and evaluation project, IMED, Dhaka
17	Annual Sellers' Conference	01	120	0	120	02	240	Employees of Samsung, Dhaka
18	Training course on Fruit Harvesting, Management and Marketing of Hill Areas	01	09	02	11	05	55	Beneficiaries of Solidarities International, Cox's Bazar
19	Training Course on Annual Performance Agreement (APA)	01	44	07	51	01	51	Officers and staff of RDA, Bogura
<b>Total =</b>		<b>71</b>	<b>2731</b>	<b>522</b>	<b>3253</b>	<b>56</b>	<b>8686</b>	

## Annex-3

## Foundation training courses organized during 2019-20

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person days	Type of Participants
			Male	Female	Total			
1	Poverty Reduction and Rural Development attachment Course for the officials of Foundation Training	10	645	191	836	05	4180	BCS Cadre Officials
2	Poverty Reduction and Rural Development attachment Course of NAEM	05	285	104	389	05	1945	BCS (Education) Cadre Officials

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person days	Type of Participants
			Male	Female	Total			
3	70 <sup>th</sup> Foundation Training course of BCS Cadre Officials	01	46	09	55	180	9900	BCS Cadre Officials
4	Foundation Training course of Nuclear Power Plant Company Bangladesh Limited (NPCBL)	01	44	06	50	60	3000	Newly Recruited Engineers, Scientist and other Officials of Nuclear Power Plant Company Bangladesh Limited (NPCBL)
5	67 <sup>th</sup> Special Foundation Training course of BCS Health Cadre Officials	01	22	19	41	60	2460	BCS (Health) Cadre Officials
<b>Total =</b>		<b>18</b>	<b>1042</b>	<b>329</b>	<b>1371</b>	<b>310</b>	<b>21485</b>	

## Annex-4

## International training courses organized during 2019-20

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person days	Type of Participants
			Male	Female	Total			
1	Rural Invest Introductory Training Course: Introduction to Formulation and Analysis of Business Plans and Small Investment Projects	02	44	14	58	05	290	Go and NGO officials from different organizations and entrepreneurs
2	SAARC regional training on "developing regional agri-business and product development" under livelihood enhancement project funded by SDF	01	04	03	07	04	28	Go and NGO officials from different organizations and entrepreneurs
<b>Total =</b>		<b>3</b>	<b>48</b>	<b>17</b>	<b>65</b>	<b>9</b>	<b>318</b>	

## Annex-5

## PGDRD training courses organized during 2019-20

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person days	Type of Participants
			Male	Female	Total			
1	Post Graduate Diploma in Rural Development (PGDRD) course (5 <sup>th</sup> batch)	01	14	07	21	360	7560	Graduated students who wants to be an entrepreneur

## Annex-6

## Internship training courses organized during 2019-20

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person days	Type of Participants
			Male	Female	Total			
1.	Internship training programme	01	0	08	08	50	400	Students of Doctor of Veterinary Medicine, Bangladesh Agricultural University, Mymensingh
2.	Internship training programme	01	26	15	41	01	41	Students of Doctor of Veterinary Medicine, University of Rajshahi
3.	Internship training programme	01	19	09	28	10	280	Students of Medicine and Animal Science, Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur
4.	Internship training programme	01	08	02	10	10	100	Students of Doctor of Veterinary Medicine, Sylhet Agricultural University, Sylhet
5.	Internship training programme	01	03	07	10	05	50	Students of Doctor of Veterinary Medicine, Patuakhali Science and Technology University, Patuakhali
6.	Internship training programme	01	11	0	11	05	55	Students of Doctor of Veterinary Medicine, Patuakhali Science and Technology University, Patuakhali
<b>Total =</b>		<b>6</b>	<b>67</b>	<b>41</b>	<b>108</b>	<b>81</b>	<b>926</b>	

## Annex-7

## RDA technology extension training courses organized during 2019-20

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
1.	RDA Developed Rural Development Model Expansion Training Course	01	22	10	32	01	32	Students and Teachers of Agricultural Extension, Bangladesh Agricultural University, Mymensingh
2.	RDA Developed Rural Development Model Expansion Training Course	01	101	33	134	01	134	Students and Teachers of Dairy and Poultry Hajee Mohammad Danesh Science and Technology university, Dinajpur
3.	RDA Developed Rural Development Model Expansion Training Course	01	21	45	66	01	66	Students and Teachers of Zoology, Rajshahi University

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
4.	RDA Developed Rural Development Model Expansion Training Course	01	57	06	63	01	63	Rajshahi University Ex-Students
5.	Opinion sharing on duty after Flood with Agriculturist	01	450	150	600	01	600	Employees, Department of Agricultural Extension, Bogura.
6.	RDA Developed Rural Development Model Expansion Training Course	01	16	31	47	01	47	Students and Teachers of Kurigram Government College, Kurigram
7.	RDA Developed Rural Development Model Expansion Training Course	01	12	10	22	01	22	Students and Teachers of Agricultural Extension, Bangladesh Agricultural University, Mymensingh
8.	RDA Developed Rural Development Model Expansion Training Course	01	403	00	403	01	403	Trainees of warrant officer course, Bogura Cantonment, Bogura.
9.	RDA Developed Rural Development Model Expansion Training Course	01	81	72	153	01	153	Students and Teachers of Geography, Rajshahi University
10.	RDA Developed Rural Development Model Expansion Training Course	01	34	10	44	03	132	Students and Teachers of Sociology, Bangladesh University of Professionals (BUP), Dhaka
11.	RDA Developed Rural Development Model Expansion Training Course	01	115	15	130	01	130	Ex-Students of Jahangirnagar University, Dhaka
12.	RDA Developed Rural Development Model Expansion Training Course	01	44	33	77	01	77	Students and Teachers of Veterinary and animal science, Rajshahi University
13.	RDA Developed Rural Development Model Expansion Training Course	01	21	53	74	01	74	Students and Teachers of Department of zoology, Govt. Azizul Haque College, Bogura.
14.	RDA Developed Rural Development Model Expansion Training Course	01	50	12	62	01	62	Students of Sapahar Government College, Noagaon
15.	RDA Developed Rural Development Model Expansion Training Course	01	18	11	29	03	87	Students and Teachers of Development studies, University of Dhaka

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
16.	RDA Developed Rural Development Model Expansion Training Course	01	25	20	45	01	45	Students and Teachers of Sohoj Path School, Dhaka
17.	RDA Developed Rural Development Model Expansion Training Course	01	0	60	60	01	60	Students and Teachers of Kalai Government Women College, Joypurhat
18.	RDA Developed Rural Development Model Expansion Training Course	01	120	78	198	01	198	Students and Teachers of Sociology, HSTU, Dinajpur
19.	Study tour of the students of the Department of Development Studies,	01	23	16	39	04	156	Students and Teachers of Development Studies BUP, Dhaka
20.	RDA Developed Rural Development Model Expansion Training Course	01	44	16	60	02	120	Department of Public Administration, Bangabandhu Sheikh Mujibur Rahman Science and Technology University, Gopalganj
21.	RDA Developed Rural Development Model Expansion Training Course	01	25	13	38	01	38	Sikkha School and College, Rajshahi
22.	RDA Developed Rural Development Model Expansion Training Course	01	27	23	50	01	50	Dept. of Zoology, Noagaon Govt College, Noagaon
23.	RDA Developed Rural Development Model Expansion Training Course	01	258	142	400	01	400	Square pharmaceuticals, Bogura
24.	RDA Developed Rural Development Model Expansion Training Course	01	19	12	31	01	31	Dept. of Zoology, KBM College, Dinajpur
25.	LFE Program of IUB	01	66	60	126	12	1152	Independent University, Dhaka
26.	RDA Developed Rural Development Model Expansion Training Course	01	69	15	84	01	84	Kurigram Govt College, Kurigram
27.	RDA Developed Rural Development Model Expansion Training Course	01	48	22	70	01	70	College teacher Kallayan samittee, Bogura

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
28.	RDA Developed Rural Development Model Expansion Training Course	01	630	470	1100	01	1100	Bogura Cant Public School and College, Bogura.
29.	RDA Developed Rural Development Model Expansion Training Course	01	30	51	81	01	81	Govt Azizul Haque College, Bogura
30.	RDA Developed Rural Development Model Expansion Training Course	01	172	109	281	01	281	NRBC Bank, Rajshahi
31.	RDA Developed Rural Development Model Expansion Training Course	01	150	43	193	01	193	Teletalk BD. Ltd, Bogura
32.	RDA Developed Rural Development Model Expansion Training Course	01	36	54	90	01	90	Quantum Foundation, Bogura
33.	RDA Developed Rural Development Model Expansion Training Course	01	05	38	43	01	43	Govt Rashiduzzoha Mohila College, Sirajgonj
34.	RDA Developed Rural Development Model Expansion Training Course	01	47	40	87	02	174	Bangabandhu Sheikh Mujibur Rahman Agricultural University, Gazipur
35.	Motivational training for farmers	01	38	02	40	03	120	DAE, Rangpur
36.	RDA Developed Rural Development Model Expansion Training Course	01	32	17	49	01	49	Bogura Government College, Bogura
37.	RDA Developed Rural Development Model Expansion Training Course	01	22	25	47	01	47	Rangpur Govt. College Rangpur
38.	RDA Developed Rural Development Model Expansion Training Course	01	46	36	82	01	82	Soilokona Degree College, Rangpur
39.	RDA Developed Rural Development Model Expansion Training Course	01	26	06	32	01	32	Dream haven Ltd, Bogura

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
40.	RDA Developed Rural Development Model Expansion Training Course	01	29	0	29	01	29	DAE, Kurigram
41.	RDA Developed Rural Development Model Expansion Training Course	01	11	39	50	01	50	Jatio Mohila Sangstha. Dinajpur
42.	RDA Developed Rural Development Model Expansion Training Course	01	39	12	51	01	51	Department of Horticulture, Bangladesh Agricultural University, Mymensingh
43.	RDA Developed Rural Development Model Expansion Training Course	01	185	85	270	01	270	Noagaon District Samittee, Bogura
44.	RDA Developed Rural Development Model Expansion Training Course	01	126	50	176	01	176	Dept. of Public Administration, Rajshahi University
45.	RDA Developed Rural Development Model Expansion Training Course	01	250	150	400	01	400	Bogura Cantonment High School, Bogura
46.	RDA Developed Rural Development Model Expansion Training Course	01	03	158	161	01	161	Debhata girls high school, Gaibandha
47.	RDA Developed Rural Development Model Expansion Training Course	01	43	33	76	01	76	Kurigram Govt. College, Kurigram
48.	RDA Developed Rural Development Model Expansion Training Course	01	116	76	192	01	192	PTI, Sirajganj
49.	RDA Developed Rural Development Model Expansion Training Course	01	62	75	137	01	137	Square High School and College, Pabna
50.	RDA Developed Rural Development Model Expansion Training Course	01	228	342	570	01	570	Cantonment Board High School, Bogura
51.	RDA Developed Rural Development Model Expansion Training Course	01	30	62	92	01	92	Al Amin Kinder Garten, Bogura

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
52.	RDA Developed Rural Development Model Expansion Training Course	01	14	16	30	01	30	Economic Division, Ministry of finance, Dhaka
53.	RDA Developed Rural Development Model Expansion Training Course	01	77	139	216	01	216	PTI, Tangail
54.	RDA Developed Rural Development Model Expansion Training Course	01	78	39	117	01	117	RARS High School, Iswardi, Pabna
55.	RDA Developed Rural Development Model Expansion Training Course	01	172	06	178	01	178	Barkers Club, Bogura
56.	RDA Developed Rural Development Model Expansion Training Course	01	66	12	78	01	78	Mirpur fitness club, Dhaka
57.	RDA Developed Rural Development Model Expansion Training Course	01	20	30	50	01	50	Sirajganj Govt. College, Sirajganj
58.	RDA Developed Rural Development Model Expansion Training Course	01	34	35	69	01	69	Dept. of History Jahangirnagar University, Dhaka
59.	RDA Developed Rural Development Model Expansion Training Course	01	24	02	26	01	26	Bangladesh Probin Hitoishi Sangha, Dhaka
60.	RDA Developed Rural Development Model Expansion Training Course	01	24	0	24	01	24	DAE, Thakurgaon
61.	RDA Developed Rural Development Model Expansion Training Course	01	30	21	51	01	51	Rajshahi Govt. City College, Rajshahi
62.	RDA Developed Rural Development Model Expansion Training Course	01	300	75	375	01	375	NATP-2 PMU, Ministry of Agriculture
63.	RDA Developed Rural Development Model Expansion Training Course	01	261	98	359	01	359	Incepta Pharmaceuticals, Bogura
<b>Total =</b>		<b>63</b>	<b>5625</b>	<b>3414</b>	<b>9039</b>	<b>82</b>	<b>10555</b>	

## Annex-8

## Workshop/ seminar organized during 2019-2020

Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
1.	Research Seminar on My Village My Town	01	80	08	88	01	88	Go and NGO officials of Different dept and RDA officials
2.	Workshop on National Vegetable Production	01	73	0	73	01	73	M4C Project, RDA, Bogura
3.	Livelihood Enhancement of the Small Farmers in SAARC Region through Small Scale Agribusiness Focusing on Value Chain Development	01	55	10	65	01	65	SDF Funded Project, IAS Bangladesh
4.	Horizontal Learning Workshop	01	32	18	50	03	150	ADD international, Bangladesh
5.	Training Workshop	01	15	0	15	01	15	Haque Corporation, Dhaka
6.	29 <sup>th</sup> Annual Planning Conference 2019-2020, RDA, Bogura	01	87	16	103	02	206	RDA, Bogura
7.	Workshop on Primary Education Strengthening Training	01	0	193	193	02	386	ASA, Sherpur, Bogura
8.	8 Years of Char Development: Lessons and Way Forward	1	88	7	95	1	95	CDRC, RDA, Bogura
9.	Workshop on Review and Planning of WSP Project	1	49	5	54	1	54	WSP, RDA, Bogura
10.	Residential Training Workshop	1	53	19	72	2	144	SESIP, Dhaka
11.	Residential Training Workshop	1	64	0	64	2	128	SESIP, Dhaka
12.	Diller Get-together of Ispahani Agro Ltd. Sherpur, Bogura	1	67	0	67	1	67	Ispahani Agro Ltd., Bogura
13.	Annual Planning and Review Meeting of PDBF, Bogura Zone, Bogura	1	550	100	650	1	650	PDBF, Bogura
14.	Residential Training Workshop	1	61	6	67	3	201	SESIP, Dhaka
15.	PAVE Convention	1	90	20	110	1	110	Hunger Project, Dhaka
16.	Zonal In-charge Program	1	64	167	231	1	231	National Life Insurance, Bogura



Sl. No.	Title of the Course	No. of Batch	No. of Participants			Duration (day)	Training Person Days	Type of Participants
			Male	Female	Total			
17.	Adult Resources workshop	1	32	9	41	2	82	Bangladesh Scouts, Rajshahi
18.	Training workshop Programme	1	25	5	30	2	60	CDRC, RDA, Bogura
19.	Trainers Training Workshop	1	27	4	31	2	62	Kurigram and Jamalpur Project, RDA, Bogura
20.	Trainers Training Workshop	1	28	3	31	1	31	
<b>Total</b>		<b>20</b>	<b>1540</b>	<b>590</b>	<b>2130</b>	<b>31</b>	<b>2898</b>	<b>-</b>

### 1.10 At a Glance Evaluation of Training Courses (2019-20)

There is another section of Research Division called Evaluation Section that provides logistic support to the Faculty Members in improving the training courses as well as the administrative support services to the trainees. At present, in this section one Joint Director and one Assistant Director have been working in the Evaluation Section.

In total five types of training courses including 2976 participants were evaluated during 2019-20 period. Number of course evaluation decreased but number of participants increased compared to previous year due to increased number of training programs were organized in 2019-20 fiscal year. In 2019-20 one special foundation training course for the BCS (Health) cadre officials and ten rural development attachment programmes as part of foundation training course of BPATC were completed. One six-month long BCS foundation training course, five rural development attachment courses of education cadre officials from National Academy for Educational Management (NAEM) and the other one was basic training for Upazila Parishad planning and service delivery. The following section shows the findings of the evaluation of different training courses including expectations by the participants.

#### Foundation training courses organized during 2019-20

Sl. No.	Title of the Course	Date	No. of Participants		
			Male	Female	Total
1.	68 <sup>th</sup> Foundation Training course of BCS Cadre Officials	01 April 2019-27 Sep. 2019	84	21	105
2.	70 <sup>th</sup> Foundation Training course of BCS Cadre Officials	27 Oct. 2019-23 April 2020	46	9	55
<b>Total =</b>			<b>130</b> <b>(81.25%)</b>	<b>30</b> <b>(18.75%)</b>	<b>160</b> <b>(100%)</b>

#### Comments of the Participants

Sl.No.	Evaluation Comments for improvement
1.	Course duration (special) should be increased
2.	Improve dining management

3.	Trainers need to improve their knowledge on training
4.	Need to increase tour allowance
5.	Incorporate self-defense, driving, swimming, yoga and gymnasium sessions
6.	Improve cafeteria management
7.	Hostels should have separate library, study and newspaper room
8.	Increase course duration (special)

#### Rural development attachment course of education cadre officials held of NAEM

Sl. No.	Title of the Course	Date	No. of Participants		
			Male	Female	Total
1.	154 <sup>th</sup> Rural Development Attachment Course of (General and Technical) Education Cadre Officials	16-20 June 2019	60	30	90
		30 June-04 July 2019	64	26	90
2.	155 <sup>th</sup> Rural Development Attachment Course of (General and Technical) Education Cadre Officials	23-27 June 2019	54	5	59
		07-11 July 2019	54	6	60
3.	156 <sup>th</sup> Rural Development Attachment Course of (General and Technical) Education Cadre Officials	13-17 Oct.-2019	65	24	89
		27-31 Oct. 2019	55	25	80
4.	157 <sup>th</sup> Rural Development Attachment Course of (General and Technical) Education Cadre Officials	16-20 Feb. 2020	56	24	80
		01-05 march 2020	55	25	80
<b>Total =</b>			<b>463</b> <b>(74%)</b>	<b>165</b> <b>(26%)</b>	<b>628</b> <b>(100%)</b>

#### Comments of the Participants

1.	Increase tour allowance
2.	Incorporate self-defense, driving, swimming, yoga and gymnasium sessions
3.	Improve cafeteria management
4.	Hostels should have separate library, study and newspaper room
5.	Increase course duration (special)
6.	Trainers need to improve their knowledge on training

The initiatives already taken in ICT development are given below

Sl.No.	The initiative has been taken in ICT	Further plan for ICT development
1.	IP camera is installed at demonstration farm.	Smart boards for training rooms.
2.	IP phone (soft) installed in office and residential area.	Smart power system for office area.
3.	Extended Wi-Fi coverage to residential and farm area.	Sensor-based energy saving road lighting system.
4.	Laptops and desktops were purchased and distributed among the officers and staffs.	Smart home technology DG's bungalow.
5.	Developed Evaluation system through appropriate computer application package.	Card-based e-payment system for internal transection.
6.	Created designation-wise email account under own domain. (Such as ...@rda.gov.bd).	Automatic switching system will be installed for bio-gas transmission.
7.	Helped RDALSC to conduct online classes.	Smart conference room.
8.	Initiatives taken to start e-payment for RDALSC.	
9.	Regular Maintenance work related to ICT.	



# ANNUAL RESEARCH REPORT 2019-20



## 2.1 Introduction of RDA Research

### 2.2 Research activities

Research is one of the main activities of the Academy. The main objectives of the research activities are to improve the quality of life of rural population, identify various problems and possibilities of rural development, assist in the development of sustainable agriculture and environmental friendly technology, and determine the strategies of technical research based on the findings. In addition, the results of the research are also used in the preparation of training materials. Research projects are conducted with the aim of national rural development policies, poverty alleviation strategies, socio-economic development, agricultural development, environmental protection, etc. Through these research activities, not only the rural development but also provide assistance and advice to the policy makers and researchers who are involved in rural development process. Apart from these, the Division works on ensuring or developing technical skills of the Faculty Members in their respective fields of specialisation.

### 2.3 Research based on SDG

RDA has been focusing 17 SDG goals in conducting researches since the year 2015 coping with the universal call to end poverty, protect the world and ensure that all people enjoy peace and prosperity. Among other priorities, RDA conducted a good number of researches on SDG in the goals of ending poverty and hunger, good health and wellbeing, quality education, and Gender inequality including new areas such as climate change, economic inequality, innovation, global peace and justice (Table 2.2).

**Table 2.1: RDA Research and SDGs (2015-2018/19)**

SDGs	Area	2015	2016	2017	2018	2019	2020	Total
Goal 01	No poverty	1	5	4	1	3	1	15
Goal 02	Zero hunger	6	-	15	13	5	2	41
Goal 03	Good health and well-being	1	1	1	3	-	-	6
Goal 04	Quality education	2	-	6	-	1	-	9
Goal 05	Gender equality	1	2	-	3	1	1	8
Goal 06	Clean water and sanitation	-	-	1	1	-	-	2
Goal 07	Affordable and clean Energy	-	1	-	-	-	-	1
Goal 08	Decent work and economic Growth	-	-	3	-	-	-	3
Goal 09	Industry, innovation and infrastructure	-	4	-	1	2	-	7
Goal 10	Reduced inequality	-	-	-	-	-	-	0
Goal 11	Sustainable cities and communities	-	2	-	-	-	1	3
Goal 12	Responsible consumption and production	-	1	-	-	-	-	1
Goal 13	Climate action	-	-	-	-	-	-	0
Goal 14	Life below water	-	-	-	-	-	-	0
Goal 15	Life on land	1	2	3	-	-	-	6

SDGs	Area	2015	2016	2017	2018	2019	2020	Total
Goal 16	Peace and justice strong institutions	-	2	2	-	1	-	5
Goal 17	Partnerships to achieve the goals	-	1	-	-	-	-	1
<b>Grand Total</b>								108

Source: RDA Research Souvenirs (Vol.1, 2, 3, and 4; Annotated Bibliography of RDA Publication along with Official Research Record).

During planning in 2020-21, faculty members should conduct research on the issues those are very important in relation to SDG, Election Manifesto of the Govt. and less covered by RDA, Bogura since its inception.

## 2.4 Performance of RDA Research

The Faculty Members involve themselves in different processes of research activities that start from the preparation of research proposal to the submission of final report for publication. Research and Evaluation Division is always helping them in processing at different stages of research. During the last four decades, RDA has earned commendable achievements in conducting research and number of completed research projects reaches to 493. In order to facilitate wider dissemination of the findings of the researches, the Executive Summary of RDA Research Publications- Volume I, II, III and IV containing 245 articles are brought out by the Academy. These volumes will give the glimpses of Research highlights conducted by the Academy and pave the path of rural development and strategic plan of RDA.

The Academy dealt with 34 research projects in 2019-20 including carried over research projects from the last fiscal years. Among those, 18 is completed in the same year including 14 reports are in publication stage and four are under review. Among the completed reports some are accepted as Journal Articles. The remaining ongoing 16 research projects are in the form of draft report writing and data collection or experimental stages (Table-2.3).

The major reasons for delaying of research projects were the engagement of the faculties with huge activities of training and action research projects. Apart from the above, other reasons for delaying - (i) in some cases after starting study required more time than mentioning time period in proposal; (ii) sometimes long waiting for getting the reviewers' comments.

The following table shows the present status of RDA research:

Table 2.2: Ongoing Research Projects of RDA

SL. No	Title	Name of the Researcher (s)	Status
1.	Study the Effect of Dietary Exogenous Phytase on Laying Performance at Older Hen	Muhammad Riazul Islam Dr. Samir Kumar Sarkar Md. Delwar Hossain Mashrufa Tanzin	Publication Stage
2.	করতোয়া নদী এবং এর তীরবর্তী জনজীবন: অতীত ও বর্তমান	Mahbub Siddiquee Dr. Sheikh Mehdee Mohammad	
3.	Quality Analysis of Dohi produced by RDA and Bogura area and Its Impact on Livelihood of Rural People	Monirul Islam Dr. M. Gulzarul Aziz	
4.	Food Security and Livelihood Improvement of Climate Change Victims in Northern Region of Bangladesh through e-Learning of Seed Technology	Sk. Saeem Ferdous Dr. AKM Zakaria	
5.	Study on the Productivity and Profitability of Sonali Chicken	Md. Delwar Hossain Mashrufa Tanzin Muhammad Riazul Islam	
6.	Effectiveness of Pre-Harvest Fruit Bagging in Guava Ensuring Economic Viability and Food Safety	Noor Muhammad Md. Delwar Hossain	
7.	Traceability Management in Banana Production at Bala Char Land Area of Bogura District	Md. Abdul Alim Shamal Chandra Hawlader Noor Muhammad	
8.	Farmers Perception towards Using ICT Tools in Plant Disease Management	Noor Muhammad Rebeka Sultana	
9.	Development of model for tubicid worm (T. tubifex) culture and its effect on growth of three selected ornamental fishes	Md. Ashraful Alam Macksood Alam Khan Dr. Md. Nurul Amin	
10.	Assessment of Adulteration in Banana Ripening practiced in Bogura District and development of safe ripening techniques for ensuring food safety and security.	Md. Abdul Alim Md. Ferdous Hossain Khan Md. Khalid Aurangozeb	
11.	Collaborative Leadership and Perception of Quality Education at Secondary Schools in Rural and Urban Areas of Bangladesh	Dr. Monsur Ahmed Dr. Muhammad Munsur Rahman Md. Tanbirul Islam Arif Ahmed Julfi	Publication Stage
12.	Effectiveness of Village Development Organizations (VDO,s) of Amar Bari Amar Khamar (ABAK) Project.	Md.Aminul Islam M A Matin Dr. Md. Abdur Rashid Sheikh Saeem Ferdous	
13.	Development of Reduction Mechanism of Post-Harvest Losses in Horticultural Crops	Dr. Md. Abdur Rashid Noor Muhammad	
14.	Ground Water Depletion with Expansion of Irrigation in Dry season: A Case Study of Bogura District	Md. Abid Hossain Mridha Dr. Md. Abdur Rashid	

SL. No	Title	Name of the Researcher (s)	Status
15.	Assessing Farming Attitude towards Tricho-compost	Suvagata Bagchi Dr. Md. Nazrul Islam	Review Stage
16.	Fish and Vegetables Production through Aquaponics System	Mr. Macksood Alam Khan Mr. Md. Ashraful Alam	
17.	Adaptability Trial of Orchid, Cactus and Ornamental Succulent Plants at RDA Demonstration Farm	Md. Khalid Aurangozeb Dr. Md. Abdul Majid Rebeka Sultana	
18.	Feasibility Study of Garlic Production in Char Land Areas of Bangladesh: Experience from Chars of Sirajganj District	Mr. Noor Muhammad Dr. Md. Abdul Majid Pramanik	
19.	Exploring the Economic Role of Non-Conventional Mechanized Transport in the Development of Rural Bangladesh: A Study on Rajshahi Division	Md. Mohiuddin Md. NasirUddin Goni	Report writing Stage
20.	Woman Centered Disaster Risk Management and Climate Change Adaptation: Roles of Gender and Culture in Rural Bangladesh	Dr. Shaikh Mehdee Mohammad Shaikh Shahriar Mohammad	
21.	Women Participation in Drought Risk Management	Dr. Sheikh Mehdee Mohammad Begum Nargis Jahan	
22.	Education system in creating rural livelihood opportunities in Bangladesh: A case of educated unemployed rural youths in Bogura district	Andalib Mahejabin Maupiya Abedin Dr. Shaikh Mehdee Mohammad	
23.	Impact of Community Radio in Agricultural Development -A Study on Krishi Radio of Bangladesh	Nusrat Jahan Dr. Shaikh Mehdee Mohammad	
24.	Effective of Information and Service delivery of Union Digital centers in Bangladesh with clientele groups	Md. Aminul Islam Dr. Md. Abdul Majid Pramanik Noor Mohammad	
25.	Optimization of planting method of micro propagation derived potato ( Solanumtuberosum) plantlets for higher production	Md. Mizanur Rahman Md. Asaduss Zaman Suvagata Bagchi	

SL. No	Title	Name of the Researcher (s)	Status
26.	Extension and Dissemination of Community Based Indigenous Poultry Farming for Economic Empowerment of Rural Area	Abdullah al Mamun Dr. Muhammad Riazul Islam MasharufaTanzin Sultana FizunNahar	Data Collection Stage
27.	কৃষি জমির আইল উঠিয়ে দিয়ে সমবায় ভিত্তিক যান্ত্রিক চাষাবাদ পদ্ধতি শীর্ষক প্রায়োগিক গবেষণা প্রকল্প	Mr. Md. Aminul Islam Md. Abdullah Al Mamun and team	
28.	Socio-economic Impacts of Rural-Urban Migration in Bangladesh	Mr. Md. Mazharul Anowar Dr. Md. Nurul Amin Dr. Shaikh Mehdee Mohammad	
29.	Impact Evaluation of PGDRD in Employment Generation	Dr. Md. Shafiqur Rashid Md. Tanbirul Islam Suvagata Bagchi	
30.	ইছামতী নদী এবং এর তীরবর্তী জীবন ব্যবস্থা	মোঃ আমিনুল ইসলাম মোঃ মহিউদ্দীন আলমগীর মাহবুব সিদ্দিকী ড. শেখ মেহদী মোহাম্মদ	Experimental Stage
31.	Air Quality and Health Risks in Rural Development Academy, Bogura	Dr. Md. Shafiqur Rashid Mr. Kamruzzaman Sarker Bulbul	
32.	Micropropagation of Date Palm (Phoenix dactylifera L.) through Direct Organogenesis	Md. Mizanur Rahman Md. Asaduss Zaman	Preliminary Stage
33.	Development of ecofriendly household waste management system and conversion of household waste into compost using Trichoderma spp.	Md. Mizanur Rahman Sarawat Rashid Md. Asaduss Zaman Suvagata Bagchi	
34.	Economics of Production of Crossbred (Local x Holstein Frisian) Bulls for Fattening under Different Feeding Conditions (Under RDA, Rangpur Project)	Dr. Muhammod Riazul Islam Dr. Sultana Fizun Nahar Mashrufa Tanzin Dr. Md. Abdul Majid Pramanik Dr. Samir Kumar Sarker	

# CHAPTER 6



ANNUAL  
ACTION RESEARCH REPORT  
2019-20



### 3.1 Introduction of Action Research

Action research is one of the major functions of the academy. The main objective of action research is to find out appropriate solutions of rural socio-economic problems. It has also aims to develop replicable models for rural development. RDA has fixed up its action research target in Annual Performance Agreement (APA). Based on the target of APA, RDA is conducting its action research activities.

Nine action research projects are being implemented by the academy. Out of these, eight are GoB Funded Projects (ADP) and One is Non-ADP funded Project. In addition, seven Self Assisted Centres, Demonstration Farm and RDA Lab. School and College are managed by RDA, Bogura. Another project has already completed by the Academy. This paper deals with the updated progress of Action Research Projects and the Centres for the fiscal year 2019-20. Moreover, seven in-coming and proposed projects are also highlighted herewith for the next fiscal year 2020-21.

In this chapter, Academy has tried to give a short account of the major achievements of all the projects. Discussion of this chapter is divided into two parts. The first part is about the introduction to the project titles under different categories depend on the nature and sources of funding. The second part is devoted to discussion on project-wise activities and achievements.

### 3.2 Ongoing Projects (At a Glance)

#### 3.2.1 ADP Projects (GOB Funded)

- i. Action Research Project on Extension and Dissemination of Modern Water Saving Technologies and Management Practices to Increase Crop Production.
- ii. Action Research Project on "Construction of Co-operative based Multistoried 'Palli Janapad' Housing with Modern Urban Amenities for Livelihood Improvement of the Rural People"
- iii. Establishment of Rural Development Academy (RDA) at Rangpur.
- iv. Establishment of Rural Development Academy at Jamalpur.
- v. Livelihood Improvement of the Poor People in the Char Islands of Sariakandi and Sonatola Upazilas under Bogura District.
- vi. Action Research Project on Disseminating Two-storied Agriculture with Solar Power Irrigation Technology and its Multipurpose Uses.
- vii. Project on "Poverty Reduction of Marginalized People of Kurigram and Jamalpur Districts.
- viii. Comprehensive Village Development Programme (CVDP) - 3rd Phase RDA Part.

#### 3.2.2 Non-ADP Projects (SAARC SDF Funded)

- i. Livelihood Enhancement of the small farmer in SAARC region through small scale agro-business focusing on value chain development.

#### 3.2.3 Self Assisted

- RDA Demonstration Farm (Including Eight Units).

- Centre for Irrigation and Water Management (CIWM).
- Seed and Biotechnology Center (SBC).
- Cattle Research and Development Centre (CRDC).
- Renewable Energy Research Center (RERC).
- Chars Development Research Centre (CDRC).
- Centre for Community Development (CCD).
- Palli Patshala Research Centre (PPRC).
- RDA Laboratory School and College.

### 3.3 Completed Project

Making Markets Work for the Jamuna, Padma and Teesta Chars (M4C) Technical Assistance Project (2nd Revised).

### 3.4 Ongoing Project (GoB Funded)

#### 3.4.1 Action Research Project on Extension and Dissemination of Modern Water Saving Technologies and Management Practices to Increase Crop Production

This is ADP funded project. The duration of this project is 6 years (April 2015 - June 2021). The project cost is Tk. 3963.00 lakh. This project is being implemented by CIWM, RDA, Bogura. Under this project a total of 200 (Two hundred) sites demonstrated in seven divisions of Bangladesh.

#### Objectives

##### a. Main Objective

The main objective of this project is to increase rice and other crop production for addressing climate change issues through dissemination of modern technologies and effective water management practices for improvement of rural livelihood.

##### b. Specific Objectives

The specific objectives are as follows-

To introduce modern farming technologies at 200 sites of seven divisions for increasing rice and other crop production;

To increase irrigation water use efficiency (Reduced irrigation water 30% compared to conventional system);

To improve the soil fertility through utilization of trichoderma enhanced composting;

To enhance knowledge and build up awareness among the farmers in modern farming technologies; and

To improve rural livelihood through improved on-farm integrated water management practices and farm productivity.

#### Major Activities of the Project

- Demonstration of Alternate Wetting and Drying (AWD), Raised Bed (RB) and System of Rice Intensification (SRI) in RDA demonstration farm.
- RDA demonstration farm will be used as main station/laboratory.
- Selection of interested farmers/lead farmers group in sub-project sites.
- Training on improve water saving farming technologies through Farmers' Field School (FFS) concept and exhibit the demo plots.
- Procure required machineries and equipments would be distributed conditionally among the trained farmers.
- Demonstration plot of environment friendly water saving technology would be shown at farmers' field and consider them as service provider group.
- Induce mechanization rice transplanter for rice cultivation.
- Arrange field day and FFS to demonstrate modern technologies among the nearby farmers in various stages of crop production.
- Arrange workshop for sharing the knowledge, experience, findings to the target groups, policy makers as well as relevant organizations for quick expansion and popularizing this technology.
- Develop and distribute information rich brochure/leaflet, poster and other printed materials for dissemination of this technology.

#### Progress

- Demonstration program on water saving technologies (raised-bed; AWD, SRI and Trico composting) in Kharif-II/2020 season are already extended at 200 locations of 40 districts in massive scale in association with neighbor farmers for Robi/2020-21.
- Demonstration and Research for Kharif-II/2020 season has already done at RDA main Laboratory station and 7 Mother Trial in 7 divisions.
- A Total of 175 batches (40 farmer/batch) Farmers Field School (FFS) are already done in selected Sub-projects Areas.
- 504 Field days are done in selected Sub-projects Area at different growing stages of demonstration.
- Robi/2020-21 demonstrations planning work are ongoing in 200 Sub-project areas and 7 Mother trials under 7 divisions and as well as RDA main laboratory station.
- A total of 36 batches (25 farmers/batch) are already conducted on Orientation and Management Training
- This project has completed 08 inception workshops among the led participant farmers, local



SAAO, NGO representatives and owner of irrigation source.

- A total of 20 batches (16 farmers/batch) Argil. Machinery training is conducted on.
- Argil. Machinery are already been procured for Sub-project areas and main research field.
- 93 Power Tiller are distributed among the selected farmers group.
- Savings collection is ongoing from the selected farmers groups under the selected Sub-projects areas.
- Credit distribution is ongoing among the selected farmers groups under the selected Sub-projects areas.

#### Crop wise yield increased through Water Saving Technologies (Robi/2019-20)

Crop	Name of Technology	Yield (Mond/Bigha)		Yield Increased (%)	Remarks
		Traditional	Water Saving Technology		
Maize (Kaberi)	Raised Bed	28.50	34.50	21.05	Water saving is AWD- 15-18% SRI- 15-20% RB- 20-30% comparatively than traditional method.
Mustard (BARI-14)	Raised Bed	06.50	08.00	23.00	
Wheat (BARI-25)	Raised Bed	09.50	11.50	21.05	
Rice (BRRI-28)	Raised Bed	19.50	22.50	15.38	
Rice (BRRI-28)	SRI	18.50	23.00	24.32	
Rice (BRRI-28)	AWD	18.00	20.50	13.89	

#### Presently land area under water saving technologies in different selected project area

Project Area	Name of Technology	Target		Achievement	
		Farmer (No.)	Land Area (Acre)	Farmer (No.)	Land Area (Acre)
200 Sub-Project Area	RB, AWD, SRI	1200	400	3000	1000
7 Mother Trail	RB, AWD, SRI	105	35	210	75
<b>Total =</b>		<b>1305</b>	<b>435</b>	<b>3210</b>	<b>1075</b>

### 3.4.2 Action Research Project on “Construction of Co-operative based Multistoried ‘Palli Janapad’ Housing with Modern Urban Amenities for Livelihood Improvement of the Rural People”

This is ADP funded project comprises duration of 4 years (July 2014- December 2021). The project cost is Tk. 42,433.78 lakh (Govt. contribution- Tk. 36298.00, Owner's Contribution Tk. 6135.78 lakh). This project is being implemented by CIWM, RDA, Bogura. Under this project a total 7 numbers of Palli Janapad building will be established in 7 divisions (Rajshahi-1, Dhaka-1, Chittagong-1, Khulna-1, Barishal-1, Sylhet-1 and Rangpur-1) of Bangladesh at suitable place.

## Objectives

### a. Main Objective

The main objective of the project is to restoration of agricultural land for food security and livelihood improvement of the rural community with modern urban housing facility.

### b. Specific Objectives

The specific objectives are as follows:

To improve the life style and livelihood of the rural community, construct multistoried building in rural areas with modern urban facilities;

To construct seven numbers of four storied low-cost rural housing with all utility facilities and 272 flat to accommodate the scattered rural people in a common shelter for making it rural level growth centre;

To construct seven numbers of two storied cattle (for rearing 468 head cattle 12636 poultry birds & shed as input source of bio-gas plant and make the dwellers self-help entrepreneurship;

To install community based bio-gas plant as a source of renewable energy;

To install solar power system as alternate electric source and ensure rain water harvesting facilities and also recycling waste water system;

Production of organic manure for better waste management as well as improvement of soil health and develop the multistoried rural shelter as zero waste society; and

To provide RDA-credit match training on various farm and non-farm interventions among the beneficiaries for additional employment/income generation for livelihood improvement.

### Major Activities of the Project

Construction of a four storied building for residence;

Construction of a two storied cattle shed to rear cattle head, poultry birds and common for facilities threshing floor for facilitated income generating activities;

Developing community based threshing floor enriched with all Argil. machineries (ploughing, harvesting, threshing, processing and intercultural operation equipments etc.) for the local farmer to enjoy modern farm mechanization facility by hire basis;

Construction of community based Bio-gas plant for better environmental solution;

Provision of multi-dimensional training to the different target group among the beneficiaries on their interested IGAs and disburse training match RDA credit among them.

### Salient Features of Palli Janapad Project

According to Matin *et.al.* 2013 these opportunities will be ensured if someone live in Community Based Rural Housing Palli Janapad Project:

Rehabilitation of 272 households into a multi-storied building in a 1.52ha that saves 16.20 ha. of land.

Development of modern facilities of rearing 500 cows and 16126 poultry birds with drying yard and storage facilities for grains.

Scope of handling waste (accumulating all drops, cow dung and excreta in gravity flow) will become easier and it will produce bio-gas and organic manure, finally waste will be converted as value.

Total Installation of community based Bio-bas plant will save annual fuel cost of Tk. 81.06 lakh and minimize the carbon emission as well.

On an average 0.02ha. Agricultural land per household will be turned into homestead area. This proposed project will restore 5.30 ha. of land from being converted to homestead area very soon.

Installation of the community bio-gas plant will save annual fuel cost of \$102000 and minimize the carbon emission as well

Connecting metal road construction cost of about Tk. 1088.06 lakh at per LGED rate on 6.55ha. of land will be saved by constructing a single metal road of Tk. 4.01 lakh on 0.24ha. of land.

It will save 6.15 km of overhead electric cable line and help to save annual electricity bill of Tk. 16.32 lakh

Construction of building using Ferro-cement/EPS technology and comparison with PWD rate schedule revealed that it is about 30% less than traditional one.

### Progress

- Out of seven project sites, six project sites (Dhaka, Rajshahi, Rangpur, Khulna, Sylhet and Chittagong) are already selected. Project site for Barishal division will be selected soon.
- Construction works for *Palli Janapad* building of Rangpur, Rajshahi and Dhaka division completed 95%, 60% and 20 % respectively.
- Construction works for *Palli Janapad* building of Khulna, Chittagong and Sylhet division are in progress.

### 3.4.3 Establishment of Rural Development Academy (RDA) at Rangpur

This is ADP funded Project of Tk. 1132.00 lakh. Its duration is October 2014- June 2021. It's an Honorable Prime Minister prioritized project for Rangpur Divisions. The project location is Ikorchali, Kachna and Jogdispur Mouza of Taragonj Upazala under Rangpur District.

### Objectives

#### Main Objective

The main objective of the project is to establish of a Rural Development Academy (RDA) at Rangpur for the sustainable livelihood improvement of the rural people in specially Northern Part of Bangladesh based on the philosophy of RDA, Bogura.

### Specific Objectives

The specific objectives are:

To serve as a catalyst to accelerate wide dissemination of appropriate and affordable technologies of RDA, Bogura to the rural poor for increasing productivity and enhancing quality of life, thereby enabling the community to move towards sustainable development.

To construct the required infrastructures for the well establishment of the rural development academy at Rangpur in line of RDA, Bogura;

To develop necessary logistic facilities for conducting training, research and action research in guidance of RDA, Bogura;

To build-up a demonstration farm with individual specialized units (Agril. Machineries, Crop, Dairy, Poultry, Fisheries, Horticulture/Nursery, Tissue culture & Hydroponic unit) exists at RDA, Bogura as a Technology Park like NIRD, Hyderabad for training and research ground;

To deploy manpower in the field of rural development for innovation and dissemination of sustainable models and technologies of RDA, Bogura;

To extend facilities for human resources development and expansion of models/technologies for ensuring food security and eradicating extreme hunger and poverty; finally

To mainstream the rural poor people by skill development as work force for the socioeconomic development of the rural Bangladesh.

### Major Activities of the Project

- Acquisition of land for establishing RDA Rangpur.
- Construction of Office Building (Administrative cum Faculty Building: 10 storied foundation 10 storied complete); Technology Building with Medical Center (6 storied foundation) 2 storied complete and Cafeteria building with recreation center and guest house: 6 storied foundation 5 storied complete).
- Construction of Residential Building (General Hostel (Male & Female): 10 storied foundation) 6 storied complete and Director Bungalow (2 storied) 2 storied complete; Faculty Quarter (10 storied foundation) 2 storied complete; Staff Quarter (10 storied foundation) 2 storied complete.

### Progress:

- A total land of 50 acres have been acquired for the academy under this project;
- Consulting firm is selected for detailed design, estimate and close monitoring of construction works.
- Land development and boundary wall are partially completed due to fund constrain.
- Construction work of 10 storied Administrative-cum Faculty Building is completed.
- Construction work of General Hostel Building completed.
- Construction work of Cafeteria building with recreation center and guest house is completed.

- A demonstration farm with individual specialized units (Agril. Machineries, Crop, Dairy, Poultry, Fisheries, Horticulture/Nursery, Tissue culture unit) has been established like RDA, Bogura demonstration farm for practical ground of training and research.

### More time and fund has to be need for completing the project work.

The following terms, are to be needed for completing the project.

Boundary wall (Extension).

Loan Filling up to the level of highway.

Vertical extension of staff and faculty building.

Digging of canal along the side of the boundary wall.

Extension of director (Banglow).

Technical training center

Beatification of campus.

Creation of manpower beyond and organogram.

### Observation

Establishment of RDA, Rangpur is a good initiative of present Government. It will help to main stream in the vulnerable people of Rangpur Division in development activities. The location of the academy was selected by the Honorable Prime Minister considering the all facts of communication (Road, Rail and Air). Most of the construction works of the project almost at the finishing stage. Some importance parts of the academy are partially done due to shortage of fund allocation. The project is proposed to revise according to the recommendation of inter-ministerial evaluation team. After revision the project, the project activities will be run in full swing and peoples of Rangpur region will enjoy the full facilities (training, research and action research). The vulnerable char peoples of northern areas and the general peoples will become skilled and can play effective role in development activities.

### 3.4.4 Establishment of Rural Development Academy at Jamalpur

This is ADP funded project. Its duration is July 2016- June 2021. The project cost is Tk. 12450.12 lakh. It's an Honorable Prime Minister prioritized project for new Divisions Mymensingh. The project location is Shibhata & Mohiramkul Mouza of Melandah Upizala under Jamalpur District.

### Objectives

#### Main Objective

The main objective of the project is to establishment of a Rural Development Academy at Jamalpur for sustainable livelihood improvement of the rural people especially in the Greater Mymensingh region of Bangladesh.

#### Specific Objectives

The specific objectives are:

- To serve as a catalyst to accelerate wide dissemination of appropriate and affordable technologies to the rural poor for increasing productivity and enhancing quality of life, thereby enabling the community to move towards sustainable development.
- To construct the required infrastructures for the well establishment of the academy;
- To develop necessary logistic facilities for conducting training, research and action research;
- To build-up a demonstration farm with individual specialized units (Agril. Machineries, Crop, Dairy , Poultry, Fisheries, Horticulture/Nursery, Tissue culture & Hydroponic and Agro-product processing and marketing unit) as a Technology Park like NIRD, Hyderabad for training and research ground;
- To deploy manpower in the field of rural development for innovation and dissemination of sustainable models and technologies;
- To extend facilities for human resources development and expansion of models/technologies for ensuring food security and eradicating extreme hunger and poverty; finally
- To mainstream the rural poor people by skill development as work force for the socio-economic development of the rural Bangladesh.

### Main Activities of Project

Acquisition of 50 acres of land and land development with construction of Boundary wall.

Construction of Office Building (Administrative cum Faculty Building: 10 storied foundation 10 storied complete) and Cafeteria building with recreation center and gust house : 6 storied foundation 6 storied complete)

Construction of Residential Building (General Hostel (Male & Female): 6 storied foundation) 6 storied complete, DG/ADG Bungalow (2 storied Foundation) 2 storied complete) and Mosque (2storied Foundation) 01 storied complete.

Establishment of six individual units (Crop Unit; Dairy Unit; Poultry Unit; Fisheries Unit; Tissue Culture and Agro Product Processing Unit.

### Progress

- Fifty (50) acres of land acquired for the establishment of Jamalpur RDA
- Consulting firm selected for detailed design, supervision and close monitoring of the construction works.
- Land development work is going on and already 85% developed.
- Boundary wall, main gate with guard shed activities are almost cent percent completed.
- Finishing work for 10<sup>th</sup> storied administrative cum faculty building is ongoing, work progress 95%.
- Finishing work for 6<sup>th</sup> storied cafeteria building with recreation center and guest house 85% completed.
- DG's/ADG's bungalow (2<sup>nd</sup> storied) completed.
- Finishing works for 6<sup>th</sup> storied male and female hostel building is going on, work progress 95%.

- A demonstration farm with individual specialized units (Agril. Machineries, Crop, Dairy, Poultry, Fisheries, Horticulture/Nursery, Tissue culture unit) is going to be established (80% completed) like RDA, Bogura demonstration farm for practical ground of training and research.

### More time and fund has to be need for completing the project work.

The following terms, are to be needed for completing the project.

- Boundary wall (Extension).
- Loan Filling up to the level of highway.
- Vertical extension of staff and faculty building.
- Digging of canal along the side of the boundary wall.
- Vertical extension of staff quarter.
- Extension of director (Banglow).
- Beatification of campus.
- Technical training center
- Creation of manpower beyond and organogram.

### Observation

Establishment of RDA, Jamalpur is a good initiative of present Government. It will help to main stream in the vulnerable people of Mymansingh Division in development activities. Most of the construction works of the project almost at the finishing stage. Some importance parts of the academy are partially done due to shortage of fund allocation. The project is proposed to revise according to the recommendation of inter-ministerial evaluation team. After revision the project, the project activities will be run in full swing and peoples of Mymansingh region will enjoy the full facilities (training, research and action research). The valuable peoples especially in char peoples and the general peoples will become skilled and can play effective role in development activities.

### 3.4.5 Livelihood Improvement of the Poor People in the Char Islands of Sariakandi and Sonatola Upazilas under Bogura District.

This is an ADP funded project. The project duration is 3 years (July 2017- June 2021). The project cost is Tk. 3055.70 lakh.

### Objective of the Project

#### Main Objective

The main objective of the project is to graduate from poverty and ensure sustainable rural livelihoods and food security by increasing the household income of the vulnerable char-dwellers living in the char islands of Sariakandi and Sonatola Upazilas under Bogura district.

### Specific Objectives

The specific objectives are as follows-

- To increase the household income of the hardcore poor char-dwellers through capacity development and asset transfer for the graduation from poverty through improved agricultural farming practices;
- To develop market system linkages for better access to mainland markets;
- To involve the selected beneficiaries in various enterprise activities (both on farm and off farm for better livelihood improvement);
- To promote cattle improvement and related services through livestock service providers (LSPs), artificial insemination (AI) support service and ICT based livestock management; and
- Capacity building of the beneficiaries special emphasis on socioeconomic and agricultural aspects of livelihood improvement.

### Location of the Project

The project will be implemented in the char areas in 08 (eight) unions of 02 (two) Upazilas namely Sariakandi and Sonatola under Bogura District.

### Main Activities of Project

- Base line survey for identification of beneficiaries;
- Categorically group formation;
- Incentive based micro saving programme in VSLAs;
- Assets transfer to the core beneficiaries of the project;
- On farm and off farm enterprise development for the beneficiaries;
- Handicraft or tailoring;
- ICT based livestock management and cattle improvement;
- Agro based technology transfer through demonstration and training;
- Awareness building and skill development training courses, seminars and workshops;
- Delivery social safety net programs and emergency aid during and after natural disasters;
- Implementation of some project activities by LSPs; and
- Monitoring and Evaluation.

### Progress

- A total of 5682 cattle (2853nos cows and 2829nos goats) had already been distributed among the core beneficiaries under assets transfer program.
- Training on crop production and livestock rearing were provided among 540 project beneficiaries.

- Training provided to: 30 persons for ICT based livestock rearing, Social awareness 2920, Disaster management 2580, Nutrition and Personal hygiene 2460, Crop production in charland 300, Beef fattening and entrepreneurship development 600, Seed processing & business 60, Fodder and Maize Stover silage production 300, Afforestation 300, Primary treatment 40, Market development & business planning 39 and 150 beneficiaries were trained on handicrafts and tailoring trade.
- Stipend for livestock rearing disbursed among 5682 beneficiaries.
- Under asset transfer activities 2853 cow and 2829 goats were distributed.
- Under this project 300 tubewell and water supply system installed. 1500 beneficiaries are benefited.
- Under AI program 3500 cows were artificially inseminated.
- Solar power operated 05 submersible pump were installed for drinking and household purposes.
- Hybrid fodder cutting of pukchung-1 was distributed among 2830 beneficiaries.
- Disaster & climate change 600, health & cleanliness 600, cattle feed & silage making 300.
- 1500 sanitary latrine were installed and disbursement among the chars beneficiaries in project area.
- 30 LSPs (Livestock Service Provider) achieved skill on ICT Based Livestock Management and AI Technology. They are applying knowledge at the field level among the beneficiaries.

### 3.4.6 Action Research Project on Disseminating Two-storied Agriculture with Solar Power Irrigation Technology and its Multipurpose Uses.

An action research in the name of two-storied agriculture with solar powered irrigation system are being conducted by RDA where the base crop is rice and vine/creeper vegetables like gourd are produced in second layer without hampering the production of rice with 200% cropping intensity and harvesting solar power from the top for pumping irrigation water. Considering the outcomes of the research, Govt. already have been approved this project for disseminating this technology in 35 areas of Bangladesh. The project tenure is 5-years (July 2017-June 2022) and the project cost is Tk. 3989.00 lakh.

#### Objective of the Project

The main objective of the proposed project is to disseminate RDA-developed solar power irrigation system with two layer agriculture technology for meeting up the increasing demand of electricity (specially in crop sector) and make crop production profitable one as well as livelihood improvement of the rural peoples for achieving the food security in 21<sup>st</sup> century.

#### The specific objectives are as follows-

- To minimize the increasing demand of electricity power consumption in irrigation sector by using solar power;
- To ensure multipurpose use of STW water for on-farm and non-farm activities at the sub-project sites to uplift the lifestyle of the project beneficiaries;
- To reduce the misuse of agricultural lands generally used for installation of solar panel by the introduction of RDA-developed (solar system) model;
- To increase the productivity per hectare of land by producing different type of crops in the same land at the same time in different layers;
- To ensure efficient/economic use of water resources to minimize the irrigation cost and increase crop production by using RDA-developed technology; and
- To provide training-match RDA-credit for popularizing this technology and increase skill and socio-economic condition of the project beneficiaries.

#### Location of the Project

Total 35 (thirty five) sites of 32 districts under 8 Divisions of Bangladesh. The location of the project sites is given below:

#### Main Activities of Project

- Installation of Solar Panel and the infrastructures (Traile/Macha) for two layer agriculture;
- Installation of Solar Power operated STW;
- Installation of buried pipe irrigation system
- Construction of Overhead Tank with portable water supply network for household use;
- Provide Training with credit support to up-liftment of socio-economic status.

#### Progress

- Field level feasibility survey was conducted in 25 sub-project sites.
- Model replication through action re Project infrastructure development works of two-storied agriculture with solar power irrigation and multiple uses are in functional phase at fourteen sub-project sites.
- Two-storied agriculture with solar power irrigation and multiple uses model have been disseminated at 14 (40%) sub-project areas out of targeted 35 sites (List of completed sub-project shown in Table-1).
- There was a provision for providing training to the project beneficiaries to make them skilled on various IGAS and improvement of their socio-economic status. A total of 1360 (31.55%) nos. project beneficiaries out of 4310 have already been trained up to June, 2020. The conducted training list is shown in Table-2).
- The overall achievement of the project 46.48% up to June 2020.

**Table 3.1: List of completed sub-project**

FY	SI. no.	Sub-Project Name	Address
2017-2018	1	Chorondip Solar Sub-Project	Chorondip, BoyalKhali, Chattogram
	2	Mirkamary Solar Sub-Project	Mirkamary, Poba, Rajshahi
2018-2019	3	Madhail Solar Sub-Project	Madhail, Niyamotpur, Naogaon
	4	Fatepur (3rd Part) Solar Sub-Project	Fatepur, Goyainghat, Sylhet
	5	Mothanagar Noyapara Solar Sub-Project	Mothanagar Noyapara, Bishwambarpur, Sunamganj
	6	Ikorchali, Solar Sub-Project	Ikorchali, Taragonj, Ranpur
	7	Joupur Solar Sub-Project	Joupur, Chhagalnaiya, Feni
2019-2020	8	Baniyachang Solar Sub-Project	Baniyachang, Chandina, Cumilla
	9	Chotogior Solar Sub-Project	Chotogior, Manikganj-Sadar, Manikganj
	10	Kodonda Solar Sub-Project	Kodonda, Ashashuni, Satkhira
	11	Namuja Solar Sub-Project	Namuja, Bogura-Sadar, Bogura
	12	Hajipur Solar Sub-Project	Hajipur, Kulaura, Moulvibazar
	13	Charkhalifa Solar Sub-Project	Charkhalifa, Doulatkhan, Bhola
	14	Bamuniya Solar Sub-Project	Bamuniya, Shajahanpur, Bogura

**Table 3.2: Training course conducted upto June 2020**

Sl. No.	Title of training Courses	No. of Batch	Duration (Day)	No. of Participants
1	Farmers Field School (FFS) Field Level Training for IGAs selection	12	2	960
2	On-Farm Water Management and two-storied agriculture	8	3	240
3	Operation and maintenance of solar system	1	5	30
4	Livestock & Poultry Rearing and Primary Treatment with Bio-gas management Training	1	6	400
5	Modern Fish Culture	3	5	90
	<b>Total</b>	<b>25</b>	<b>-</b>	<b>1360</b>

## Observation

### Green Innovations- Solar Power Irrigation with drinking water supply

- The new innovation of two storied agriculture with direct solar irrigation system minimizes pressure on national power supply grid and load shading.
- Solar panel harvests sunshine (as 3rd layer crop) and generates power for lifting ground water using direct sunshine and reduces the electricity consumption and irrigation cost (operating cost) to almost zero.
- Each sub-project is capable of supply of irrigation water for 15-20 acres of lands and safe drinking water in 50 HH.

## Impact

- The ultimate long term impact of multistoried cropping system is to reduce poverty and improve livelihood of farmers and limit dependency on ever crying electricity for irrigation.
- Effective utilization of abundant sunshine for irrigation farmers can produce, sale and consume paddy and vegetables on the same piece of land round the year.
- Adoption of this system can increase cropping intensity from 180% to 360% and even 500% in Bangladesh.
- This project can establish a model named 'Solar Home' where electricity using facility will be created using solar power during load shedding period.

### 3.4.7 Project on "Poverty Reduction of Marginalized People of Kurigram and Jamalpur Districts.

This is ADP funded project. Its duration is 3 years (July 2018- June 2021). The project cost is Tk. 19515.35 lakh. It is a prioritized project by Honorable Prime Minister for two backward districts of northern Bangladesh. The project location is all union Parishads and Paurasavas of eight selected Upazilas under Kurigram and Jamalpur districts. These Upazilas are Nageswari, Rajarhat, Ulipur and Chilmari under Kurigram district, and Dewanganj, Islampur, Madarganj and Melandah under Jamalpur district.

## Objectives

### Main Objective

- The main objective of the project is to mainstream the extreme poor and marginalized people through poverty alleviation. The specific objectives are:
- To create employment opportunities for extreme poor and marginalized people;
- To increase income of the extreme poor and help them becoming entrepreneurs through providing skill development trainings, and transferring assets and modern agricultural technology;
- To improve livestock breeders through artificial insemination [AI] technology and ICT based livestock management; and
- To enhance the socioeconomic condition of the project beneficiaries.

### Main Activities of Project

- Handing over 25,000 cattle heads to the extreme poor households under the 'Asset Transfer' scheme
- Collection of 10 oxen/ cows (pure breed) for improving livestock breeders
- Establishment of eight agro processing, preservation and marketing (APM) units including grice and flower mills, honey processing unit, chilling plant, freezing and refrigerator unit (one in each Upazila) acres land acquisition for establishing eight APM units (50 decimals for each unit)

- Establishment of eight community based biogas plant for rural waste management
- Establishment of 16 group based fish farms and technology transfer to 640 beneficiaries for modern fish farming
- Creating self-employment opportunity for 168 Livestock Service Providers (LSPs) and 32 Fishery Service Providers (FSPs)
- Providing skill development trainings in different trades to 8,000 project beneficiaries
- Transferring AI technology and ICT based livestock management
- Establishment of 50 solar power generated street lights
- Formation of groups consisting 30-50 project beneficiaries

## Progress

### Activities Completed during 2019-20

- Orientation workshops have been conducted at district level in presence of concerned high government officials, LGI representatives, government officials at district and Upazila levels, NGO personnel and the media.
- Beneficiaries selection 8000 persons
- Cattle distribution to beneficiaries - 315 no.
- Land acquisition in eight upazila is in progress satisfactorily
- Three e-GP tender for procuring machineries for APM Unite, computer and Improved bull from Australia has been completed but delayed due to covid -19.

### Targeted activates for 2020-21

- Benefices selection 10000 person
- Cattle distribution to beneficiaries - 8750
- Land acquisition in eight sites will be completed
- Construction of APM Unit in eight sites will be started
- Installation of 50 solar street light will be completed.
- Demonstration of modern fish culture technology and cattle rearing technology will be completed.

## 3.4.8 Comprehensive Village Development Programme-2<sup>nd</sup> Phase (RDA Part)

### Introduction

Comprehensive Village Development Programme (CVDP) was initiated by Bangladesh Academy for Rural Development (BARD), Comilla in 1975 in the name of 'Total Village Development Programme' with a view to examine one village one organisation in a village. The main thrust was given to

mobilisation of local resources and its utilisation so that the villagers would be self-reliant irrespective of age, sex, class and professions. The project was included in the 3<sup>rd</sup> FYP and renamed as 'Comprehensive Village Development Programme' (CVDP). In the second phase during the Fourth FYP, Rural Development Academy (RDA), Bogura was involved with the implementation of the project in 1991-92. At this stage CVDP was implemented by BARD and RDA in 40 villages each in Rajshahi and Khulna Divisions, and Dhaka, Chittagong and Sylhet Divisions respectively. The Experimental Phase of the project was wound up in June 2004. During the Experimental phase CVDP was able to create some positive results for the betterment of the rural people under the programme. The government was convinced to adopt CVDP as a model concept for rural development and recommended for nation-wide replication throughout the country.

The First phase of the national programme was wound up in June 2009. The programme is sponsored by the Rural Development and Co-operative Division of the Ministry of LGRD & Co-operatives. RDA, BARD, BRDB and Co-operative Departments were working as implementing agencies. Total number of villages under the programme were 1575 of which RDA covered 300 villages of four Upazilas such as Sherpur (Bogura), Sadullapur (Gaibandha), Mirpur (Kushtia) and Jhenaidah Sadar (Jhenaidah).

Due to outstanding impacts of the programme the government has approved its Second Phase for a period of July 2009- December 2014 comprising 66 Upazilas of 64 districts. Total number of villages were 4275. CVDP (RDA part) was implemented in 1020 villages of 16 Upazilas in Rajshahi, Rangpur and Khulna divisions.

### Achievements Uptill 2<sup>nd</sup> Phase

CVDP has made a good progress uptill the period of 2<sup>nd</sup> phase. The remarkable progress was observed in increasing number of cooperatives, enrollment of members, capital accumulation. In addition, the project conducted several types of training courses, workshops/seminars, awareness programmes, and other social activities for the beneficiaries and stakeholders.

### Other Comments on the 2<sup>nd</sup> Phase implementation

1. The institutional base of most of the CVDP co-operatives are being strengthened. These are playing a leading role in the village in a sustainable manner.
2. About 81% of the societies have shown their worthiness in launching credit programme with their own capital consisting of both share and savings. This helps creating self-employment and generating additional income for the co-operators.
3. CVDP has given top priority to imparting training. It helps a lot to make awareness build-ings, skill development and technology transfer.
4. Linkage between village based cooperatives and Upazila level government departments has become strengthened. So the developmental activities such as livestock vaccination, family planning, EPI, sanitation coverage etc. are found very successful.
5. CVDP has given emphasis on environment protection through introducing renewable energy like biogas and solar panel. Bio-fertilizer, vermi compost and tricho compost are used in farming. Plantation also is another important activity of the cooperatives.
6. CVDP was created a diversified impact at the field level with less investment.

### CVDP-3<sup>rd</sup> Phase

Again, the Govt. already approved 3<sup>rd</sup> phase of CVDP for four years (January 2018-December 2021) with the total allotted cost of 301.05 crores and RDA has been participating in this phase with other three organisations-BARD, BRDB, and Dept. of Cooperatives.

CVDP-3<sup>rd</sup> Phase is being implemented in 10,035 villages under 162 Upazilas of 64 Districts. RDA, Bogura is responsible for 2160 villages under 35 Upazilas of Rajshahi, Rangpur and Khulna Division. Among 35 Upazilas, 19 are new. RDA, Bogura started project activities from July, 2018 due to late employment of DPDs and PD. Project activities are being hampered due to lack of project personnel at the field level. The recruitment process is being lingered due to the court case handled by the previous employees. Only Assistant Project Directors at the Upazila level (UCOs) are working in the field and formed a good number of societies at the village level and involved in many activities including enrollment of members, organising training programmes, etc. Apart from this, Cooperators have been participating in social awareness program, maintenance of village roads/EPI program and other activities.

The short-listed activities upto June 2020 are given below:

Sl. No.	Activities	DPP Target	Progress up to June 2020
1.	Formation of Co-operative Societies (no.)	2160	1980
2.	Family Coverage (no.)	204400	28100
3.	Membership Enrolment (person)	312000	192356
4.	Capital Accumulation (lakh Taka)	10970	3405.64
5.	Loan disbursement from societies' own capital(lakh taka)	8610	3944.96
6.	Training and related activities (person/mandays)	-	
	1.16.11.1.1.1.1 a) Training for the project personnel	146	35
	1.16.11.1.1.1.2 b) Orientation Course for Upazila level officials.	475	475
	1.16.11.1.1.1.2.1.1 c) Orientation Course for development of the village societies like Dev. Workers, Gramkormi and Cooperators.	22800	960
	d) Special training (3days)	6840	2100
	e) Special IGA Training (30 days)	7660	420
	f) Monthly Joint Meeting and E-Training	262080	29640

### 3.5 Ongoing Project (Non-ADP Funded)

#### 3.5.1 Livelihood Enhancement of the small farmer in SAARC region through small scale agro-business focusing on value chain development (Non-ADP)

##### Objectives of the project

Overall objective of the project is promoting agro-business model in selected sites with a major focus on promoting small agro-processing equipments for quick value addition of fruits and vegetable

##### Specific Objectives

- Increase income and improve livelihoods of the small holders
- Promote empowerment of rural women and employment through promotion of agri-business
- Develop value chain of the agriculture products and mainstreaming the locally produced commodities

##### Project Context

Agriculture is the single largest producing sector of economy in Bangladesh since it comprises about 30% of the country's GDP and employing around 60% of the total labour force. The performance of this sector has an overwhelming impact on major macroeconomic objectives like employment generation, poverty alleviation, human resources development and food security. Meeting the nation's food requirements remains the key-objective of the government and in recent years there has been substantial increase in grain production. However, due to calamities like flood, loss of food and cash crops is a recurring phenomenon which disrupts the continuing progress of the entire economy.

Bangladesh has managed to triple its rice production since its independence, from 10 million Metric Ton (MT) in 1971 to over 32 million MT today. Astonishingly, 8.44 million hectare of the land are irrigated, which is over 7 times more than in 1990 (Bangladesh Agriculture Statistics, 2013). Modern varieties have been introduced on 75% of the total rice cropped area. Bangladesh is now world's sixth largest producer of rice which accounts for 77% of agricultural land use (irri.org, 2013). Bangladesh is endowed with a fertile land and favourable climate for the production of various agricultural products. Considering its potentiality, the Government has given much emphasis on the development of agricultural products and agro-based industries in the country. Vegetables, fruits, aromatic fine rice, tea and other agro products are exported regularly.

Horticulture crops are grown in about only 7% of the total cultivated area (Siddique and Azad, 2010). Vegetable growing area in the country is about 0.358 million ha and fruits 0.145 million ha. Besides, about 19.4 million homesteads cover about 0.45 million ha for fruits and vegetables. Production of vegetables has increased from 1.79 to 3.00 million tons in 2005-06 to 2009-10. Similarly, the production of fruits during the same period has increased from 3.17 million tons to 4.52 million tons (Table 2). Among fruits, banana occupied the highest area (42.2%), followed by mango (19.6%), pineapple (12.8%), jackfruit (7.0%) and guava (4.8%). Among vegetable crop brinjal occupied the highest area (16.9%) followed by radish (8.4%), pumpkin (6.8%), aroids (6.4%),



tomato (6.2%), and bean (4.7%). Although horticultural occupies only 7% of Bangladesh's agricultural land, production generates more than 18 % of its agricultural GDP. Fruits and vegetables are grown in all over Bangladesh but the extent of cultivation varies from one region to another. Some crops have concentrated areas for production because of favourable agro-ecological condition and better marketing facilities.

According to the FAO survey, about 82% of farmers in all the regions sell horticultural crops immediately after harvest. They carry on head loads and make use of rickshaw vans to move the produce to markets. Traders, wholesalers and buyers mainly use rickshaw vans and trucks. About 66% of the farmers sell their produce in weekly markets and 22%, in the daily markets. Seasonality, under developed marketing and transportation system, poor infrastructure and insufficient storage facilities intensify price volatility. Farmers usually get price information from other farmers, traders, radio, television and newspapers.

In Bangladesh, the major marketing channel flow of fruits and vegetables from the farmers to the consumers is summarized below:

**Farmers → own family consumption**

**Farmers → Hat/Bazar → Local Trader → Retailer Consumer**

**Farmers → Hat/Bazar → Faria → Wholesaler Retailer**

**Farmer → Hat/Bazar → Faria → Wholesaler → Processor/Exporter**

### Project activities

- Inception meetings and Farmer group formation and baseline survey
- Identification and supply of equipments and inputs
- Training need assessment (Training on IGA)
- Conduct of training based on training need assessment (value chain development, agro processing, product handling, post harvest management, farm business management)
- Development of small agro-business and exposure visit
- Production, processing and Marketing
- Monitoring and evaluation

### Output of the project

- 02 small agro-processing units set up
- Small agro-business established
- Development of skill and capacity of the participating small farmers on commercial production, processing and marketing
- Established trade linkage between community and commercial establishments
- Functional saving account in operation
- Farmer group established (or strengthened) for agribusiness

### Outcome of the project

- By 2020, at least 75% of the farmers using the new practices are earning at least 15% more income than under the conventional methods (and none is earning less)
- Post-harvest losses for selected vegetables and fruits reduced by 10 % as a result of new practices

### Impact of the project

- Proportion of people living below national poverty lines
- Active involvement of farm families in collective agri-business managed by the community
- Diversification and specialization of household income source
- Gradual reduction of poverty and malnutrition
- Investment on education and family welfare increased

### Number of Beneficiaries

100 Farm families (direct) and 1000 farm families (indirect)

### Project Location(s)

Bogura and Gazipur

### Project Implementation Period

Date of commencement: 08<sup>th</sup> October 2018 (Started on June 2019) and date of completion: 07<sup>th</sup> October 2020 (Expected project no cost extension for 1.5 years)

### Details of Funding

SDF Grant: 184,314.00 US\$ and 27740.00 US\$ in kind support by RDA

### Progress

#### The following project activity has been completed:

- National inception of the Project has been completed at RDA with the collaboration of SAARC Agriculture Center (SAC) and CIRDAP.
- Group formation activities have been done at two sub project areas of Gazipur and Bogura.
- Baseline survey has been completed by survey team and under review for finalization.
- Installation & procurement of vacuum frying machine has been completed and starting value addition of Jackfruit and Banana. Small scale marketing is ongoing of jackfruit and Banana Chips.
- Small scale Tomato Hot Ketchup making machineries are supplied to the Gazipur site and 01 (one) training program has been completed on Value addition of their cultivated Tomato.
- Construction of processing shed at Bogura& Gazipur Site has been completed.

- Registering of FPOs of Both sites (Bogura & Gazipur has been completed).
- Training and inputs are supplied to the beneficiaries according to project book.

### 3.6 Self Assisted Action Research

#### 3.6.1 RDA Demonstration Farm

The demonstration farm was created shortly after the establishment of the Academy with the following broad objectives:

- Conducting innovative, adaptive and demonstration trials and dissemination of improved agro-technologies to the farming community;
- Holding practical sessions of the skill development training courses on agricultural technologies organized by the Academy; and
- Producing quality seed of HYV rice, Potato and other high value crops and products to help the Govt. in agricultural development.

The demonstration farm measures about 80.0 acres of which 65.0 acres are under Action Research and the rest of the area is under infrastructure such as road, farm building, Bio-gas plant, pond and irrigation system etc. At present the farm has 09 agricultural individual production Units: Those are (i) Crop (ii) Nursery (Orchard and Ornamental) (iii) Poultry, (iv) Dairy, (v) Fisheries, (vi) Biotechnology laboratory, (vii) Irrigation and Farm power machinery, (viii) Palli Joibo Shar and Biogas Unit and (ix) Agro-products processing and Refrigerated storage unit

#### Farm Management

A Farm Development Committee Chaired by the Director General of the Academy oversees the activities of the Demonstration Farm. All faculty members of the Agricultural Sciences Division with diversified technical disciplines are members of the Committee. Each unit In-charge carries responsibility of planning and executing the year long production and research activities. The entire program of the Farm from planning to implementation is materialized under the overall guidance of the Director of Agriculture Sciences Division. The ultimate implementer of the planned activities is the Farm Manager who acts under the overall guidance and care of the Farm In-Charge. The Farm In-Charge is nominated among the faculty members of the Agricultural Sciences Division. Relevant Faculty Members, in addition to the Unit In-charges, render their services in crop production including soil fertility management, horticulture (orchard and ornamental), dairy, poultry, fisheries, farm mechanization, irrigation, tissue culture and agro-product processing and marketing.

#### Activities Performed During July 2019-June 2020

##### i. Crop Unit

It's clear that agriculture, done right, is the best means the world has today to simultaneously tackle food security, poverty and environmental degradation. Keeping this philosophy for rural development RDA, Bogura operates crop unit in its demonstration farm on 30.00 acres of land and also 15 acres under collaborative research activities under (PPP) model. The crop unit experiments on and produces grain crops seed mainly Aman and Boro paddies as well as maize, potato and

different seasonal vegetables around the year. Seeds produced of rice; and potatoes are regularly sold to BADC under its Contract Growers Program. RDA is a member of that program and has been producing, quality seeds that contribute in the government national seed supply chain.

Apart from the production activities the unit offered practical training to training on the production technologies of organic fertilizers and their utilization, hybrid maize Production and homestead vegetables production to trained farmers' on modern crop production technologies as learning by doing. Crop unit also playing a role to motivate farmers and extension of modern technologies. Conduct research to make agriculture more profitable as a means of achieving food security and rural self employment, provide feedback about technologies to the concern research institute to improve the technology. Finally the unit is trying to build up a knowledge bank on crop production technology for delivering actionable knowledge among the farmers.

#### Income and Expenditure of the Crop Unit during July, 2019-June, 2020

Name of crops	Gross income (Tk. In Lakh)	Expenditure (Tk. In Lakh)	Net Profit (Tk. In Lakh)
Aman paddy seed, Potato, Boro Paddy, Seed vegetable and non seed potato, non seed rice along with straw.	19.51553	13.90	5.44

During the reporting year crop unit supplied 14527 Kg of Aman, 20020 Kg of Potato, and 9380 Kg of quality Boro rice seeds to BADC, Bogura for supporting the govt. seed multiplication program. Apart from the production activities the unit conducted practical sessions for total 63batches trainees on the production technologies of organic fertilizers and their utilization, rice seed production and homestead vegetables production and more than 14300 visitors from home and abroad visited the unit.

##### ii. Nursery Unit

Nursery unit is one of the Self-financed units of RDA Demo-Farm. It conducts their activities on 6 acres of land including a Germplasm repository. It is decided into two parts: horticulture and ornamental section.

**Horticulture Section:** This section experiments and research on different variety of indigenous and exotic fruits. During last fiscal year in this section 5000 mango seedlings, 2500 lemon seedlings, 2500 litchi seedlings, 3000 guava and other various 5000 fruit seedlings are developed through cleft, layering and other grafting techniques.

**Ornamental Section:** This section also experiments and research on exotic, rare and others new variety of ornamental plants. During last fiscal year more than 20000 seedlings are developed through cutting technique. More than 15000 thousand seedlings are distributed among project beneficiaries, poor farmers and Government organizations in honor of 100 years birth anniversary of father of nation Bangabandhu Sheikh Mujibur Rahman.

Training on nursery management has been given among 20 people. More than 10000 visitors have visited this unit.

The cost-benefit status of this unit is presented in following table:

**Table 3.3: Production Income and Expenditure of the Nursery Unit during July, 2019-June, 2020**

Items	Area (ac)	Gross income (Tk. In Lakh)	Expenditure (Tk. In Lakh)	Net Profit (Tk. In Lakh)
Seedlings, saplings and grafts of different plant species	6	12.43	11.06	1.37

### iii. Poultry Unit

Poultry unit is one of the important units of RDA demonstration farm. It covers an area of 1.00 acre including four poultry sheds. This unit is working as a demonstration as well as training ground for the visitors and participants coming from different corners of the country. This unit also implementing internship programme for Doctor of Veterinary Medicine (DVM) and Animal Husbandry (AH) graduates from Bangladesh Agricultural University, Mymensingh; Hajee Mohammad Danesh Science and Technology University, Dinajpur; Patuakhali Science & Technology University, Patuakali; Sylhet Agricultural University, Sylhet and Sher-E-Bangla Agricultural University, Dhaka Now, this unit is running under the PPP model done between Poultry Unit of RDA and CP Bangladesh. The last financial year this unit was reared 15600 broiler chickens in five batches and 13963 broiler chickens were sold out in the market. The total mortality was very low (3.5 %) due to application of modern broiler production practices and timely vaccination under this PPP model. Income and expenditure of the Poultry Unit during 2019-2020 are shown below:

**Table 3.4: Income and Expenditure of the Poultry Unit during July, 2019 June, 2020.**

Gross income of Poultry Unit	Expenditure	Net Profit (Tk. In Lakh)
3.61	0.90	2.71

Under this unit 13 rural poor people were trained for developing their practical skill in broiler production and more than 12,000 other trainees and visitors visited the farm as a part of demonstration. But this year here also decreases the number of visitors due to fetal and most contagious effect of Covid-19.

### iv. Dairy Unit

Dairy unit is one of the key units of RDA demonstration farm. This unit is working as a demonstration as well as training ground for the visitors and participants coming from different corners of the country. Dairy unit covers an area of 4.5 acres including 5 cattle sheds and grassland. This unit also implementing internship programme for Doctor of Veterinary Medicine (DVM) and Animal Husbandry (AH) graduates from Bangladesh Agricultural University, Mymensingh; Hajee Mohammad Danesh Science and Technology University, Dinajpur; Patuakhali Science & Technology University, Patuakali; Sylhet Agricultural University, Sylhet and Sher-E-Bangla Agricultural University, Dhaka. The newly technologies which are using under this unit are– (i) ICT Based Livestock Management for proper record keeping (ii) Machine milking for ensuring hygienic milk production; (iii) using own developed milk replacer and calf starter for ensuring economic calf production; (iv) Maize stover silage to overcome the shortage of cattle feed; (v) Estrus synchronization; (vi) Embryo Transfer; (vii) Dehorning (viii) AI in Sheep; (ix) Environment friendly livestock waste management etc. The regular activities of this unit are milk production, selling of cow dung, selection and culling of

cattle. This unit organized practical session of different livestock production, health and artificial insemination related training courses on regular basis. Production, expenditure and income of the Dairy Unit during 2019-2020 are shown below:

**Table 3.5: Production, Income and Expenditure of the Dairy Unit during July, 2019 - June, 2020**

Gross income (Tk. In Lakh)	Expenditure (Tk. In Lakh)	Net (Tk. In Lakh)
50.98	47.92	3.06

Gross income earned by selling of milk, cow dung and culled animal respectively. The unit also offered internship to 200 students of DVM and AH, skill development training to 100 trainees and more than 12000 other trainees and visitors visited the farm as a part of practical demonstration.

### v. Fish Hatchery Unit

The Fish Hatchery Unit runs its activities on 06.50 acres water bodies and a modern hatchery. The main activities of this unit are rearing of brood fish, production of fish seed and fish fingerlings of different indigenous and exotic fish species adapted to local environments and organizing practical sessions of fish culture training courses. There are four ponds and two canals under this unit. Of these, three ponds are perennial having 03.50 acres of water area used for rearing of brood fish. The rest one pond and the canals are seasonal having 03.00 acres of water area and used for rearing of fish spawn. Fish seed (spawn) of different species such as carps, magur, gulsha tengra, mono sex tilapia, Vietnamese kai are produced in the hatchery. Additionally, different types of ornamental fishes like koi carp, comet carp, gold fish, milky carp are produced in small scale in fish hatchery. Besides, Rural Development Academy (RDA), Bogura and Index Fisheries Company Ltd. are doing an action research to produce quality Monosex fry in RDA fish hatchery. Production, expenditure and income of the Fish Hatchery Unit during 2019-2020 are shown below:

**Table 3.6: Production, Income & Expenditure of the Fish Hatchery Unit during July, 2019 to June, 2020**

Gross income (Tk. In Lakh)	Expenditure (Tk. In Lakh)	Net Profit (Tk. In Lakh)
13.07	5.19	7.88

Gross income earned by selling of fish and fish spawn produced in the pond and hatchery respectively. Apart from this, the unit offered training to 03 (three) trainees for skill development course and more than 1250 other trainees and visitors visited the hatchery.

### vi. Biotechnology Laboratory Unit

Biotechnology Laboratory Unit has been producing disease free high quality seed potato of different varieties (Diamant, Cardinal, Asterix, Granola, Courage, BARI-54 etc.) and of different categories (pre-breeder/mini-tuber, breeder, foundation, certified) therefore contributing significantly to the agriculture sector of Bangladesh through supplying of good quality healthy seeds to the rural farmers. It comprises a modern biotechnology laboratory and operates field level activities on an area of 16 acres of land and presently confined to the production of quality potato seeds and disease free potato plantlets for commercial purposes. Researchers of this center are also working to establish protocol for the production of quality plantlets of gerbera, banana and orchid,

Arabian dates, stevia in this laboratory. Recently, scientists of this unit got success for commercial production of tissue culture based strawberry at field level.

Trichoderma laboratory is also another area of concern of this unit where good quality environmentally bio-pesticides and bio-fertilizers are being produced using a beneficiary fungus named *Trichoderma harzianum*. Trichoderma is an effective biological agent for conversion of solid waste into best quality organic manure. This unit is conducting research on solid waste management using the potentialities of this fungus. These tricho-products have been distributed to the rural farmers and has a significant contribution on crop yield and control of soil born diseases.

**Table 3.7: Production, Income and Expenditure of Biotechnology Laboratory Unit during July 2019 to June 2020**

Name of Items	Total Income (Tk) in lakh	Expenditure (Tk) in lakh	Net profit (Tk) in lakh
Seed potato and potato plantlets, Tricho-compost, Tricho-suspension, Tricho-powder.	28.54	17.28	11.26*

\* Taka 08 lac (eight hundred thousand) has been transferred to revenue from the net profit.

More than 800 interested students, farmers and entrepreneurs were trained on plant tissue culture based plant production as well as disease free potato seed production technology under the supervision of the resource persons of this unit.

### vii. Irrigation and Farm Power Machinery Unit

Irrigation and Farm Power Machinery is a support service unit of RDA including activities of biogas and agricultural machinery technology dissemination and development into the RDA farm. This unit is to cover about 80 acres of farm at RDA and 25 acres of Radar station of Bogra as base. The main role of the unit is helps to others units for land preparation, tillage operation by tractor and power tiller, rice planting by rice transplanter intercultural operations by modern equipment's, pre and post-harvest processing by reaper and thresher. Also, two mini combine harvesters are recently added to the units that largely helping to process agricultural crops as contact basis inside and other sides of the RDA. Modern agricultural machinery and equipment like combine harvester, Rice transplanter, sprinkler and drip Irrigation, power tiller, tractor, Reaper, Thresher are used introduced in this unit which has greater impact on farm development. This unit has an agri-machinery workshop that produces many equipment's like close drum thresher, bed planter, potato harvester, AWD magic pipe and local agricultural machineries. Irrigation and Farm Power Machinery unit of RDA is not only covered land preparation works but also contract basis rent works have done to many farmers in Bangladesh. Income & Expenditure of the unit during 2019 –2020 are given in the following table:

**Table 3.8: Income and Expenditure of the Unit during July, 2019 – June, 2020**

Items	Gross income (Tk. in Lakh)	Expenditure (Tk. In Lakh)	Net Profit (Tk. in Lakh)
Agricultural machinery rent and Irrigation	6.95	5.75	1.20

During last fiscal my year this unit has done tillage operation on 250 acre of land and deep tube well operated more than 2500 hours for irrigation and supply purpose. This unit also has given training among 20 persons on farm power machinery operation and maintenance.

### viii. Polly Joybo Sar and biogas Unit

Palli Joibo Sar and Biogas is a support service unit under RDA demonstration farm involved with the production of biogas and bio-slurry. It operates two different plats (RDA demonstration farm plant and Garidah dairy farm plant) to meet the daily consumption of biogas of RDA residential area. There are 37 (thirty seven) household connections for biogas at RDA residential area. The bio-slurry is being marketed with the brand of "Palli Joibo Sar" having different size of packages. Annual turnover of the unit for the FY2019-20 was BDT5.32 lakh with net profit of BDT 1.39 lakh.

**Table 3.9: Income and Expenditure of the Unit during July, 2019 – June, 2020**

Items	Gross income (Tk. in Lakh)	Expenditure (Tk. In Lakh)	Net Profit (Tk. in Lakh)
Seals of Polly Joybo Sar and biogas	5.32	3.93	1.39

### ix. Agro-Processing, Preservation and Marketing (APM) Unit

**Agro-Processing, Preservation & Marketing (APM)** Unit of RDA, Bogura started in 2007 at the outer periphery of the of the RDA campus and adjacent to the NCDP market on 0.70 acre of land. This Unit is being experimentally run under the Center for Irrigation and Water Resource Management (CIWM), RDA, Bogura. CIWM initiated APM Unit activities with allocation of Tk 61.00 lakh with other logistics support and guidance. The unit is running its operation with marginal profit. Previously APM unit has jointly worked with a Public-Private Partnership project named RDA-KFBILL Agro Processing and Marketing Project and created small scale agro processing industry in rural level and made entrepreneur for livelihood improvement. Now this unit has working with public-private partnership model with other groups and producing around 32 types BSTI certified agro-products and marketing through public-private model in some location especially in Dhaka, Mymensingh and Bogura. This unit is directly supervised by managerial body of RDA along with 16 non-revenue personnel (salary given by unit own income) and 02 research are going on under unit facility.

**Income & Expenditure of APM Unit during (July 2019- June 2020)**

Items	Gross income (Tk. in Lakh)	Expenditure (Tk. In Lakh)	Net Profit/loss (Tk. in Lakh)
Agro food products and Unit management during FY 2019-20	236.09	239.60	-3.51*

\*Stocks are available in store and could not be sold for the reason of Covid-19 pandemic

### 3.7 Demonstration Farm based Action Research

Many private organizations are interested to conduct joint action research work in RDA, demonstration farm due to its on going activities, training, research facility and exposure. According to (PPP) RDA, Bogura has signed MoU with ACI (Ltd), NCDP, Index Fisheries Limited, CP Bangladesh Limited, Waste Agro Limited, Ispahani Agro Limited, Fasal Agro Limited and Kamal Machine Tools to conduct joint action research in the field of hybrid seed production, plant tissue culture, biotechnology and agricultural product marketing.

### 3.8 ACI-RDA Joint Action research

To invent and produce different hybrid vegetable and cereal crops RDA and ACI jointly established a research and development (R&D) centre. The centre has been released 40 hybrid vegetable varieties from 2009 to June 2020. Besides, research is going on for another invent of more than 28 hybrid varieties of 13 different vegetable and it is also mentionable that crossing box has been set up through combination of many parental line to release F1 maize and rice variety inside the country. About 13 ha. of land is under ACI-RDA joint action research (R&D) activities. From this R&D centre, more than 100 rural people were trained as a skilled manpower and now they are able to be an entrepreneur from 2019-2020 fiscal years.

### 3.9 RDA-Index Fisheries Ltd. joint action research

Index Fisheries Company Ltd. is playing an important role for production of fisheries food and fingerlings. Rural Development Academy (RDA), Bogura and Index Fisheries Company Ltd. is doing action research to produce quality Monosex Tilapia fingerlings and marketing under the PPP model from July 2017. Under this action research 33 lakhs Monosex Tilapia have been produced and marketed from July, 2019- June, 2020. Although, the target were 1(one) crore monosex tilapia fry for this fiscal year but covid-19 pandemic affect the production due to some unavoidable causes. Under this action research, 08(Eight) rural people were trained as a skilled fish technician and now they worked in different fish farm.

### 3.10 RDA-CP Bangladesh joint action research

CP Bangladesh is playing an important role for the production of poultry feed and poultry. Rural Development Academy (RDA), Bogura and CP Bangladesh Ltd. is doing action research to produce quality broiler chicken and marketing under the PPP model. Under this action research 13963 broiler chickens have been produced and marketed from July, 2019- June, 2020. and 13 peoples were trained on broiler chickens production.

### 3.11 RDA- Agriplus Ltd Bangladesh joint action research

Under PPP program nursery unit is jointly working with Agriplus Ltd for vegetable seedling production using special nutrient medium. This joint venture is now acting as vegetable seedlings germplasm center. In the last fiscal year this center has produced and sold 235000 vegetable seedlings and nursery unit has gained 1,00,000.00 taka as a profit from selling of this seedling of this germplasm centre.

### 3.12 Centre for Irrigation and Water Management (CIWM)

CIWM mainly dealing with action research to find out appropriate solutions and replicable models for rural development was established in 2003 to reach rural people with the benefits of RDA-developed irrigation and water management models within a very short time. The centre has transferred from project approach to programmatic approach to make the projects outcome sustainable and is continuing its past project activities.

### Main activities and achievement

**Research and Action Research:** CIWM conducts action researches by emphasizing irrigation and water management as means of improved agricultural practices for sustainable rural development. Since its inception, it has been continuing action research projects to generate additional employment opportunities in rural areas through irrigation and water management technologies. CIWM has already successfully completed seven action research projects and Replicating RDA-developed irrigation and water resources model at various organizations with their own fund and interest/request.

### Innovative Approach of Government for Urban Waste Management

Present Government is well concern on waste management. Public Works Department has taken an unique innovative approach for managing all waste to value through its two authorities namely RAJUK (Rajdhani Unnayan Korripokha) and NHA (National Housing Authority). NHA is implementing the “Energy Efficient Portable Water Supply and Solid Waste Management Model by Processing all sort of Water Sources (Groundwater, rain water, Gray water and Sewerage water)” for making their “Shapno Nagar Housing (1040 flats) Project” more Green and Environment Friendly in collaboration with CIWM, RDA.

The project is implementing under the 3R concept of CIWM, i.e. Recycle, Reuse and Reduce. Where rooftop rainwater is harvested, purified (recycle) and boosted up for drinking water supply. Total gray water (shower and basin) are collected through a separate line and supplied for toilet flushing under pressure boosting system after recycling it. The recycled and reuse of water (Rain and gray water) reduced the per-capita water use (150 liter) of at least 60 liters. Finally the water comes from toilet flush and kitchen is in the name of black water, are managed in Sewage Treatment Plant (STP). The overflow water of STP will be treated by mixed-bed double-dakar multimedia filter. This water is used for gardening, green area vegetation and excess water will be subsided in soak pit for aquifer recharge. The sedimentation of STP and degradable waste comes from kitchen are managed in bio-gas plant for producing good quality fertilizer and bio-gas can be used for cooking purpose of guards and staff deployed for security. Finally CIWM helps to make the Shapna Nagar Housing project Green, clean and Environment friendly.

In RAJUK Uttara Apartment Project (6636 flats) a innovative approach of waste management project named “Biological Treatment Plant for Sewage and Wastewater (STP), Solid Waste Management with Bio-digester to produce Energy and Quality Organic Manure including Rain Water Harvesting with Reservoir and Ground Recharging finally make Uttara Apartment Project, RAJUK, Dhaka more Green and Clean” is being implemented by CIWM, RDA, Bogura.

Under this approach rainwater harvested from rooftop will be subside in existing aquifer after treatment for uplifting groundwater level of the project area. Total sewage water will be managed in Sequential Batch Reactor (SBR) type Sewage Treatment Plant (STP). Here biological treatment takes place and the overflow water will be drained in existing stream after treatment. Source separation will be ensured in household level. The sediment of STP and the separated degradable waste will be managed in Bio-gas plant. Produced bio-gas will be used as cooking energy and best quality fertilizer will be produced from slurry comes out from bio-gas plant.

In the last financial year 2019-20 a total of **13** RDA-developed Water Resources Model (DTW with or

without WTP) are implemented by different organizations by depositing full cost, which is presented in Table-A1. In the current financial year a total of 13 projects work is being going on (Table-A).

On the other hand total 23 technical and financial proposals have been submitted to concern authority on the basis of request from different organizations which is presented in Table-B. After receiving the proposed project cost, the project will be implemented as per scheduled of work plan. CIWM, RDA, Bogura total 261 projects has been replicated as full cost in the different organizations of Bangladesh, which is presented in Table-C.

### RDA Credit Program

Supply of safe drinking water in rural areas is a critical problem in our country. In rural areas no subsidy is provided by the government for safe drinking water supply. Considering this issue as a national priority basis CIWM has developed a micro-finance model term as RDA-credit. The main objective of this model is to empower rural people in such a way so that they can become financially self dependent. As a result they can easily pay back the seed capital and water supply charges. To carry out varies income generating activities RDA-credit give support to the unemployed project beneficiaries. This support helps to improve their living standard as well s socio-economic level. At a glance of RDA-credit programme is presented in Table -D.

### Overall Achievement of CIWM

- RDA-developed technology has been extended at ten sites from the own income of CIWM. In this regard, a MoU is signed with the interested NGO/Samittee to deposit 10% of the total project cost as down payment and to pay the rest amount within one/two years at 11% interest.
- Till date, a total of 182 persons have been employed from the own income of CIWM without any financial assistance of government. To put it another way, about 910 members of 182 families (5 members in each family) have ensured a comfortable livelihood.
- In the current year, the Centre has provided Tk. 2.00 million to the revenue budget of the Academy.
- RDA-developed Irrigation and Water Management Technology Model has been extended in 265 sites in seven divisions under government, non-government, NGO/Samittee and private ownership. As a result, about one lakh people are getting project benefit directly or indirectly.
- Inter institutional linkage has been developed with various GOs (DAE, LGED, REB, DPHE, BMDA, JFCL, BICIC, NHA, RAJUK) and NGOs (BRAC, Proshika, GKF) by extending RDA-developed Irrigation and Water Management Technology.
- The Model ensuring multipurpose use of water resource is getting more and more popularity day by day.
- Water Resource Development Technology with training matched RDA-credit has changed the socio-economic status and improved the quality of livelihood of the rural people.

In consideration of the effectiveness of CIWM activities, the BoG of Academy has decided to set up another six following new Centers.

- Seed and Biotechnology Center (SBC)

- Cattle Research and Development Centre (CRDC)
- Renewable Energy Research Center (RERC)
- Chars Development Research Centre (CDRC)
- Centre for Community Development (CCD)
- Palli Patshala Research Centre (PPRC)

### Recognition for CIWM activities

- **Independence Award-2004** for extra-ordinary contribution to rural development more specifically by: (i) irrigation command area development through buried pipe technology (ii) innovation of multipurpose use of low cost DTW model (iii) development of arsenic-free safe water supply plant and (iv) development of technical protocol for commercial hybrid maize seed production in Bangladesh.
- Director of CIWM Mr. M.A Matin is awarded '**Bangbandhu National Agricultural Award 1415 (Gold)-2010**' by the present Government for the recognition of CIWM's achievement (Innovation of Environmental Agricultural Technology).
- **AARDO-Rural Development Award 2012**, New Delhi, India; March, 2012 - This Award is bestowed on Rural Development Academy from Bangladesh in recognition of its outstanding contribution in the field of Rural Development.

**Table 3.10: Model replication in 2019-2020 (Completed Up to June' 2020)**

Sl. No	Name of Project	Nature of Work	Funded by
1	Palli Biddut Samitte, Hazigonj, Chandpur.	DTW, WTP,PH	GO
2	DAP Fertilizer Company Ltd. At Housing Colony Rangadia, Anowara, Chattogram.	O/W,DTW & PH	GO
3	Northwest Power Generation Company Ltd. Khulna.	O/W, DTW	GO
4	Palli Kanon, Uttara, Dhaka.	DTW	GO
5	Narail Zonal Office at Narail Under Jashore PBS-2.	DTW	GO
6	Bangladesh Livestock Research Institute (BLRI), Faridpur.	DTW	GO
7	Sylhet Palli Biddut Samitte-1, Sylhet	WTP	GO
8	Bogura Palli Biddut Samitte-1, Mokamtola Zonal office.	WTP	GO
9	BSCIC Sreemongole	WTP	GO
10	230 KV Switching Station, Sirajgonj	WFP Servicing	GO
11	Bangladesh Fisheries Research Institute, Chandpur	WFP Servicing	GO
12	70 MW Piking Power Station, Power Development Board, Bara, Pabna	WFP Servicing	GO
13	Jamuna Multipurpose Bridge Area (East) JMBA	WFP Servicing	GO

Table 3.11: Model replication (Ongoing)

Sl. No.	Name of Project	Nature of Work	Funded by
1	Sopno Nagar Under National housing authority, Segunbagicha, Dhaka.	DTW,WTP,R/O, Bio-gas Plant, RWH, Pipe line	GO
2	Rangpur Sugar Mills Ltd. at Sahebgang Fram, Gobindaganj, Gaibandha.	DTW, Pipe Line	GO
3	Uttara Apartment Project, Rajuck,Dhaka	Solid Waste Management, STP	GO
4	Fenchugonj Combined Cycle Power Station, Fenchugonj, Sylhet	DTW	GO
5	Polas Urea Fertilizer Factory LTD, Polas, Narsindhi.	DTW & P/H	GO
6	PBS Patuakhali	DTW, WTP	GO
7	Chattogram Urea Fertilizer Factory Ltd. (CUFL) Rangadia, Chattogram.	6 Nos O/W& 2Nos DTW	GO
8	Bangladesh Livestock Research Institute (BLRI),Rajabari Hat Godagari,Rajshahi.	DTW	GO
9	Bhola 225 MW Combined Cycle Power Plant, Bhola.	3 Nos O/W& 3Nos DTW, Pipe line	GO
10	Bangladesh Sugarcrop Research Institute (BSRI), Subornochar,Noakhali	O/W, DTW, Burid pipe	GO
11	Palli Bidyut Samity-3 at Sitakunda, Chittagong.	DTW,WTP	GO
12	PBS Shatkira	DTW,WTP	GO
13	GMD,PGCB Shitakundo Chattogram	DTW,WTP	GO

Table 3.12: Proposal submitted to different agencies

Sl. No.	Name of project	Nature of work	Funded by
1	Bangladesh Sugar crop Research Institute (BSRI), Subornochar, Noakhali	O/W, DTW, Buried pipe	GO
2	Sheikh Rehana Textile Engineering College at Gopalganj.	DTW, WTP	GO
3	Titas 50 MW Power Plant, Titas, Cumilla.	O/W, DTW & WTP	GO
4	Chittagong Urea Fertilizer Factory Ltd. (CUFL) Rangadia, Chittagong.	6 Nos O/W& 2Nos DTW	GO
5	Bangladesh Glass Factory at Barokund, Sitakunda, Chattogram	5 Nos DTW & P/H	GO
6	Bangladesh Glass Factory at Barokund, Sitakunda, Chattogram	5 Nos O/W	GO
7	Palli Bidyut Samity, Bogura.	WTP Servicing	GO
8	Palli Bidyut Samity, Sylhet.	WTP Servicing	GO
9	BCS Administration Academy at Dhaka.	15000 litre WTP	GO
10	Resettlement Village Development Project, Uttara, Dhaka.	WTP, Sewage Treatment Plant, Solid Waste Management, Rain water Harvest	GO

Sl. No.	Name of project	Nature of work	Funded by
11	PBS Patuakhali	DTW, WTP	GO
12	PBS Nowakhali	DTW, WTP	GO
13	Barishal Metropolitan and Khulna District Police Line Project at Barishal	O/W,DTW, WTP, RO	GO
14	Barishal Metropolitan and Khulna District Police Line Project at Khulna	O/W, DTW, WTP, RO	GO
15	PBS, Rupatoli, Barishal	DTW with WTP	GO
16	Shazibazar 330MW Combined Cycle Power Station, Shazibazar, Hobigonj.	O/W, 6Nos	GO
17	PBS-2,Raujan,Chottogram	DTW with WTP	GO
18	70 MW Piking Power Station, Power Development Board, Bara, Pabna	WTP Servicing	GO
19	Jamuna Fertilizer Company Ltd. (JFCL), Tarakandi, Jamalpur.	2 Nos O/W & 1 No DTW	GO
20	Bhola 225 MW Combine Cycle Power Plant	3No O/W, 3No DTW, PH, Pipe line	GO
21	Polas Urea Fertilizer factory Narsingdi.	DTW	GO
22	230 KV Switching Station, Sirajgonj	WFP Servicing	GO
23	Fisheries Diploma Institute at Chandpur	DTW with WTP	GO

**DTW**- Deep Tube Well, **WTP**- Water Filtration Plant, **RO**- Rivers Osmosis, **O/W**- Observation well

Table 3.13: Model replication as on June' 2020.

Sl. No.	Name of Project	Nature of Work	Remarks
1	50 MW Peaking Power Plant, Bagabaria, Sirajgonj	WFP/GR	GO
2	100 MW Peaking Power Plant, BPDP, Gopalganj	DTW,WFP,GR	
3	150 MW Combined Cycle Power Station, Sylhet	DTW	GO
4	230 KV Switching Station, Sirajgonj	DTW & WFP	GO
5	50 MW Peaking Power Plant, Bagabaria, Sirajgonj	WFP/GR	GO
6	660 MW X 2 Coal Based Power Station, Rampal, Bagerhat	DTW	GO
7	660 MW X 2 Coal Based Power Station, Rampal, Bagerhat (2 <sup>nd</sup> phase)	RO	GO
8	70 MW Piking Power Station, Power Development Board, Bara, Pabna	GR	
9	Abdul Momen Economic Zone, Gozaria, Munshigonj	DTW,WFT,GR,PL	GO
10	ACI-RDA Joint Research RDA, Bogura	DTW,	GO
11	Agricultural Research Foundation	DTW	GO
12	Ahmedpur, Sujanagar, Pabna	WFP	GO
13	Alenga Resord Ltd, Alenga,Tangail	DTW,WFP	GO
14	Alinagar, Gomostapur, Chapai Nowabgonj	WFP	GO
15	Aman Company, Mohonpur, Rajshahi	DTW & WFP	Private

Sl. No.	Name of Project	Nature of Work	Remarks
16	Aman Company, Ullapara, Sirajgonj	DTW & WFP	Private
17	Aqua Breeds Project, Majipara, Panchagar	DTW	Private
18	Aristocrat Hotel, Sirajgonj	WFP	Private
19	Aysa Abed Foundation, Manikganj, Bangladesh Rural Advance Committee; BRAC.	DTW & WFP	NGO
20	Baghabari Gas Turbine (GT) power station, Sirajgonj; BPDB.	DTW & WFP	GO
21	Bangladesh Fisheries Research Institute, Bagherhat	WFP	GO
22	Bangladesh Fisheries Research Institute, Chandpur	WTP	
23	Bangladesh Fisheries Research Institute, Mymensingh.	DTW	GO
24	Bangh Bandhu Bridge Area	WTP	
25	Bangladesh Power Development Board, Khalishpur, Khulna	DTW	GO
26	Bangladesh Agricultural University, Mymensingh	Flow Measurement Tank	
27	Bangladesh Agricultural University, Mymensingh (DTW NO-4)	DTW	
28	Bangladesh Agricultural University, Mymensingh (DTW NO-5)	DTW	
29	Bangladesh Agriculture University, Mymensingh (DTW NO-3)	DTW	GO
30	Bangladesh Agriculture University, Mymensingh-DTW NO-2	DTW	
31	Bangladesh Agriculture University, Mymensingh-DTW NO-1	DTW	GO
32	Bangladesh Bank Agrabad, Chattogram	DTW	GO
33	Bangladesh Bank Office Complex, Chattogram	DTW	GO
34	Bangladesh Fisheries Research institute, Jashore	WFP	GO
35	Bangladesh Livestock Research Institute (BLRI) Saver (Central Cow Breeding Centre);	DTW	GO
36	Bangladesh Livestock Research Institute (BLRI), Baghabari;	DTW & WFP	GO
37	Bangladesh Livestock Research Institute (BLRI), Savar Bio-gas plant establishment unit ministry of Livestock and fisheries	Bio-gas	GO
38	Bangladesh Livestock Research Institute (BLRI), Savar; Dhaka	DTW	GO
39	Bangladesh Livestock Research Institute (BLRI) Cumilla (Vaccine Production Centre);	DTW & WFP	GO
40	Bangladesh Livestock Research Institute(BLRI), Bagabari, Sirajgonj	WFP	GO
41	Bangladesh NGO foundation, Dhunot, Bogura	DTW/,WTP	
42	Bangladesh Rice Research Institute BRRI, Gazipur;	DTW	GO
43	Bangladesh Rural Advance Committee, Fish Hatchery Farm, Sreemongal; BRAC.	DTW & WFP	NGO
44	Bangladesh Rural Advance Committee BRAC, Poultry Farm, Mirsari, Chattogram;	DTW & WFP	NGO
45	Bangladesh Rural Advance Committee, Poultry Farm, Sreemongal; BRAC.	DTW & WFP	NGO
46	Bangladesh Rural Advance Committee, TARC, Faridpur; BRAC	WFP	NGO
47	Bangladesh Rural Advance Committee-UNICEF Village Sonargaon, Dhaka; BRAC.	DTW & WFP	NGO

Sl. No.	Name of Project	Nature of Work	Remarks
48	Bangladesh Small Scale Industries Corporation (BSCIC) State, Pabna	DTW	
49	Bangladesh Small Scale Industries Corporation (BSCIC), Kanchpur, Narayongonj	DTW	GO
50	Bangladesh Small Scale Industries Corporation (BSCIC), Noakhali	WFP	GO
51	Bangladesh Small Scale Industries Corporation (BSCIC), Rangamati	Dug/WFP	GO
52	Bangladesh Small Scale Industries Corporation (BSCIC)BSCIC, Kishoregonj	DTW/WFP	GO
53	Bangladesh Small Scale Industries Corporation (BSCIC)BSCIC, Munshigonj	DTW/WFP	GO
54	Bangladesh Small Scale Industries Corporation (BSCIC)BSCIC, Sherpur	WFP	GO
55	Bangladesh Sugarcane Research Institute, Iswardi, Pabna	DTW	GO
56	Bangladesh University Grant Commission, R/A, Mirpur, Dhaka; BUGC	DTW	GO
57	Bangladesh Water Development Board, Narayangonj	DTW & WFP	GO
58	Bangle Meat Production Ltd. Sathia, Pabna	DTW & WFP	Private
59	Bangobandhu Bridge Special organization Tangail	WFP	NGO
60	Bangobandhu Jamuna Bridge (East and West)	WFP	GO
61	Bangobandhu Sheikh Mujibur Rahaman Agricultural University, Salna, Gazipur.	DTW	GO
62	Bangobandhu: Sheikh Mujibur Rahaman Agricultural University (BSMRAU),Salna, Gazipur (2nd Phase)	DTW	GO
63	Bangobandhu:Sheikh Mujibur Rahaman Science and Technology University, Gopalganj	DTW/WFP	GO
64	Bangobandhu:Sheikh Mujibur Rahaman Science and Technology University Gopalganj 2 <sup>nd</sup> phase	DTW/WFP	
65	Bheramar Power Station, Kustia; BPDB.	DTW	GO
66	BIAM Foundation, Bogura	DTW	GO
67	Boyra daiary and poultry farm Balkuche, Sirajgonj	DTW	
68	BRAC Agriculture Research and Development Center, Gazipur	DTW	NGO
69	BRAC, TARC, Pirer bazar, Sylhet	DTW	NGO
70	Bufflow development project, Bagerhat (Livestock Department)	DTW	GO
71	Chandaikona, Raygonj, Sirajgonj	DTW	Private
72	Chandnia, Shibgonj, Bogura	WFP	Private
73	Chapai Nawabgonj Purashava, Chapai Nawabgonj; DPHE	DTW	GO
74	Chapainawabgonj Palli Biddut Samity, Chapainawabgonj; PBS	WFP	GO
75	Chatob-Borat, Shatia, Pabna	DTW,WFP	GO
76	China-Bangladesh Friendship	DTW&WFP	GO
77	Chittagong Urea Fertilizer Limited, Rangadhia, Chattogram	DTW	GO
78	Civil Cornar Baitul Aman Society Andabar, Dhaka	WFP	Private
79	Dack Bangla Para, Shahjadpur, Pabna	WFP	Private
80	Dharki, Sadar, Joypurhat	WFP	NGO
81	Energies Power Corporation Ltd., Mascot Plaza, Dhaka	DTW	Private



Sl. No.	Name of Project	Nature of Work	Remarks
82	Energis Power Corporation LTD, Shikalbaha, Chattogram	DTW	Private
83	ENT Foundation, Agargaon, Dhaka	DTW	Private
84	EPZ Kornofuly	DTW	GO
85	Fenchugonj Combined Cycle Power Station, Fenchugonj, Sylhet	DTW	GO
86	Flaming Agro Tech Ltd. Tilokpur, Joypurhat	DTW	Private
87	Food Village Campus, Sherpur, Bogura	DTW/WFP	Private
88	Gabtolli Health Complex, Gabtolli, Bogura	WFP	GO
89	Gas Transmission Company Ltd. (GTCL), Monhorde, Narsingdhi	DTW	GO
90	Gas Transmission Company Ltd. (GTCL), Ashugonj, B.Baeia	DTW	GO
91	Gas Transmission Company Ltd. (GTCL), Demra, Dhaka	DTW	GO
92	Gas Transmission Company Ltd., (GTCL), Baghabari, Sirajgonj;	DTW & WFP	GO
93	Ghorashal Thermal Power Plant, Narsingdhi	DTW	GO
94	Ghorashal Thermal Power Plant, Narsingdhi (2nd Phase)	DTW	GO
95	Ghorashal Urea Fertilizer Factory, Narsingdhi	DTW	GO
96	GMD,PGCB Power grid Company, Dhekin Keranigonj, Dhaka	DTW	GO
97	GMD,PGCB Power grid Company, Sonargaon, Narayongonj	DTW/WFT	GO
98	GMD,PGCB, Sub-Station, Shajadpur, Sirajong	DTW,WFP	GO
99	Gobindapur, Kachua, Chandpur	WFP	GO
100	Hazi mujib foundation Komolgonj, Moulvibazar	DTW	
101	Homna pauroshova Cumilla	DTW & WFP	GO
102	Horipur 360 MW Combine Cycle Power Station, Horipur, Siddirgonj, Narayongonj	DTW	
103	Hossainpur, Sirajgonj	DTW & WFP	GO
104	Institute of Marin Technology, Sirajgonj	DTW/WFP	
105	Jaghati, Sadar, Jashore	WFP	GO
106	Jalalabad Gas Transmission and Distribution Ltd., Sylhet	WFP	GO
107	Jamuna Fertilizer Company Ltd. (JFCL), Tarakandi, Jamalpur.	DTW & WFP	GO
108	Jamuna Multipurpose Bridge Area (Alanga) JMBA	DTW & WFP	GO
109	Jamuna Multipurpose Bridge Area (East) JMBA	DTW & WFP	GO
110	Jamuna Multipurpose Bridge Area (Nolka) JMBA	DTW & WFP	GO
111	Jamuna Multipurpose Bridge Area (west) JMBA	DTW & WFP	GO
112	Jamuna Multipurpose Bridge Rehabilitation Area (East) JMBA	DTW & WFP	GO
113	Jamuna Multipurpose Bridge Rehabilitation Area (West) JMBA	DTW & WFP	GO
114	Jamuna Multipurpose Bridge Thana Complex (East) JMBA	DTW & WFP	GO
115	Jamuna Multipurpose Bridge Thana Complex (West) JMBA	DTW & WFP	GO
116	Joysagor Fish farm, Sirajgonj	DTW	NGO
117	Kalmia, Laksham, Cumilla	WFP	Private

Sl. No.	Name of Project	Nature of Work	Remarks
118	Kanighat, Sylhet	WFP	Private
119	Karnofuly EPZ, Patenga, Chattogram	DTW & WFP	GO
120	Madna Parchimpara, Chuadanga	WFP	GO
121	Marge Net One Limited JMBA Area	WFP	GO
122	Matin Cotton Mills, Shialkhol, Sirajgonj	DTW & WFP	Private
123	Milk production Project, (General)	DTW	GO
124	Mohamadnagar, Companigonj, Noakhali	WFP	Private
125	Mohasthan Mazar, Bogura	DTW	NGO
126	Monu and Muhuri River Survey	Surveying	GO
127	Mr. Abdus Salam, Kalsamati, Sherpur, Bogura	DTW	Private
128	Mr. Alauddin, Damua DTW Project	DTW	Private
129	Mr. Azad, Araibari, Kashba, B-Baria	DTW	Private
130	Mr. Golam Mostafa, Daribangra, Sherpur, Bogura	DTW	Private
131	Mr. Yunus Ali, Shibpur DTW Project	DTW	Private
132	Mr. Zonab Ali, Kalshimaty DTW Project	DTW	Private
133	National Academy for Training, Research & Multilingual Short Hand Bogura; NATRMS	DTW	GO
134	National Heart Foundation Hospital, Dhaka	DTW	GO
135	Nefra, Ulipur, Kurigram	WFP	GO
136	Noiagola, Chapainawabgonj	DTW	GO
137	North West Power Generation Company Ltd., Khulna	DTW	GO
138	Northern Poultry Farm, Sabgram, Bogura	WFP	Private
139	Omera LPG bottling plant Dhonkunthi, Sherpur, Bogura	DTW	Private
140	Palash Urea Fertilizer factory, Norshingdi	DTW	GO
141	Palashbari Upzilla Parishad, Gaibandha	WFP	GO
142	Palli Biddut samittee, Zhilongza, Cox's Bazar	DTW, WFP	GO
143	Palli Biddut Samittee, Thikrabondah, Khulna	DTW	GO
144	Palli Biddut Samity-1, Cumilla	WFP	GO
145	Palli Biddut Samity, Gaibandha	DTW	GO
146	Palli Biddut Samity, Narayongonj	DTW,WTP	GO
147	Palli Biddut Samity, Belkuchi, Sirajgonj;	DTW & WFP	GO
148	Palli Biddut Samity, Gaibandha	WFP	GO
149	Palli Biddut Samity, Habigonj	WFP	GO
150	Palli Biddut Samity, Jhalokhati	WFP	GO
151	Palli Biddut Samity, Lalmonirhat	WFP	GO
152	Palli Biddut Samity, Manikgonj	WFP	GO
153	Palli Biddut Samity, Moulvibazar.	DTW & WFP	GO

Sl. No.	Name of Project	Nature of Work	Remarks
154	Palli Biddut Samity, Munshigonj;	WFP	GO
155	Palli Biddut Samity, Naogaon;	DTW & WFP	GO
156	Palli Biddut Samity, Norshindi;	DTW & WFP	GO
157	Palli Biddut Samity, Rajbari	WFP	GO
158	Palli Biddut Samity, Sirajgonj	WFP	GO
159	Palli Biddut Samity, Sirajgonj;	WFP	GO
160	Palli Biddut Samity, Ullapara, Sirajgonj	WFP	GO
161	Palli Biddut Samity-1, Savar, Dhaka	DTW	GO
162	Palli Biddut Samity-2, Cumilla	WFP	GO
163	Palli Biddut Samity-2, Kashinathpur, Pabna;	DTW & WFP	GO
164	Palli Biddut Samity, Bhola	DTW	GO
165	Paschimanchal Gas Co. Ltd, Baghabari, Sirajgonj	DTW	GO
166	Pathrail, Delduar, Tangail	WFP	GO
167	Paykegacha Porosova, Pykegacha, Khulna.	WFT	NGO
168	Project in Agriculture, rural industries, Science and Medicine	Water Test	GO
169	PROSHIKA Training Centre, Kytee, Manikganj; PROSHIKA	DTW & WFP	NGO
170	Purba Homna, Cumilla	WFP	GO
171	RAB-12, Batelian Campas, Sirajgonj	DTW/WFP	
172	Raghunathpur, Sadar, Chandpur	WFP	GO
173	Rashid Krishi Khamar, Trishal, Mymensingh	DTW&WFP	Private
174	RDA Fisheries Unit, Bogura	DTW	GO
175	RDRS, Koshba, B-Baria	DTW	NGO
176	Regional foundation Centre, Nodhapara	DTW	GO
177	Rural Development Academy, Bogura	DTW	GO
178	Rural Development Training Institute, Sylhet; RDTI	DTW	GO
179	Rural Electrification Board Narayangonj	DTW/WFP	GO
180	Rural Electrification Board, Barishal;	DTW & WFP	GO
181	Rural Electrification Board, Jashore	WFP	GO
182	Rural Electrification Board, Joypurhat	DTW	GO
183	Rural Electrification Board, Manikgonj	WFP	GO
184	Rural Electrification Board, Rajshahi;	WFP	GO
185	Rural Electrification Board, Rangpur;	DTW	GO
186	Rural Electrification Board, Tangail	DTW	GO
187	Sadabari, Dhanghara, Chuadanga	WFP	GO
188	Satian, Mirpur, Kustia	WFP	GO
189	Sayed Spinning & Cotton Mills Ltd., Sirajgonj	WTP	Private

Sl. No.	Name of Project	Nature of Work	Remarks
190	Seed Certification Agency, Joydevpur, Gazipur	DTW	GO
191	Seed Quality Control Project,, Joydevpur, Gazipur	DTW	GO
192	Shahjalal Science and Technology University, Sylhet	DTW	GO
193	Shahjalal University of Science and Technology, Sylhet	WFP	GO
194	Shamsuddin Spinning Mills Ltd.	DTW	Private
195	Sheikh Fajilatunnesa Eye Hospital, Gopalganj	DTW	GO
196	Sherpur Upzilla Office, Bogura	DTW	GO
197	Shiddirgonj Thermal Power Point, Narayangonj	DTW	GO
198	Shiddirgonj Thermal Power Station, Narayangonj (2nd Phase)	DTW	
199	Shikdarpara, Pekua, Cox's Bazar	WFP	GO
200	Sreepur, Fulgazi, Feni	WFP	GO
201	Sumon Enterprise, Bogura	WFP	Private
202	Switching Station Ashugonj, B. Baria (GTCL)	DTW	GO
203	Sylhet Agricultural University, Sylhet	DTW	GO
204	Technical Training Centre (TTC), Alampur, Sylhet	WFP	GO
205	Technical Training Centre (TTC), Bandarban.	DTW	GO
206	Technical Training Centre (TTC), Gaibandia	DTW,WFP	GO
207	Technical Training Centre (TTC), Gopalganj	DTW	GO
208	The Security Printing Corporation Bangladesh Limited, Gazipur	DTW	GO
209	TSP Complex, Patenga, Chattogram	OB	GO
210	Urea Fertilizer Factory LTD, Ghorashal	DTW	GO
211	Vaduria, Nawabgonj, Dinajpur	WFP	GO
212	Wes Gas Ltd. Nolka, Sirajgonj	WFP	GO
213	World Vision, Bogura	DTW	NGO
214	Youth Training Centre, Bogura	DTW	GO
215	Active Pharmaceutical Ingredient(API), Gozaria, Munshigonj	DTW	GO
216	Bibiyana-South 400MW Combined Cycle Power Plant Campus, Nabigonj, Hobigonj-1.	DTW, WTP, GR	GO
217	Bibiyana-South 400MW Combined Cycle Power Plant Campus, Nabigonj, Hobigonj-2.	DTW, WTP, GR	GO
218	BSCIC State Mirarshorai, Chattogram	O/W, DTW	GO
219	Pairst 1320 MW Thermal Power Plant Campus at Kolapara, Patuakhali-1	OW,DTW,WFP	GO
220	Pairst 1320 MW Thermal Power Plant Campus at Kolapara, Patuakhali-2	OW,DTW,WFP	GO
221	Shajalal University of Science & Technology, Sylhet	DTW	GO
222	Siddhirgonj Thermal Power Station, Siddhirgonj, Narayongonj-DTW- 3.	DTW	GO
223	Siddhirgonj Thermal Power Station, Siddhirgonj, Narayongonj-DTW- 4.	DTW	GO

Sl. No.	Name of Project	Nature of Work	Remarks
224	BSCIC State, Sreemongal	WTP	GO
225	Multi-Lane Tunnel under the Karnaphuli River Project at Chattogram	DTW-4,WFP,RO	GO
226	BSCIC State, Chuadanga	OW, DTW	GO
227	BSCIC State, Dhamri, Dhaka	DTW	GO
228	BSCIC Gopalganj	O/W,DTW,WFP	GO
229	Sikalbaha 225 MW Duel Fual CCPP Consttuction Project,BPDB at Sikalbaha, Chattogram.	O/W, DTW	GO
230	Sikalbaha 225 MW Duel Fual CCPP Consttuction Project,BPDB at Sikalbaha, Chattogram.	Pipe Line	GO
231	Palli Biddut Samitte, Laxmipur	DTW,WFP,GR	GO
232	Shahjalal University of Science and Technology, Sylhet	WFP	GO
233	Syed Spinning & Cotton Mills Ltd. Shialkol, Sirajganj.	WTP(Servicing)	GO
234	10 KW F.M Radio Station, Gopalganj	DTW,WTP	GO
235	Fenchugonj Combined Cycle Power Station, Fenchugonj, Sylhet.	DTW (Servicing)	GO
236	Palli Biddut Samitte,Hobigonj	WTP (Servicing)	GO
237	Palli Biddut Samitte,Moullobibazar	WTP (Servicing)	GO
238	Palli Biddut Samity, Belkuchi, Sirajgonj;	WTP (Servicing)	GO
239	Palli Biddut Samitte, Chattogram.	WTP	GO
240	Bangobandhu:Sheikh Mujibur Rahaman Science and Technology University, Gopalganj.	WFP (Servicing)	GO
241	50 MW Peaking Power Plant, Bagabaria, Sirajgonj	WFP(Sercicing)	GO
242	Bangladesh Livestock Research Institute (BLRI), Bagabari, Sirajgonj.	DTW	GO
243	132/33 KV Grid Sub-Station, Khulshi, Chattogram	DTW,WFP,RO	GO
244	132/33 KV Grid Sub-Station, Patenga, Halishahar,, Chattogram	DTW,WFP,RO	GO
245	Palli Biddut Samitte,Ullapara, Sirajgonj	WTP (Servicing)	GO
246	Urea Fertilizer Factory, Ghorashal	DTW(Servicing)	GO
247	Trauma Center at Gopalganj	DTW,WTP	GO
248	Ghorashal Thermal Power Station at Polash, Narsingdi.	DTW	GO
249	Palli Biddut Samitte, Hazigonj, Chandpur	DTW, WTP,PH	GO
250	DAP Fertilizer Compan Ltd. At Housing Colony Rangadia, Anowara, Chattogram	O/W,DTW & PH	GO
251	Northwest Power Generation Company Ltd. Khulna	O/W, DTW	GO
252	Palli Kanon,Uttara, Dhaka	DTW	GO
253	Narail Zonal Office at Narail Under Jashore PBS-2.	DTW	GO
254	Bangladesh Livestock Research Institute (BLRI), Faridpur.	DTW	GO
255	Sylhet Palli Biddut Samitte-1, Sylhet	WTP	GO
256	Bogura Sylhet Palli Biddut Samitte-1, Mokamtola Zonal office.	WTP	GO
257	BSCIC Sreemongole	WTP	GO

Sl. No.	Name of Project	Nature of Work	Remarks
258	230 KV Switching Station, Sirajgonj	WFP Servicing	GO
259	Bangladesh Fisheries Research Institute, Chandpur	WFP Servicing	GO
260	70 MW Piking Power Station, Power Development Board, Bara, Pabna	WFP Servicing	GO
261	Jamuna Multipurpose Bridge Area (East) JMBA	WFP Servicing	GO

**Table-D: At a glance of RDA-Credit Programme (Up to June 2020)**

Sl. No.	Key Points/Activities	Progress
1	Total Sub-Project Area (Nos.)	378
2	Total Seed Capital Released (Tk. in lakh)	5682.22
3	Cumulative Revolving Seed Capital (Tk. in lakh)	14092.7
4	Total members involved in credit (Nos.)	26950
	A) Male	15652
	B) Female	11298
5	Credit due for realization (Tk. in lakh) including service charge	14755.359
6	Credit realized (Tk. in lakh)	13253.40
	A) Principal (Tk. in lakh)	11940.00
	B) Service charge (Tk. in lakh)	1313.40
7	Out Standing (Tk. in lakh)	2389.49
	A) Principal (Tk. in lakh)	2152.70
	B) Service charge (Tk. in lakh)	236.80
8	Realization of %	89.82

### 3.13 Seed and Biotechnology Center (SBC)

Rural Development Academy (RDA), Bogura along with its stakeholders has achieved much national and international recognition as an efficient and leading organization for dissemination of seed and different aspects of biotechnology up to village level. Seed and Biotechnology Centre established at RDA with the aim to produce high quality disease free seeds, plantlets and to conduct training, research and action research. RDA has a seed production farm of 80 acres of cultivable land with sophisticated seed processing facilities, seed health testing laboratory and biotechnology laboratory.

After the establishment in 2011, this center was only involved in production of disease free potato seed of two varieties Diamant and Cardinal but at present it is working on seven different varieties of potato, some commercially important plants such as strawberry, stevia, grape, orchid, banana, gerbera etc. along with mushroom and trichoderma. Eight persons including 3 scientists are working in this center presently.

## Strategic goal of SBC

Seed and Biotechnology Centre works to enhance the living standard of rural poor people using biotechnological knowledge.

## Aims and objectives

Specific objectives of the center are as follows

- To produce disease-free seed and plantlets through tissue culture techniques to meet the increasing demand of quality seed;
- To conduct research and demonstrate the outcomes for rural development;
- To provide training for human resource development on plant tissue culture;
- To transfer technologies among the stakeholders and beneficiaries as a means of improving their living standard;
- To initiation of collaborative research program with different relevant organizations and conduct awareness building programs on different biotechnological aspects.
- To produce trichoderma products for soil borne disease control and better crop yield.

## Available facilities

- Well-equipped laboratory for plant tissue culture of various plant species.
- A demonstration farm of about 80 acres of land with all kinds of modern facilities.
- Skilled and efficient manpower.
- Modern laboratory for production of Trichoderma based high quality bio-pesticides and bio-fertilizers and mushroom production.

## Research Programs already conducted

- Production of disease free potato seed through meristem culture for commercial use;
- *In-vitro* propagation of grape (*vitis vinifera*);
- Protocol development for *in vitro* regeneration of some commercially important varieties such as banana, orchid, gerbera, stevia, dates etc.
- Regeneration of strawberry through shoot tip culture.
- Development of technical protocol for Trichoderma enhanced biofertilizer production.
- Effect of Trichoderma suspension on production of organic fertilizer.
- Business opportunity of Trichoderma Composting Technology.
- Shelf life study of Trichoderma in Talc Based Formulation.

## Achievements

- More than 800 beneficiaries are given skill development training on plant tissue culture of which most of them are self-employed at present;
- Each year around 6000 man-day's work opportunity has been created by this center;
- Seed potato production of seven different varieties e.g. Granola, Diamant, Cardinal, BARI-54, BARI-29, BARI-86, and Asterix; have made successful through tissue culture technique.
- From the beginning more than 1620 MTs of disease-free seed potatoes of different categories e.g. prebreeder/mini-tuber, breeder and foundation are produced;
- Around 3.5 million of disease-free potato plantlets are produced;
- Every year farmers field days are organized for demonstration of technologies and sharing of practical experiences;
- Each year hundreds of farmers are getting advisory services.

## Currently running program

In biotechnology laboratory, near about 1, 50,000 quality potato plantlets production process is ongoing. Beside this, strawberry, stevia, gerbera, gladiolus, orchid and date palm propagation is also going on.

## Financial statement

This centre is running by its own earnings and significantly contributing its profit to the revenue.

**The financial statement for financial year 2019-20 (July 2019- June 2020) is as follows:**

Name of Items	Total Income(Tk) in lakh	Expenditure (Tk) in lakh	Net profit (Tk) in lakh
Seed potato and potato plantlets, Tricho-compost, Tricho-suspension, Tricho-powder.	28.54	17.28	11.26*

\* Taka 08 lac (eight hundred thousand) has been transferred to revenue from the net profit.

## Future Plan

- Protocol development for date palm (Arabian date) plantlet production, commercial production and creation of new avenue for income generation of farmers and unemployed youth.
- Micropropagation of Gerbera, banana & orchids and their profitable production to encourage the rural poor to get involved in huge cut flower market.
- Act as a Centre of Excellence for rural development focused initiatives in the country.
- Use of biotechnological knowledge for the well-being of our rural people to uplift their living status.
- Has a future plan to set up a molecular biology laboratory for the development of new crop varieties through molecular techniques.

### 3.14 Cattle Research and Development Centre (CRDC)

#### Introduction

Cattle Research & Development Center (CRDC) is one of the important center under the management of Rural Development Academy (RDA), Bogura to deal with research, action research, and training and advisory services special emphasis put on livestock and rural development in Bangladesh. This center was established with the government revenue budget for the year 2011-14. The main task of the center is to provide demand led livestock services and sustainable technologies for increasing their productivity and improving farmer's quality through improving scientific managerial and professional competency in harmony with environment. The center is dedicated in sharing Knowledge and skills related to animal feeding, breeding, care, nutrition, management and treatment. This center also keenly seeks collaborations and partnerships with highly regarded organizations and educational institutions all over the world.

#### Objectives

The main objective of CRDC is to improve the genetic potential of local cows for milk production (3000 litre per cow per lactation) and to contribute in the national demand of milk and meat. The specific objectives of the study were:

To produce and supply of quality semen for improvement of cattle breed through artificial insemination for increasing milk and meat production

ICT based livestock services with data management for proper record keeping

#### Methodology

CRDC has established one main center at RDA campus and two Sub-centers at Kotalipara, Gopalganj and Jujkhola, Pirojpur for improvement of cattle breed through artificial insemination. Under CRDC there is a modern and full automatic bovine semen processing laboratory where quality frozen semen produced on regular basis and supply to farmer's house for artificial insemination by skilled AI workers of livestock services providers (LSP). This center has 80-100 skilled AI workers who performed AI for improving the genetic potential of bull and heifer through artificial insemination (AI) to the action research project areas of RDA under direct supervision of the CRDC staff and technical personnel. This center also take initiatives for improvement of cattle feed quality and production of silage as cattle feed. It is also conduct research on breeding, feeding and management techniques. They conduct training for the staffs and beneficiaries of the study villages. This center plays a vital role for ICT based livestock record keeping through application of mobile apps.

#### Internship programme

The internship programme for Doctor of Veterinary Medicine (DVM) and Animal Husbandry (AH) graduates from Bangladesh Agricultural University, Mymensingh; Hajee Mohammad Danesh Science and Technology University, Dinajpur; Patuakhali Science & Technology University, Patuakali; Sylhet Agricultural University, Sylhet and Sher-E-Bangla Agricultural University, Dhaka were conducted and every year about 500 interns learned practically about modern techniques of bovine semen

processing, dairy production, better farm management, machine milking, feeding, breeding etc. But this year the number is decreased due to the world wide effect of Covid-19

#### Training and exposure visit

There were about 100 participants trained practically on artificial insemination and developing their skills and more than 1,2000 visitors from home and abroad visited the activities of CRDC every year in the field of cattle breed improvement and taking this as a business model. Here also decreases the number of visitors due to fetal and most contagious effect of Covid-19.

At present there are 12 prove bulls at AI lab and bull station under CRDC center which is used for quality semen production and the semen is supplied to the AI workers who were trained up by RDA.

Production, expenditure and income of the Dairy Unit during 2019-2020 are shown below:

**Table 3.14: Production, Income and Expenditure of the Dairy Unit during July, 2019 - June, 2020**

Gross income (Tk. In Lakh)	Expenditure (Tk. In Lakh)	Net (Tk. In Lakh)
27.97	24.49	3.48

#### Projects under CRDC

Under CRDC one project entitled: "Action Research Project on Strengthening and Expansion of Cattle Research and Development Center" under RDA, Bogura have submitted.

#### Services providing by CRDC

- Better herd management
- Nutritional improvement & clean water therapy
- Quality feed production and supply
- Calf raising through low cost milk replacer & calf starter
- Heifer & pregnant cow management
- HYV fodder production, processing and preservation
- Silage & maize stover silage production
- Quality semen production & supply
- Artificial insemination
- Genetic improvement
- Machine milking
- Milk & meat marketing
- Diagnostic services
- Farm design, project planning & implementation
- ICT based livestock services with data management

- Environment friendly livestock waste management

### Conclusion

CRDC is continuously trying to improve breed of cattle by supplying quality semen which is produced by CRDC. If this process is done in large scale within the country it will be helpful to improve the breed of cattle and also in record keeping. CRDC also trying to introduce new technologies for livestock development and production which motivate the visitors to improve the livestock sectors ultimately to develop their livelihood status. It is an attraction for all kinds of visitors to be inspired in receiving new technologies followed by using and contributing to the national GDP. In recent the overall activities of CRDC has decreased due to more contagious effect of Covid-19, which causes adverse effect on the production and profitability of the center as well as RDA and effect on the national GDP. Hope the world pandemic Covid-19 will recover soon and the country will recover its crisis.

### 3.15 Renewable Energy Research Center (RERC)

Bangladesh has major problems with energy crisis, persisting poverty and environmental degradation. With only 49% of Bangladesh having access to electricity, the per capita energy use is only 180 kWh. Moreover, the people who are connected with the national grid are experiencing frequent load shedding. At present, the country can generate about 4500 MW electricity, while peak demand is about 6000 MW (USAID, 2011). Therefore, the supply is unreliable, Most of the supply is limited to urban areas; access to electricity in rural areas is less than 10%. RET can solve this problem by harnessing energy from country's free flowing renewable such as sunshine, wind, tidal waves, waterfalls or river current, sea waves or biomass, Use of renewable energy, increased energy efficiency and enhancement of energy security constitute a sustainable energy strategy approach.

Rural Development Academy (RDA), Bogura creating environmental friendly model for rural developing rural livelihood socio-economics status since its inception. From a decade ago RDA is working on solid waste (created from demonstration farm units- dairy, poultry, fisheries, cafeteria, guesthouse, hostel and residential areas) management and producing renewable energy through community based bio gas plant to maintain a clean and environment friendly campus. With the rising population growth our natural sources of fuel are in decreasing trends. It is tough to fulfill energy demand from natural resources against required fossil fuel of about 40 million tons annually for Bangladesh. According to the decision of 41st Board Meeting of the Academy a specialized centre established in RDA as "Renewable Energy Research Centre" for quick extension, popularization, continuations as well as institutionalization and dissemination of sustainable technologies in home and abroad.

### Objectives

The main objective of this action research project is to meet up rising demand of energy and building awareness of producing and using renewable energy through community based waste management practice, maintain friendly environment in rural areas of Bangladesh and to developed a replicable and sustainable model through the country. Besides, others renewable energy sources such as solar, wind, hydro energy etc also be given preference.

To strengthen organic farming system and utilization of organic manure at the field level. A community based bio-gas plant would be installed for environment friendly waste management and to

reduce health hazard and practice of raising livestock's also be developed to meet up nutritional demand as well as ensure supply source of input materials (cow dung) to bio-gas plant.

- To create an additional employment opportunity by providing RDA credits among the community members for IGAs mainly for raising livestock to have economic support as well as renewable energy such as- bio-gas, solar energy etc.
- To arrange national and international seminar/workshops for disseminating successful model/technologies among the farmers, NGO/GO and relevant extension agencies for implementing at the field level.
- To get self-sufficiency in energy sector through producing electricity locally by bio-gas driven generator as alternative means of renewable energy.
- To take initiative for visiting nationally and internationally in order to sharing experience on renewable energy aspect.
- To ensure waste management practice environmentally friendly and in sustainable manner.
- To take initiative for dissemination of renewable energy technologies through suitable agencies like, GO/NGO and PPP (Public Private Partnership).
- To take renewable energy and waste management related action research projects, consultancy work, research work in the allied fields in home and abroad.

### Activities

- Establishing bio-gas plants for production of biogas, organic fertilizer and electricity as a means of renewable energy and inspire rural people towards livestock's farming.
- Ensuring support service for installing and management of solar panels.
- Conducting action research to strengthen irrigation skill and saving grid power for smooth running of solar pumps.
- Development of livelihoods through education, health-care, nutrition as well as income status of rural people through involving with RDA micro credit activities.
- Submitted a proposal for establishing Bio-gas plant at BAU Campus, Mymensingh.
- Submitted proposal for establishing waste management system all over Bangladesh through Department of Livestock Services.

### Observation

Installation of two storied agriculture with solar system demonstration at RDA demonstration farm in the paddy field for irrigation and cucurbit cultivation in remarkable achievement which could save land for setting solar panels.

Farmers many now come forward to set-up solar panels in their paddy fields without losing yield and land.

## Green Innovations- Organic Fertilizer

Raw biogas is collected by a truck mounted gas tanker (10 m<sup>3</sup>) under 20 bar pressure from community biogas plant located in 112 villages throughout the country. The raw biogas is firstly stored in balloons/tankers as buffer storage. The raw biogas is purified (remove CO<sub>2</sub>, H<sub>2</sub>S and moisture etc.) in mother station located at RDA. In purified biogas methane content raised up to 97% and store in a purified gas tanker (20 m<sup>3</sup>) under 20 bar pressure as buffer storage for its multipurpose use (electricity generation, supply to the gas line for cooking and supply to the vehicle under 200 bar pressure as CNG) experimentally.

### Impact

Community biogas has created lot of interests among the policy makers, development planners and common people of Bangladesh considering a source of renewable energy and better management of decomposable wastes. Managing of waste is a big concern. Improper handling and management of waste is also a big challenge. Community approach biogas plant can ensure better waste management as well as adds value and creates positive impact on rural society.

Community biogas is used as alternate source of fuel energy for household cooking. As a result savings of fuel wood reduces deforestation and appears safeguard of village women against health hazard issues.

Employment generation and additional income have been ensured in village level through production of organic manure and biogas marketing. Quality organic manure produced from biogas plant improves soil health. The proper waste management keeps rural environment sound and clean by reducing harmful carbon emission.

Purified biogas is used for electricity generation and inject to vehicle substitute for CNG can reduce additional pressure on national power grid and saves costly foreign currency.

### Progress:

- Ensured intensive Monitoring of Community Based Biogas Project activity through RERC.
- A GoB funded project entitled "Action Research Project on Disseminating Two-storied Agriculture with Solar Power Irrigation Technology and its Multipurpose Uses" is being implanted through RERC.
- Under this center a total of two new project proposals has submitted. The projects is (i) Action Research Project on Community Based Livestock and Waste Management for Better Livelihood.

## 3.16 Chars Development Research Centre (CDRC)

### Introduction

Poverty alleviation constituted the basic theme of all Five Year Development Plans of Bangladesh since its independence and considerable efforts have been made to alleviate poverty. But the incidence of poverty remains high in Bangladesh. Analyses of national data show that the incidences of poverty are not evenly distributed across the region. High concentration exists in specific areas, such as along the major rivers (*char lands*). Such poverty persists because of increasing inequality

between regions as well as people. It has been found that the riverine chars are amongst the poorest in Bangladesh. Chars areas are characterized by a set of specific features that set them apart from other parts of Bangladesh and that justify different approach.

In physical terms, riverine chars are nearly accreted from the river and are consequently low lying. This makes char dwellers vulnerable to flood and erosions. The soils are relatively low with contents of organic materials, which cause low fertility compared to mainland. Individual and household displacement is common in chars areas. A fragile physical environment, limited assets, reduced income opportunities, remoteness and absence of mainland institutions and services together make char dwellers' livelihoods particularly vulnerable to extreme poverty and destitutions.

An estimated 6.5 millions people live in 28 char upazilas of five districts and 2 millions people living in the chars are extremely poor. This situation focused govt. attention for better integration of the regions into Bangladesh wider socio-economic development. Keeping this in view, Rural Development and Cooperatives Division initiated the Chars Livelihood Programme in 2003. (Ref: CLP).

### Strategic goal of CDRC

CDRC works to accelerate the progress in improving income and livelihoods of the extreme poor char-dwellers through exploiting and enhancing their capabilities.

### Strategic objectives of CDRC

The strategic objectives of CDRC are across different components:

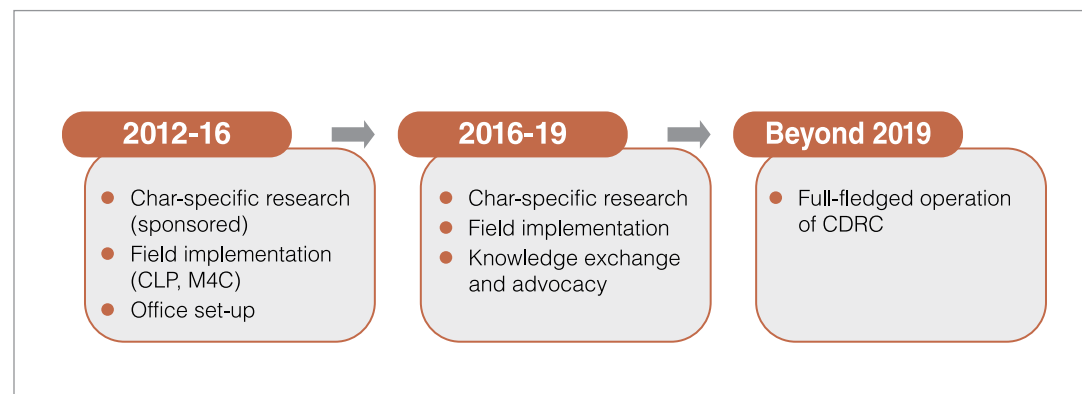
- Generate knowledge and technologies to improve the livelihoods of the char-dwellers;
- Develop methods and techniques for making effective interventions in the char-lands;
- Bring and demonstrate innovative good practices in the char-lands;
- Empower and mainstream the existing efforts of the char-dwellers;
- Facilitate for better market access;
- Mainstream women empowerment, climate change adaptation and disaster risk reduction/management;
- Conduct interdisciplinary research works including education, health, gender, climate change, disaster management, agriculture, financial and social issues to meet emerging challenges;
- Establish local, national and international partnerships for sharing knowledge and experiences.

### Management of CDRC

The management of CDRC follow the guidelines set out in the 41stBoG meeting of RDA. CDRC is considered as the lead centre for chars related development activities in Bangladesh and will have overall operational responsibilities. RDA will play a strong supporting role through providing the chair of advisory committee by the Director General. The planning and managing committee headed by the Director of CDRC will oversee planning, management, implementation,

monitoring and evaluation of CDRC activities. RDA faculty members with relevant expertise will always have opportunities to participate and lead CDRC programmes.

### Review and roadmap development of CDRC activities



### Review the progress of CDRC activities (2012-2019)

#### Progress of CDRC driven training activities

The following CDRC training activities have been undertaken since its inception.

- CDRC conducted IFC financed training courses on Extension of Maria Seed Technology amongst 1,000 women of the chars;
- CDRC conducted IFC financed training courses on Women in Seed Entrepreneurship (WISE) amongst 1,000 women of the chars;
- CDRC trained up 150 char-dwellers on the production and utilization of trichoderma and trichocompost in the collaboration with Innovation Pvt. Ltd. and Bangladesh Agricultural University (BAU), Mymensingh;
- CDRC trained up 50 CLP staff on asset transfer and office management.

#### Progress of CDRC driven research activities

The following research activities have recently been completed or are being conducted to develop useful ideas and technologies relevant for the chars.

- Impact of Assets Transfer in Chars financed by RDA (completed)
- Impact of Chili Seed Treatment in the Chars financed by M4C (completed)
- Maize Variety Screening for the Chars financed by M4C (completed)
- Production and Familiarisation of Maize Stover Silage financed by M4C (completed)
- Modern Rice Technology Transfer financed by M4C (on-going)
- Improvement of Chars' Transportation financed by M4C (on-going)
- Migration Behaviour of Char-dwellers financed by CLP (on-going)

- Chronology of Agricultural Diversity in the Chars by CLP (on-going)
- Progress of CDRC field implementation

### CDRC involves in the following field implementation

- Chars Livelihoods Programme [Phase 2] (CLP-2)
- Making Markets Work for the Chars (M4C)
- Women in Seed Entrepreneurship (WISE)
- Trichoderma Enhanced Composting (TEC)
- Grain Storage at Household Level for Food Security of Char Areas in Bangladesh
- Scaling up WISE Model to the Extreme Poor Women Living in Climate Change Affected Chars Areas under M4C Projects
- Collection and Dissemination of Popular Indigenous Crop Varieties Cultivated in Chars
- Improvement of Livelihood status of Char Dwellers through Adopting Sandbar Suitable Cropping Practices under M4c Project
- Improvement of agroforestry practices for better livelihood and environment in Char land area of Tista River Basin

### Progress of CDRC documentation, publication and advocacy activities

- CDRC in the financial collaboration with IFC did an audio-visual documentary on Women in Seed Entrepreneurship in the Chars that telecast in electronic media regular basis.
- CDRC in the financial collaboration with IFC is making another digital documentary on Ash Gourd (Winter Melon): The Magic Crop of the Chars.
- CDRC has decided to document all types of publications (i.e. research publications, impact and evaluation studies, journal articles, Masters, MPhil and PhD theses, leaflet, newsletters, posters, innovative video clippings, important newspaper clippings, and any other char related documents).
- RDA faculty members has done several char related research and evaluation studies. Assets transfer in Chars is an example.
- They have also published a number of journal articles on char related issues.
- The Daily Star and the Daily Prothom Alo, two of the top national dailies published the success stories of CDRC and its activities.
- The CDRC has conducted a workshop on RDA developed client resilient technologies.

### Progress of CDRC Administrative and others

- CDRC already developed its strategic plan;
- The secretariat of CLP has been replaced by the secretariat of CDRC;
- A GoB funded project entitled "Livelihood Improvement of the Poor People in the Char



Islands of Sariakandi and Sonatola Upazilas under Bogura District is in approving stage, will be implemented by CDRC.

### CDRC Progress up to June 2020

The following workshop/ event were facilitated by CDRC to disseminate project learning and attract private and public investment in Chars:

- **To share projects learning and experiences, M4C & CDRC jointly organised “8 Years of Char Development: Lessons and Way Forward” at RDA, Bogura on 25 September 2019.**

Honorable Director General of RDA, Bogura Mr. Md. Aminul Islam was present in the program as chief guest. Mr. Shaikh Yusuf Harun, Honorable Secretary, Medical Education and Family Welfare Division, Ministry of Health and Family Welfare appeared in the event as Guest of Honour. At these events, stakeholders from different sectors appreciated this initiative of compiling all these Char related information in a publication and shared their opinion how the content of these publications can be further enriched. The participants insisted on updating and publishing these books each year with latest information. These events included interactive sessions where M4C's private sector partners, beneficiaries, and representative of local government interacted and suggested way forward to continue growth and development and uplifting the living standards of the marginalised char people.

- **M4C & CDRC published two Char focused books “Char Agro-input Potentials” & “Char Information Book”**

The first publication “Char Agro Input Potential” focused on only one sector but presented in-depth information (i.e. farming households, cropping patterns, acreage, acreage wise sales, major haat (local markets), area wise sale of seeds, fertilizer, pesticides, and micronutrients); which are the most relevant for the agro-input companies to penetrate and expand their business in the char markets. The scope of the other publication “Char Information Book” wider than the previous; it has highlighted topics like northern Chars of Bangladesh, agro-input potentials in the Char markets, potentials of post-production services and Char produces, livestock market potentials in Chars, potentials of microfinance services and development initiatives by the Government and Non-government Organisations.

- **Knowledge Dissemination events based on the publications “Char Agro-input Potentials” & “Char Information Book” were organised in all three districts where M4C is currently working, Kurigram, Sirajganj and Gaibandha on 17, 19 and 23 September 2019 respectively.**

Deputy Director of Department of Agricultural Extension (DAE), District Livestock Officer of Department of Livestock Services (DLS) along with the other high-level Government officials of these departments was present at the events. At these events, stakeholders from different sectors appreciated this initiative of compiling all these Char related information in a publication and shared their opinion how the content of these publications can be further enriched. The participants insisted on updating and publishing these books each year with latest information. These events included interactive sessions where M4C's private sector partners, beneficiaries, and representative of local government interacted and suggested way forward to continue growth and development of the Chars.

- **CDRC launched their newly developed website of CDRC ([cdrc-rda.org](http://cdrc-rda.org)) on 25 September 2019.**

To institutionalize the results and lessons of the project, M4C facilitated the development of CDRC website which will serve as a platform for all char relevant information source. In this website, a wealth of CDRC's won resources as well as its projects' (CLP, M4C etc.) knowledge products have been stored which will be updated on a regular basis.

- **In September 2019, SOLshare successfully established the 2nd Solar grid at Khasrajbari, Kazipur, Sirajganj under the partnership with CDRC & M4C.**

A total of 20 char households are connected with this Solar grid which will allow them to sell/share the solar energy with any member of that grid.

- **CDRC organised an exposure visit for Partex Agro Limited on 8-9 July 2019 to show the business potential of char areas.**

M4C & CDRC facilitated an exposure visit of a team from Partex Agro Limited visited a few locations (Char haats, households) in Natuarpara, Kazipur, Sirajganj. Partex Agro team interviewed relevant stakeholders to analyse business potential of char areas.

- **CDRC jointly with Nourish organized Farm Owners Training on Native Poultry Farm Management followed by Exposure visit on 21 October 2019 at RDA Bogura and Sherpur, Bogura.**

Char Distributor of Nourish and Nourish Poultry and Hatchery Ltd. jointly organized a training for interested char producers on Native Chicken Farm Management followed by Native chicken farm visit at Char Bhaban, RDA Bogura and farm at Sherpur, Bogura assisted by CDRC & M4C. A total of 17 potential Char producers participated the training.

### 3.17 Centre for Community Development (CCD)

Besides conducting research in technological development of agricultural aspects RDA has been continuing research activities in socio-economic issues. The related socio-economic issues are: rural livelihood improvement, explore various problems and identify problems on rural and agricultural development, social empowerment at the grass root level; social forestry, leadership development at the local govt., child development, climate change, youth development, rural education, women empowerment, rural public health, women repression, anti-drug awareness creation, environmental protection, agricultural extension, micro enterprise development, agribusiness enterprise development and management, evaluation of GO/NGO programmes, etc. Apart from these, RDA has been conducting research on various issues of SDG, five-year plan, perspective plan, etc. Through conducting socio-economic research, RDA has been contributing to rural development and in formulation of policy as well.

To make sustainable development and create fruitful participation in rural development a

**Centre for Community Development (CCD)** has been approved in the RDA's 41<sup>st</sup> Board Meeting.

#### Objectives

The objectives of the CCD are to:

- conduct research on rural development and keep trying to evolve model,

- continue activities of previous socio-economic research and action research,
- undertake initiatives to conduct action research through the help of national and international organisations,
- communicate with national and international organisations in community/rural development,
- provide training on strengthening skill development to RDA people and personnel of national and international organisations related to rural development,
- disseminate relevant research findings of CCD through organising seminar/workshop,
- try to be self-dependent in operation of the CCD by reducing dependency on the revenue budget.

## Activities of CCD in 2018-19 and plan in 2019-20

### Research activities

During 2018-19 year faculties of RDA related to CCD were involved in conducting different types of researches and this year faculties have a plan to conduct following research projects:

Palli Sanchay Bank: Challenges and Prospects

Cooperative management system: recent challenges and possible way out in development of Cooperatives.

Apart from these researches, faculty members of CCD will be involved in conducting different types of researches sponsored by RDA/outside agencies.

### Training activities

CCD has a plan to organise following training courses in 2019-20:

Leadership development,

Climate change and environment management, Awareness on anti-drug and HIV-AIDS. Agribusiness Entrepreneurship Development and Management cours. Research methodology and any other courses may be included as per need and request by the faculty members/ outside agencies.

### Action Research

CCD has now introduced entrepreneurship development activities with the previous fund derived from the Project CVDP. Especially CCD has been working with CVDP-3<sup>rd</sup> phase and using the organization of CVDP to initiate its entrepreneurial activities. It searched some potential entrepreneurs and then providing credit to the beneficiaries based on their required demands. CCD already provided RDA credit amounting to Tk. 46.25 lac to 72 beneficiaries including 20 women. The beneficiaries initiated some agribusiness with some other businesses related to:

- Chicken Farming
- Beef fattening
- Cow rearing
- Goat rearing
- Nursery development
- Fisheries
- Farming
- Others like medicine (vet) shop, paddy-rice business, cloth shop, Trolley business, etc.

CCD already formed 17 Indigenous Chicken Farms including especial chicken Kadaknath and Tiger in Sadullapur, Gaibandha. Beneficiaries are getting benefit through these initiatives and successful in operating their Chicken business. Consumers are getting safe chicken because these chicken farms are being operated with safe feed and safe treatment procedure.

Through various types of entrepreneurial activities CCD already created employment opportunities for 216 persons and entrepreneurs are being benefitted financially. So it is helpful for them to contribute in the family for livelihood development.

Faculty members related to CCD will be making their action plan in relation to community development in the fiscal year 2019-20.

### Other Activities

Working with Institute of Bangladesh Studies (IBS), University of Rajshahi

CCD already signed anMoU with IBS to work on various aspects related to training, orientation programs for their MPhil and PhD fellows. IBS is sending their fellows for getting orientation on RDA's different activities of training, research and action researches. Under this agreement RDA is also sending its fellow for higher Degree. Like the previous year, CCD organized one training program in 2018-19 and it will be continued in this year also.

## 3.18 Palli Patshala Research Centre (PPRC)

The English name of Patshala is school. Actually Patshala is an academic house where the tender aged boys and girls prepare their lessons. In the past it was in the residence of a preceptor. But on the eve of time residence of preceptor converted into patshala/school. Still now the people remember the name patshala with pride and vanity. Now Palli Patshala will be the new of its kind with few exceptions. In this Patshala all ages youths and olds can learn something as per their desire particularly who are living in the village and deals with crop, livestock, fisheries, poultry, social forestry, health, nutrition, sanitation, education, environment, soil and water what not. Now it will be the meeting place to discuss their problems and once upon a time it will be the store house of knowledge. For cultivation of crops what will be the procedure- the villagers can discuss themselves and take decisions in a body. In this case if they need any training they can seek help from RDA. All types of invented models from RDA will be displayed there. For self employment the villagers can design some courses as per their age, sex and so on. So that Polly Patshala can play a role for Rural Development. Palli Patshala is a new concept of RDA. So initially there are some mistakes but with the age of time it will become a junction of Rural development model.

## 3.19 RDA Laboratory School and College

Rural Development Academy (RDA) School and College is an exceptional institution in the field of National education. It was set up in 1985 in the green premises of RDA with a view to educate the children of

RDA staff and the children of backward rural population of adjacent areas. With the establishment of the college section in 2001, its institutional status has increased greatly. School & College is working as a laboratory of RDA. The institution is run by an efficient governing body under the direct supervision of RDA. The governing body is headed by DG, RDA as chairman. Due to the proper management and the direct supervision of RDA as well as the sincere efforts of dedicated and devoted teachers, it has been able to gain praise from the beginning because of its overall excellent results and good performance.

Meanwhile children of many vulnerable families of rural communities have completed their secondary and higher secondary education from this institution and they are now studying in different renowned institutions home and abroad. Some ex-students of this institution have completed their higher education and they are now serving in various sectors of the country. Among them, there are BCS cadre officers, university teachers, doctors, engineers, scientists and other dignified personalities who are contributing to the overall national development through their respective jobs.

Students of this institute have been taking part in SSC exam from 1990 and HSC exam from 2003. By analyzing the results till 2020, it is found that in most cases 100% success has been achieved. In the PEC, JSC and SSC examination, the passing rate is 100%. In the last JSC exam of 2019, the passing rate is 100%. A+ 159 (68.33%). The passing rate of SSC-2020 is also 100%. A+ 216 (94%). Passing rate of HSC-2019 is 100%, A+ 118 (54.38%). It is notable that a significant number of students are getting scholarships each year in the PEC, JSC and SSC exam. Along with that a good number of students of this institution get chance for higher study in Medical, Engineering and different public universities each and every year. The last 5 years result of PEC, JSC, SSC and HSC exam are illustrated below:

#### PEC Result (2015-2019)

Year	Total	Successful	Grade				% of Successful
			A+ (%)	A	A-	B	
2015	175	175	124 (71%)	51	--	--	100%
2016	178	178	96 (54%)	74	04	04	100%
2017	180	180	125 (69%)	52	1	2	100%
2018	179	179	162 (90.50%)	16	1	-	100%
2019	186	186	151(81.18%)	33	2	-	100%

#### JSC Result (2015-2019)

Year	Total	Successful	Grade				% of Successful	Remark
			A+ (%)	A	A-	B		
2015	215	215	204 (95%)	11	--	--	100%	--
2016	236	236	228 (97%)	08	--	--	100%	--
2017	225	225	213 (95%)	12	-	-	100%	--
2018	233	233	166 (71.24%)	66	1	-	100%	--
2019	232	232	159 (68.33%)	73	-	-	100%	

#### SSC Result (2016-2020)

Year	Total	Successful	Grade			% of Successful	Remark
			A+ (%)	A	A-		
2016	163	163	142 (87%)	19	02	100%	--
2017	206	206	180 (87.38%)	26	--	100%	--
2018	221	221	184 (83.25)	34	03	100%	--
2019	262	262	231 (88.17%)	30	1	100%	--
2020	230	230	216 (94%)	14	-	100%	

#### HSC Result (2016-2020)

Year	Total	Successful	Grade					% of Successful	Remark
			A+ (%)	A	A-	B	C		
2015	167	167	31 (18.6%)	119	15	01	01	100%	---
2016	313	312	82 (26.20%)	189	35	06	--	99.68%	---
2017	219	219	46 (21%)	157	13	03	--	100%	---
2018	199	199	82 (41.21%)	113	04	--	--	100%	---
2019	217	217	118 (54.38%)	98	1	-	-	100%	

Currently, 2700 students are studying in the institute. 75 experienced teachers and 45 officers and employees are working. Because of the quality education of this institution the pressure of admission is very high.

#### Achievements

In order to develop the latent talent of the students, sports such as football, volleyball, handball, cricket etc. are organized. As well as sports, debates, recitations, dance, knowledge-asking, portraying, music, swimming etc. are included in the syllabus. Students of this institution have achieved remarkable success by participating in different competitions held at upazilas, districts, divisions and national level. It is to be noted that in 2010 a student participated in National Children's Prize Competition, got the Gold Medal as the first prize. In 2011 and 2012, through participation in the National Children's Prize competition, a student occupies second place. The students also participated in the National Cultural Competition-2015 organized by Bangabandhu Shishu Kishore Mela, one student at the national level achieved 1<sup>st</sup> place on dance and one student earned second place in Nazrul Sangit. In 2016, a student got first place in dance at national level. In 2019, 3 students participated at Jatio Shishu Porushkar competition at national level and one student got 1<sup>st</sup> position at Hamd-nat, another got 2<sup>nd</sup> position at Sora Gan and another got 3<sup>rd</sup> position at Polligiti & Loko Sangit.

#### Talent Hunt Competition-2018

Two students named SM Mushfiqur Rahman Mugdha and SM Shahnawaz of class Eight of RDA Laboratory School and College, Bogura took part in the Talent Hunt Competition-2018 and both of them secured first place at Upazilla and District level. SM Mushfiqur Rahman Mugdha took part from Group-A on Bangladesh Studies and Liberation War and SM Shahnawaz took part from

the same group on Mathematics and Computer. It is mentionable that SM. Mushfiqur Rahman Mugdha secured second place at divisional level.

### Scouting at RDA Lab. School & College

This institution has well-equipped scouts and girl-in-scout teams. The scout team has been rewarded in all the camps held at Upazilla, District, Regional, National and International levels. It's notable that among them some are achieving the first position at the national level. By the year 2018, 65 Scouts have won the President's Scout Award, the highest award of Bangladesh Scouts. It is also mentionable that 15 scouts out of 15 were able to earn President's Scout Award in 2018. 14 scouts appeared for President's Scout Award in 2019 and the result hasn't been published yet. Three scouts have already increased the glory of the institute by participating in international Jamboree in Japan and Malaysia. This year in 2019 two scouts attended at the 24<sup>th</sup> world Jamboree held at West Virginia, USA, during 22 July-02 August. The institute has a nice Red Crescent Team also. Both Red Crescent Team & Scout Team are working relentlessly for peace and in time of disaster and are increasing the glory of the institute.

### Curriculum Based Projects with foreign schools under British Council

The students of RDA Laboratory School and College are doing curriculum based projects with different foreign schools under British Council. Project on 'Climate Change' is going on with Punsang Middle School, South Korea; 'Arts and Crafts' with Holy Family Convent National School, Sri Lanka; 'Agriculture' with Dakados Governmental Language School, Egypt; 'World Earth Day' with Zarmidine Preparatory School, Tunisia; 'Save Every Drop of Water' with Holy Family Convent National School, Sri Lanka. The students are exchanging their views and thoughts with the foreign students to enrich themselves.

### Visit to foreign Countries for International Programmes

Seven students from RDA Laboratory School and College visited Lakshmiapat Singhania Academy, Kolkata, India for International Friendship Development Program on 05-09 November, 2017. The students also took part in football and Cricket tournament there.

Six students from this institution took part in the Asian English Olympics-2018 held on 08-12 February, 2018 in Jakarta, Indonesia.

A cricket team of RDA Laboratory School and College took part in the **5<sup>th</sup> International School Cricket Premier League (ISCPL)** held on 08-13 December, 2018 at **City Montessori School, Kanpur Road, Lucknow, India.**

Nine students from RDA Laboratory School and College visited **Lakshmiapat Singhania Academy, Kolkata, India** for Curriculum based Projects and International Students' Exchange Visit Program from 21 September to 01 October, 2019.

Ten students from this institution took part in Confluence International -2019 and won the trophy held on 04-07 December, 2019 at **City Montessori School, Kanpur Road, Lucknow, India.**

### Recognition for International Award:

1. RDA Laboratory School and College has gained '**International School Award, 2018-21**' accredited by British Council for successful completion of **curriculum based projects**

handed over on 6<sup>th</sup> November, 2019 in the presence of Mr. Mohibul Hassan Chowdhury, MP, Honourable Deputy Minister, Ministry of Education, Bangladesh as chief guest. Prof. Dr. Syed Md. Golam Faruk, Director General, Directorate of Secondary and Higher Education, Ministry of Education, Mr. Kanbar Hossein-Bor, Honourable British Deputy High Commissioner to Bangladesh, Mr. Adrian Chadwick, Regional Director, British Council, South Asia and Tom Miscioscia, Country Director, British Council, Bangladesh at Hotel Radisson Blu, Dhaka.

2. RDA Laboratory School and College has gained '**International School Award**' accredited by **ISA, Dubai** for "**School with Safest Environment**" handed over on 16<sup>th</sup> December, 2019 in the presence of the Ambassador Dr. Deepak Vohra, Poland and Dr. Attaullah Wahidyar, Senior Advisor to Education Minister of Afghanistan at Amity University, Dubai.

All the above mentioned achievements are due to the contribution of RDA and RDA Lab. School & College authority and the Governing body as well.

### Bangabandhu's Birth Centenary Celebration

The Birth Centenary celebration of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman and National Children's Day 2020 was observed on 17<sup>th</sup> March, 2020 with due respect under the direct supervision of Md. Aminul Islam, Director General, RDA, Bogura. All the faculty members and officials of RDA, Teachers and Students of RDA Laboratory School and College enthusiastically took part in the program. Md. Aminul Islam, Director General, RDA along with others placed wreath at Bangabandhu Sheikh Mujib's portrait. Special discussion was held on the significance of the life of Bangabandhu Sheikh Mujibur Rahman for the students in the auditorium.

## 3.20 Completed Project (ADP)

### 3.21 Making Markets Work for the Jamuna, Padma and Teesta Chars (M4C) Technical Assistance Project (2<sup>nd</sup> Revised)

This project is ADP Technical Assistance Project. This project has been approved in 30 May 2013; M4C is a project mandated by the Swiss Agency for Development and Cooperation (SDC) and Ministry of LGRD and Cooperatives, Government of Bangladesh; it is implemented by Swisscontact in collaboration with Rural Development Academy, Bogura.

#### Project Implementation Period

Type of TAPP	Date of Commencement	Date of Completion
Original	01-May-2013	30-Nov-2016
Revised (1 <sup>st</sup> )	01-May-2013	30-Nov-2016
Revised (2 <sup>nd</sup> )	01-May-2013	31-Dec-2019

The total project cost is Tk. 9262.85 lakh, (Project AID-SDC Tk. 7899.85 and GoB Tk. 1363.00 lakh). This project is being implemented by Rural Development Academy (RDA), Bogura along with Swiss contact.

## Objective

The overall goal of the project is to reduce poverty and vulnerability of char dwellers in selected districts of North and Northwest part of Bangladesh through increased income and employment generation. For this, the main objectives of the project are:

To facilitate better access of people for marketing, improved business services and job opportunities in selected market systems relevant for the poor char dwellers

To stimulate systemic change in selected market systems relevant for poor char dwellers.

## Specific Objectives

To attain the objective, the specific objectives as follows:

- Households benefit from positive changes in economic activity (in terms of production, productivity, quality of product, better price and/or reaching new markets)
- Demonstrate changes in behavior that reduce vulnerability to disasters (using drought/flood resistant varieties and/or changing cropping practices/ cropping pattern to avoid flood/rain).
- Service providers, firms and other market actors provide char producing households with more and/or better services (information, advice, technology, inputs and/or market access)
- Targeted lead firms, private and public service providers show evidence of sustainable changes in terms of business innovation, investments, expansion and/or business attitude towards chars and service delivery.

## Overall Progress

### Project Achievement up to June 2019

- M4C project has been implemented in Char Island of 10 Northern districts (Bogura, Gaibandha, Jamalpur, Sirajganj, Kurigram, Lalmonirhat, Nilphamari, Rangpur, Tangail and Pabna) of Bangladesh in 1<sup>st</sup> revised period and 3 districts (Gaibandha, Sirajganj and Kurigram) and 11 Upazillas in 2<sup>nd</sup> revised period.
- The project has been targeted for increasing the household income of 85,000 poor Char HHs in the Northern Bangladesh and already have graduated (benefit outreach) 117,650 HHs through 58 services facilitated by the project.
- Partnership developed with 6 agro-input companies for promoting suitable agro-inputs and information.
- Trained up 1,442 agro-input retailers, 349 cattle feed retailers and 42 seedling sellers.
- Trained up 192,338 farmers (including 65,205 female) facilitated through 13,336 training sessions
- Demonstrated 5,555 plots, 93 demonstration cattle and arranged 1,412 farmer's field days on Production of Char Suitable Crops (Maize, Chili, Jute, Groundnut, Mustard, Onion, Rice, Pulses and Vegetables).

The interventions with agro input Company have created an access to BDT 19.61 Crore worth government approved quality agro-inputs and with ACI Godrej company 5,074 MT livestock feed worth BDT. 17.61 crore in the chars.

- Built up collaboration with Bangladesh Agricultural Research Institute (BARI) – Spices Research Center (SRC) and Oilseeds Research Center (ORC) for production of chili, mustard and groundnut seeds.
- Made collaboration with Bangladesh Jute Research Institute (BJRI) and Department of Agriculture Extension (DAE) to strengthen channels for promotion of improved jute cultivation and retting practices in Chars.
- Made collaboration with Department of Livestock Services (DLS) to strengthening channel for promotion of vaccination, deworming and treatment practices in chars.
- Bridge up partnership with agro-processing companies for sourcing channel for procurement of quality produced in Char areas. Till July 2019, 350 traders linked to high quality-high price markets; 46,000 MT quality products sourced, 363 MT potatoes and chilies sourced by PRAN.
- Supported 171 Trader Out Grower Schemes/ contractors (Crop) for expansion of contract farming model involving 19,217 farmers (Maize, Groundnut, Mustard, Onion, Potato, Pulses etc.). The production of maize raised from 5 to 8 tons per hectare and Groundnut raised 1.8 tons to 2.4 tons in char area.
- Also supported 117 Trader Out Grower Schemes/ contractors (Livestock) for expansion of Bull contract farming involving 11,612 farmers fattened 12,761 bulls and earned an average profit of BDT. 9,750 per bull within 4 months.
- One hundred Eighteen Maize Shelling, six Rice threshing and six Silage Service providers are providing services to 19,525 farmers for their product processing.
- Facilitate 410 traders for promotion of improved post-harvest practices and sourcing from 68,250 farmers. Due to use improved post-harvest practices, farmers are getting quality product ensuring higher market price.
- M4C also partner with Microfinance Institute NDP, GUK, United Finance, SKS, BRAC and ESDO to provide seasonal crop loan in chars. BDT. 50 Crore loan disbursed by the partner M(FI)s; 17,325 Farmers received and repaid loans.
- Support 97 drying material supplier for promotion of low-cost drying materials among 16,975 char farmers.
- 18 Onion storage Service Provider sold low cost bamboo made selves/ macha among 102 farmers, who stored a total of 37.5 MT onion for getting better price and reduce storage loss.
- Support formation and/or capacity building of 14 Sales and Service Centers (SSCs) on the chars catering to 6,500 char farmers.
- Partnership with handicrafts companies/ agents (Dhaka Handicraft, HathayBunanoProshikan Society, Women Skills Development Foundation) 1,000 char women were trained and employed by three handicrafts companies who earned BDT 1,100 additional income per month.
- Support formation and/or capacity building of 08 Ghat Coordination Committees (GCC) namely Kazipur, Sariakandi, Chandobaisa, Fulchari, Saghata, Chilhari, Mogolbasa and Islampur to improve ghat services.

- Facilitate approval of policy on ghat management committees which will ensure better management of ghat services.
- Local Government Engineering Department (LGED) mobilized BDT 5.19 Crore funding for construction of 16 Passenger sheds, 07 Roads, whereas the project co-financed 09 floating landing stations, 18 charergari, 28 model boats and 02 unpaved road and people are enjoying better transport services with loading and unloading facilities.

The respectable Additional Secretary O. N. Siddika Khanom, RDCD visited M4C project activities and spoke to its partners and beneficiaries at Natuarpara, Kazipur, Sirajganj. She expressed her satisfaction and appreciated M4C project interventions and results.

- The Swiss ambassador to Bangladesh H. E. René Holenstein participated a four-day long field visit program to witness lives of the char-dwellers living in the northern char districts of Bangladesh and ongoing activities of M4C project. During the visit, the Swiss Ambassador met multiple intervention partners and beneficiaries of M4C project to understand the benefits realized due to M4C activities in agro-outputs/postharvest and financial services.
- A Knowledge Dissemination Event titled “Market Systems Changes for Sustainable Vulnerability Reduction in Challenging Contexts” was held on Thursday, June 20, 2019 at CIRDA International Conference Center (CICC). Through the event, a project Making Markets Work for the Jamuna, Padma and Teesta Chars (M4C) officially disseminated the project’s experience of developing the agricultural market system which generated pathways for vulnerability reduction for poor/extreme poor households living in the hard-to-reach char areas of northern Bangladesh. Mr. Md. Kamal Uddin Talukder, Secretary, Rural Development and Cooperative Division, Ministry of Local Government, Rural Development and Cooperatives graced the occasion as the Chief Guest whereas the program was also attended by Mr. Derek George, Deputy Director of Cooperation, Embassy of Switzerland, Bangladesh;
- M4C signed partnership contract with Char Development Research Centre (CDRC), RDA Bogura to strengthen the capacity of CDRC and establish it as a full-functioning center to institutionalise the information, knowledge, lessons to facilitate further initiatives and/or investments from wider public and private sector actors, beyond the project period for further development of the Chars. The following workshop/ event were facilitated by CDRC to disseminate project learning and attract private and public investment in Chars:
- Three regional and a national seminar on Future Planning of Char Development Research Centre (CDRC), RDA was organised by Rural Development Academy (RDA) in collaboration with M4C at CIRDA, Dhaka. The participants from public sector organisations, development partners, NGOs and private sector organisations attended the seminar and shared their expectations from CDRC in the coming days.
- CDRC jointly with Kazipur Upazila Parishad observed the International Disaster Risk Reduction Day 2017 at Kazipur Upazila assisted by M4C project. The event started with a rally in the main streets in front of Kazipur Upazila Parishad, Kazipur and a discussion session followed by demonstration on disaster preparedness were displayed by Fire Service and Civil Defense Forces.
- CDRC organized a workshop on “Lessons and Challenges of Agri-financing on the Northern

Chars”. Different reputed Microfinance Institute in northern region i.e. Padakhep Manabik Unnayan Kendra, ASA, RDRS, Society for Social Service (SSS), Grameen Bank, ESDO, NDP, SKS, GUK, TMSS, Buro Bangladesh participated the event and shared their learning to expand their microfinance operation in Chars.

- Char Development Research Centre (CDRC), RDA, Bogura organized a Workshop with Feed Mills to disseminate M4C project’s interventions to increase quality Maize production in Chars and future linkage and support to increase sourcing by Feed Mills from Chars. A total of 30 participants from CP, Nourish, Quality, Mega, Aftab, Index, Care/ Tamim, Misham, Jomjom, Nosib feed company including agent, Large traders and T-OS participated in the event.
- The General Manager, CP Bangladesh Co. LTD, Mr. Prasert Hongkunsap and the Consultant Dr. Md. Abdul Baqi visited M4C Project interventions at Belkuchi, Sirajganj and meet with Livestock farmers, T-OSs, LSP, Retailers, Distributors and Company representative to gain understanding on Livestock market potential in Chars as a part of field visit from 8-10 April 2018 and future market expansion in Chars through partnership with CDRC. CP also organize a business linkage meeting with Char Traders and started Maize sourcing.
- African-Asian Rural Development Organization (AARDO) team, 27 participants from 12 countries visited M4C Project interventions at Char in Shaghata, Gaibandha as a part of the Green Innovation and Rural Development Training course organized by RDCD, RDA & AARDO held at RDA Bogura.
- CDRC celebrates the International Women Day 2018 and 2019 at Char Sanbandha, Khasrajbari, Kazipur, Sirajganj jointly with Kazipur Upazila Parishad assisted by M4C. A rally, discussion, quality agri inputs and agri products display by AICs and Char women were organized and prize was distributed and 20 excellent women performers .
- CDRC also organized a workshop with potential Local Engineering Workshop (LEW) on 19 February 2018 at RDA, Bogura to disseminate/ share the learning on Agri. Machineries, Charer Gari, Floating Landing Station (FLS) & Model Boat and also to discuss the future collaboration/ linkage with CDRC who is interested to expand their business in Chars.
- CDRC in collaboration with Making Markets Work for Jamuna, Padma and Teesta Chars (M4C) organized a half-day long event titled Agro-input Company Meet: Unlocking Char Potentials on Monday, 30 July 2018, at Ascott Palace Dhaka. Representatives from all leading agro-input companies participated to learn from their counterparts’ hands-on experience of enhancing distribution of quality input in the char regions.
- CDRC signed MOU with Nourish to expand their Poultry chick and feed business in Chars. Nourish already set up a new distributor in chars Tekani, Kazipur, Sirajganj and also through existing distributor of Belkuchi visited Char area of Belkuchi to cater char markets.
- 3 batches orientation on Cattle Fattening and Flip Chart handover event to DLS, Gaibandha, Sirajganj and Kurigram organized by CDRC & assisted by M4C in Gaibandha, Sirajganj and Kurigram. Respective Veterinary Field Assistant (VFA), ULO, Veterinary Surgeon participate the program. The event was chaired by respective District Livestock Officer, Gaibandha, Sirajganj and Kurigram and Dr. Md. Abdur Rashid Director, CDRC & PD, M4C was present as Chief Guest.

- CDRC in collaboration with M4C organized a half-day long event titled Agro-vet Company Meet: Unlocking Char Potentials on Sunday, 17 February 2019, at Rural Development Academy (RDA), Bogura. The event explored the market context, distribution systems, market shares and the potentials of Chars for the agro-vet (livestock feed and medicines) companies. The event was chaired by Dr. Md. Abdur Rashid, Director, CDRC, RDA, Bogura and Project Director M4C and Mr. Md. Aminul Islam, Director General (Additional Secretary), RDA, Bogura was present as the Chief Guest.
- M4C project in partnership with CDRC organized a three day-long training from 12 March 2019 to 14 March 2019 on Market Systems Development (MSD) at RDA, Bogura. The training was facilitated by Ailsa Buckley, Market & Business Specialist, Central-east & Southern Africa, Swisscontact & Fazle Razik, Team Leader, ASTHA, Swisscontact Bangladesh. The training was organized for government officials who are either conducting research or implementing project on the issues surrounding rural development of Bangladesh and intended to develop their understanding on market systems development. The training sessions particularly focused on how to identify gaps in the systems, how to find the root causes behind those constraints and how to develop an approach to the solution. 24 representatives from Ministry of Local Government, Rural Development and Co-operatives, Ministry of Planning, BARD, BRDB and RDA participated in this interactive training.
- “Enriched char, developed country” – with this slogan a total of 3 char agri-business Fair organized at the Fulchari College premises of Fuchariupazilla, Gaibandha from 2-4 November 2018, at the Jatrapurhaat of Jatrapurupazilla of Kurigram district from 21-23 January 2019 and at Kazipur, Sirajganj from 2-4 February 2019. With the support of M4C Project, the fair is being jointly organized by Fullstop Solutions Ltd., SKS Foundation, NDP, MJSKS and Char Development Research Centre (CDRC) is jointly organizing this event. The fair aspires to create access to better quality products for the char-dwellers as well as to assist private companies to explore the business potential in the char region. In this three days long event advanced and scientific agricultural equipment, mobile banking operators, motor vehicle, agri-machineries, cosmetics, and mobile handsets sellers will be exhibiting their products.
- CDRC signed contract with Solshare to establish Peer-to-Peer Solar Grids, which will connect existing solar home systems (SHS) in off-grid areas and enables sharing excess energy among households, depending on the energy consumed throughout the day, which will ultimately contribute in Rural Electrification and Socio-economic Empowerment in char areas of Bangladesh. Within June 2019 Solshare established one Solar-grid in Char Maizbari, Sariakandi, Bogura through which 25 Char households are now connected and using and sharing/ selling solar grid generated electricity.

## Annual Administrative and Financial Report 2019-2020

## Introduction

The Administrative Division of the Academy plays a vital role in the day-to-day activities of the Academy. Its major functions are to facilitate training, research and action research activities of the Academy and also to look after the welfare of its employees. In the administrative matters, the Director General is the Chief Executive. He is assisted by an Additional Director General, a Director (Administration), a Deputy Director (Administration), a Protocol Officer, an Assistant Director (Administration) and an Administrative Officer. The Board of Governors is the apex body for policy decisions. The Honourable Minister/Advisor for Local Government, Rural Development and Cooperatives is the Chairman of the Board and the Director General of RDA is its Member-Secretary (Appendix-A). The Board sits at least twice a year to review the activities of the Academy and gives decisions and approvals on important issues.

### Activities of Different Sections

The Administrative Division looks after as many as nine sections of the Academy and the day-to-day operations of these sections. There are also special committees to perform specific jobs relating to administration. These committees provide suggestions and recommendations as and when required. The subsequent paragraphs that deal with the activities of the respective sections for the reporting period (2019-2020) are state below:

#### 1. General Administration

During the reporting period all administrative routine works were done smoothly. Among the faculty members 25 were attended 12 foreign training programmes/ study tour and were nominated to 36 in-country training programmes. All national days were observed with due solemnity.

#### 2. Accounts Section

An Accounts Officer on deputation from the office of the Comptroller and Auditor General of Bangladesh, Dhaka, looks after the activities of this section. He is assisted by an Accountant, an Assistant Accountant and a Cashier.

##### The detailed breakup of the budget for 2019-2020 is as follows:

	(in lakh Tk.)
i. Grant to meet the regular expenditure of the Academy	<b>1909.04</b>
ii. Local income of the Academy	<b>95.11</b>
iii. Grant to meet the research and training expenditures of the Academy	<b>155.91</b>
<b>Grand Total</b>	<b>2160.06</b>

Audit of expenditure has been done up to 2019-2020 by Local Audit department of the Government. The present status of different audit objections is presented below:

Unsettled audit objections up to 2019-2020	51
Works Audit objections	-
<b>Total number of audit objections</b>	<b>51</b>



### 3. Maintenance Section

Maintenance section is responsible for the maintenance of buildings, road structures, furniture, water and electricity supply within the campus. One Assistant Engineer and one Sub-Assistant Engineer (in charge) are currently looking after the maintenance works. The budget allocation for maintenance works and the expenditure during the reporting period are shown below:

	Allocation (in lakh Tk.)	Expenditure (in lakh Tk.)
a) Maintenance of building and road structures	65.00	26.10
b) Electricity bill	84.00	84.40
c) Telephone bill	2.00	1.12

### 4. Transport Section

Transport section is responsible for the day-to-day operations of all the vehicles placed under the transport pool of the Academy other than the project vehicles which are managed independently by the concerned Project Management Unit (PMU).

An amount of Tk. 3,275,000.00 was allocated in the budget for this section and Tk. 3,275,000.00 was spent for repairing and maintaining the vehicles and payment of fuel cost.

Major overhauling works of one vehicle was done.

### 5. Publication Section

The main function of the Publication Section is to publish different reports prepared by the Academy. Besides, distribution and selling of the publications are also done by this section. Activities of the section during the reporting period were as follows:

a) Number of reports published	14
b) Copies of published reports	4600
c) Distribution of publications free of cost (including brochures)	2755
d) No. of reports and journals sold	521
e) Income from the selling of publications (Tk.)	35,380/-

### 6. Hostel and Guest House

The Academy has five hostel buildings including one for female. The four male hostels have a capacity to accommodate 454 persons at a time and the female one with a capacity of providing accommodation of 64 persons. There is one Manager who is assigned to look after the overall day-to-day to management of the hostel and guest. There are one Hostel Assistants and one Storekeeper to assist him in doing his job. Boarding facilities are provided to the participants of different training courses, seminars, workshops, conferences and the other official programmes of different agencies held at the Academy. In addition to this, the Academy has a fully outfitted guest house having 128 air conditioned rooms including nine suites furnished with dining and lounge facilities. The guest house is used for distinguished visitors and dignitaries from home and abroad. In all 54388 persons stayed at the hostels during the reporting period.

### Total income and expenditure during the period were as follows:

Opening balance as on (01.07.2012)	Tk.	73,14,276.41
Total utility charges received	Tk.	2,40,63,725.00
Gross balance	Tk.	3,13,78,001.41
Maintenance cost	Tk.	1,64,81,660.00
Net balance	Tk.	1,48,96,335.41

Besides, there is a rented guest house in Dhaka which is used by the officers and employees of the Academy during their visit to Dhaka for official purposes.

### 7. Cafeteria

Cafeteria facilities are offered to the participants of different training courses, seminars, workshops, conferences and the other official programmes of different agencies arranged at the Academy. The employees of the Academy also use the facilities of the cafeteria. There is one Manager for the Cafeteria who works under the direct supervision of a committee headed by The Chairperson of Faculty Council. The Cafeteria Committee oversees the whole management of the cafeteria and suggests ways and means for its improvement. Total income and expenditure during the reporting period were as follows:

Total received	Tk.	2,10,43,646.00
Total operational expenditure	Tk.	1,95,89,091.00
Gross balance	Tk.	14,54,555.00
Capital expenditure	Tk.	-
Net balance	Tk.	-

### 8. Medical and Nutrition Centre

Medical and Nutrition centre provides primary treatment and medical advice to the trainees and employees of the Academy including their family members. The services provided by the medical centre include – emergency medical services, outdoor medical services and observation medical care for the individual cases as and when necessary and facility for examination of blood sugar. There is one Medical Officer, one Pharmacist and one Dresser to look after the patients. The activities of this centre during the reporting period were as follows:

Number of patients received treatment	3,091
Emergency treatments received	380
Referred service	48

Besides, advisory services were provided to different patients as before.

### 9. Mosque

The Academy mosque has a capacity to accommodate around 500 persons for prayer. Besides, the five time congregations a day and the Friday prayer, all the Muslim auspicious days are observed with due solemnity in the mosque. Special prayers like Milad Mahfil were held on national days. There is one Pesh Imam and one Khadem-cum-Muazzen to facilitate the observance of all the religious events held in the mosque.

## Appendix-1

## Board of Governors

### Chairperson

#### Hon'ble State Minister

Ministry of Local Government, Rural Development and Co-operatives

### Members

- **Secretary**, RDCD Ministry of LGRD & Cooperatives
- **Sr. Secretary**, Ministry of Public Administration
- **Sr. Secretary**, Ministry of Finance
- **Secretary**, Ministry of Agriculture
- **Secretary**, Ministry of Local Government
- **Secretary**, RDCD, Ministry of LGRD & C
- **Member**, Planning Commission
- **Rector**, BPATC
- **Director General**, BRDB
- **Director General**, BARD
- **Commissioner**, Rajshahi Division
- **Registrar & DG**, Department of Co-operatives
- **Director**, IBS, Rajshahi University
- **Vice Chancellor**, BAU, Mymensingh
- **Director General**, NILG

### Selected Members by the Government

- **Mr. Md. Habibar Rahman**, Hon'ble Member of the Parliament, Bogura-5 (Sherpur-Dhunat)
- **Dr. Mihir Kanti Majumder**, Chairman, Palli Sanchay Bank (Former Secretary to the Government)
- **Mr. Md. Abul Kalam Azad**, Former Principal Secretary to the Hon'ble Prime Minister
- **Professor Dr. M. Abul Kashem**, Vice Chancellor Hajee Mohammad Danesh Science and Technology University, Dinajpur

### Member Secretary

#### Director General

Rural Development Academy (RDA), Bogura

## Appendix-2

## List of Faculty Members

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