



BARC

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Bangabandhu-Pierre Trudeau Agricultural Technology Centre Inaugurated by Prime Minister Sheikh Hasina at BRRRI



Hon'ble Prime Minister Sheikh Hasina Inaugurating Bangabandhu Pierre Elliot Trudeau Agricultural Technology Centre

Bangladesh Rice Research Institute (BRRRI) celebrated its golden jubilee on 22nd February 2023. Hon'ble Prime Minister (HPM) Sheikh Hasina graced the occasion as the chief guest.

After arrival at the BRRRI, The Prime Minister paid homage to the portrait of the Father of the Nation Bangabandhu Sheikh Mujibur Rahman. Later HPM inaugurated the program by releasing balloons and pigeons to mark the 50th founding anniversary of BRRRI.

Prime Minister reiterated her call to scientists to put extra effort into research to attain excellence in agricultural production.

"I always think that without research it's not possible to attain excellence. As we are an agriculture-dependent country, we have given extra importance to agriculture," she said.

A documentary titled "50 years of BRRRI's pride and success" was screened at the function.

HPM inaugurated the *Bangabandhu Pierre Trudeau Agricultural Technology Centre* (BP-ATC) and visited BRRRI's Innovations stalls.

The centre is expected to increase the existing research capability of the NARS, technology exchange,

and development assistance between Bangladesh and Canada. This is the first time such a research centre set up with the direct support of the government of Canada.

The technology centre has been set up at BRRRI following a Memorandum of Understanding (MoU) signed between the Global Institute for Food Security at the University of Saskatchewan in Canada and the Bangladesh Agricultural Research Council (BARC) aiming to cooperate on multidisciplinary research, training, and development partnership to ensure sustainable food security.



Prime Minister Sheikh Hasina Unveiling Cover of the Five Books

HPM also unveiled the cover of some important research publications published by BARC and BRRRI. The three books published by the Bangladesh Agricultural Research Council are *A Development Trajectory of Bangladesh Agriculture From Food Deficit to Surplus*, *Agricultural Development for Fragile Ecosystem in Bangladesh*, and *Research Priorities Vision 2041*. BARC's

Executive Chairman Dr. S M Bokhtiar was the lead author of the first two books.

Hon'ble Agriculture Minister Dr. Muhammad Abdur Razzaque, MP, Hon'ble Liberation War Affairs Minister A K M Mozammel Haque, MP and Hon'ble State Minister for Youth and Sports Md. Zahid Ahsan Russel, MP, Agriculture Secretary Wahida Akter, Executive Chairman

of the Bangladesh Agricultural Research Council Dr. S M Bokhtiar, Director General of International Rice Research Institute (IRRI) Jean Balié Executive Director and Chief Executive Officer at Global Institute for Food Security, Steven Webb and BRRRI Director General Dr. M Shahjahan Kabir spoke on the occasion.

Press Briefing on Safety of Broiler Meat by the Ministry of Agriculture



Press Briefing on Safety of Broiler Meat by the Ministry of Agriculture

Livestock Division, BARC implemented a project *Qualitative and Quantitative Study of Hazardous Chemicals in Broiler* from January to June 2022 financed by the Ministry of Agriculture. Ten antibiotics and three heavy metals were tested from broiler meat, bones, and composite samples (liver, kidney, and gizzard) by ISO-certified and accredited laboratories, i.e., SGS Laboratory, Chennai, India, and Quality Control Laboratory, DLS,

Dhaka. To announce the results of the project, a press briefing was organized by the Press Information Department (PID) of the Ministry of Agriculture (MoA), Bangladesh Secretariat on 12 January 2023. Hon'ble Minister Dr. Muhammad Abdur Razzaque, MP, Ministry of Agriculture delivered his speech on the safety of broiler meat. On that occasion, Mr. S. M. Rezaul Karim, MP, Hon'ble Minister, Ministry of Fisheries and Livestock, Wahida

Akter, Secretary, Ministry of Agriculture, Dr. Nahid Rashid, Secretary, Ministry of Fisheries and Livestock, Dr. S M Bokhtiar, EC, BARC were present. Approximately one hundred journalists from print and electronic media were present at the press briefing. In the press briefing, Hon'ble Agriculture Minister assured that broiler meat is safe for human consumption based on the results of this project.

Demonstration Trials for Validation of Fertilizer Recommendation Provided through 'Khamari' Mobile App



Secretary, MoA Visiting Demonstration Trial Plot of Wheat at Gomastapur, Chapainawabganj and Trial Plot of Onion at Puthia, Rajshahi

Wahida Akter, Hon'ble Secretary, Ministry of Agriculture, Dr. S M Bokhtiar, EC, BARC, Director Generals of BARI, BINA, BWMRI, SRDI, other high officials of BARC, DAE and NARS institutes and crop zoning project personnel monitored the performance of three demonstration trial plots of wheat at Gomastapur, maize at Godagari and onion at Puthia established by SRDI, BWMRI and BARI respectively during 3-4 March 2023. In Gomastapur upazila, the Hon'ble Secretary and the visiting team observed the demonstration trial plot of wheat (BARI Gom-33). The crop production was better for 'Khamari' mobile app

recommended fertilizer dose compared to farmers' fertilizer application plot. They also observed that farmers are using imbalanced fertilizer which is a major cause of yield gap and food insecurity. The crop zoning project personnel showed the operation of 'Khamari' mobile app in the field. The Hon'ble Secretary, MoA, EC, BARC and other high officials were satisfied about the performance of 'Khamari' mobile app.

A field day was organized adjacent to the demonstration trial site at Parbatipur in Gomastapur upazila of Chapainawabganj district. The Director Generals of BINA, SRDI

and BWMRI, Additional Director, DAE, Rajshahi region, Upazila Nirbahi Officer of Gomostapur upazila, officials of DAE, Scientists of research institutes, crop zoning project personnel, and Farmers were attended the field day. The Hon'ble Secretary, MoA in her speech expressed her satisfaction in observing good performance of wheat crop and area coverage in this region. She requested the farmers to consult extension personnel in using balanced fertilizer for their land following the 'Khamari' app. She hoped the production of wheat will be much higher than the previous year. The Executive Chairman of BARC in his

deliberation explained the usefulness of 'Khamari' in crop production. He requested the SAAOs for helping the farmers in using the 'Khamari' app. One representative from farmers' also spoke on the field day and expressed their willingness in

using the 'Khamari' app acknowledging its implication toward crop production.

On 4 March 2023 the Hon'ble Secretary, MoA, Executive Chairman, BARC and other high officials of BARC, DAE and NARS

institutes and crop zoning project personnel monitored two demonstration trial plots of maize at Godagari and onion at Puthia of Rajshahi district established by BWMRI and BARI respectively.

The Fourth Industrial Revolution (4IR) and Potential Applications in the Livestock Sector

Livestock Division, BARC organized a training program on *The Fourth Industrial Revolution (4IR) and Potential Applications in the Livestock Sector* on 25-26 January 2023 at BARC. In this training course, thirty (30) scientists/officers from NARS and other institutes (BARC, BLRI, BAU, SAU, NIB, and BIRTAN) were present as participants. The inaugural session was presided over by Dr. Nazmun Nahar Karim, Member Director, Livestock Division, BARC. The training program was inaugurated by the chief guest Dr. S M Bokhtiar, Executive Chairman, BARC. The welcome remark was delivered by Dr. Mohammad Rafiqul Islam, Chief Scientific Officer, Livestock Division, BARC. Resource persons were successfully conducted lectures on the Fourth Industrial Revolution (4IR) implementation in Agriculture: Various important topics on 4IR such as Big data application, Tracing and traceability in GMP of livestock and poultry industries using block



Fourth Industrial Revolution (4IR) and Potential Application in Livestock Sector

chain and other digital technologies, Internet of Things (IoT) based sensors and their applications, IoT based cattle shed monitoring and transformation of veterinary services through 4IR technologies, IoT, Artificial Intelligence (AI) and cloud computing for Climate Smart Livestock and poultry production, IoT based Infrastructure design for precision in sustainable livestock and poultry production in

Bangladesh. Drone for counting and monitoring livestock in the field and IoT based anaerobic digestion and biogas utilization prediction, Ammonia (NH₃) and Methane (CH₄) emission monitoring systems in livestock industry and Impact-based smart weather advisory services for livestock and poultry industries. After the successful completion of the training program, certificates were given to the trainees .

Workshop on Bangladesh Delta Plan-2100

A day-long workshop on *Bangladesh Delta Plan 2100* was held on 06 February 2023 at Bangladesh Agricultural Research Council (BARC), Dhaka. Dr. S M Bokhtiar, Executive Chairman, BARC was present as chief guest. Dr. Md. Abdus Salam, Member Director (Planning and Evaluation), BARC chaired the inaugural session. The welcome address was delivered by Dr. A B M Khaldun, Principal Scientific Officer (Planning and Evaluation), BARC. The chief guest Dr. S M Bokhtiar, Executive Chairman, BARC highlighted the implementation of Delta plan-2100 in Bangladesh. He mentioned that Bangabandhu Sheikh Mujibur Rahman is the architect of modern agriculture. Effective implementation of the Delta Plan will eliminate extreme poverty, create more jobs and sustain GDP growth above 8% until 2041. Bangladesh Government approved Bangladesh Delta Plan 2100 (BDP 2100) on 04 September 2018, with



Inaugural session of the workshop

the aspiration of achieving a safe, climate resilient and prosperous Delta by 2100. He also mentioned that 'BDP 2100' is the plan for moving Bangladesh forward towards the end of the 21st Century. Efforts have been made to formulate BDP 2100 exactly in the same way we want to build Bangladesh in the coming years of this century, he further mentioned. The chairman of the session

welcomed all participants from 16 organizations. Scientists and stakeholders attended this workshop and discussed making a fruitful plan for the future Delta. In total 90, participants from different organizations viz., BARI, BRRI, BINA, BSRI, BJRI, BSTRI, CDB, BFRI, BADC, BARC, DAE, SRDI, DAM, BLRI, and BWMRI attended the workshop.

Training on Technical Report Writing and Editing

Agricultural Information Centre (AIC), BARC, organized a 3-day long training program on *Technical Report Writing and Editing* during 3-7 March 2023 at BARC. The main objective of the training program was to make the NARS scientists and officers skilled in scientific and modern techniques of technical report writing and journal paper editing.

Thirty scientists from NARS institutes attended the training. The inaugural ceremony of the training program was graced by



Hon'ble Chief Guest EC, BARC Handing over the Certificate to the Participants

the chief guest Dr. Nazmun Nahar Karim, Member Director, Livestock Division, BARC. Dr. Md. Mosharraf Uddin Molla, Member Director, AERS Division, was present as a special guest. The program was chaired by course director Dr. Kabir Uddin Ahmed, Director, AIC. Dr. Susmita Das, Principal Documentation Officer, AIC gave the welcome address and highlighted the objectives of the training program as the course coordinator.

As the chief guest, Dr. Nazmun Nahar Karim emphasized the importance of technical report writing and journal paper editing for scientists. She also shared some techniques for effective technical writing. Dr. Md. Mosharraf Uddin Molla, as a special guest uttered the necessity of technical report writing for every agricultural scientists.

After successful completion, the training program ended with a closing ceremony. Dr. S M Bokhtiar,

EC, BARC as chief guest of the closing program distributed the certificates among the participants. In his closing remarks he highlighted the importance of technical report writing and editing. Dr. M. Baktear Hossain, Member Director, Natural Resources Management Division and Director, SAARC, was present as a special guest. Dr. Kabir Uddin Ahmed, Director, AIC chaired the concluding session.

Training Course on Awareness Building on Act and Policies of Bangladesh Agriculture

Crops Division, BARC organized a training program on *Awareness Building on Act and Policies of Bangladesh Agriculture* on 26-28 February 2023. In this training course, forty officers from NARS institutes (BARI, BRRI, BSRI, BFRI, BJRI, BINA, BLRI, and BARC) were present as participants. The inaugural session was presided over by Dr. Md Abdus Salam, Member Director, Crops Division, BARC. The training program was inaugurated by the chief guest Dr. S M Bokhtiar, EC, BARC. The welcome remark was delivered by Dr. Shah Md. Monir Hossain, Chief Scientific Officer, Crops Division, BARC. Resource person successfully conducted lectures



EC, BARC addressing the Training Program

on Introduction to different agricultural policies in Bangladesh. After successful completion of the

course, certificates were given to the participants.

Workshop on Wellness Through Safe Food and Nutrition

Access to sufficient amounts of safe and nutritious food is an important component of maintaining a healthy life. Ensuring a nutritious diet helps and promotes good health as well as prevents many chronic diseases. According to WHO, approximately

30% of preventable morbidity and mortality from noncommunicable illnesses from hypertension, fatty liver, and diabetes are attributable to improper nutrition and physical inactivity. To address this issue's Nutrition Unit, BARC organized a one-day long workshop entitled

Wellness Through Safe Food and Nutrition on 9 February 2023 at BARC. Dr. S M Bokhtiar, EC, BARC, and Mr. Md. Abdul Wadud, Executive Director (Additional Secretary), Bangladesh Institute of Research and Training on Applied Nutrition (BIRTAN) were present as

chief guest and special guest, respectively, while Dr. Mohammad Rafiqul Islam, Director, Nutrition Unit, BARC chaired the inaugural session. Along with NARS scientists, officers of extension organizations (DAE, DoF, DLS), DAM, Hortex Foundation, BIRTAN, BADC, FAO participated in the workshop. Including a keynote paper, five strategic papers were presented covering crop, livestock, and fisheries sub-sectors emphasizing food security, safe food, and nutrition. The major recommendations that have been adopted from this workshop were



Inaugural session of the workshop

strengthening national food control systems, assessment of risks in food safety, diversity in food intake, public awareness, challenges, and way forward for

ensuring safe and nutritious food, as well as no wrong information that should not be published in the public domain without any accurate data.

Training on IoT Based Precision Agriculture for Sustainable Production

A 3-day long training course on *IoT Based Precision Agriculture for Sustainable Production* organized by Agricultural Engineering Unit during 17-19 January 2023 was held at Training Building, BARC. Thirty participants from NARS institutes (BARC, BARI, BRRI, BINA, BSRI, BJRI, SRDI, and CDB), BIRTAN, BADC, and DAE attended the training. Fifteen lectures on different topics focusing on IoT, artificial intelligence, machine learning, and deep learning in precision agriculture, infrastructure design for precision agriculture and application,

adoption, profitability, opportunities, challenges, plan & policies of IoT-based precision agriculture were delivered by renowned scientists, teachers, and experts from different government and private organizations and universities. The training program was directed and coordinated by Dr. Md. Baktear Hossain, MD (NRM), BARC, and Dr. AFM Tariqul Islam, PSO, Agricultural Engineering Unit, BARC, respectively. The inaugural session was presided over by Dr. Md. Baktear Hossain, MD (NRM), BARC, and Dr. Nazmun Nahar

Karim, Member Director (Livestock), BARC, and CSO (Agricultural Engineering), BARC was present as chief guest. Dr. AFM Tariqul Islam, Principal Scientific Officer, Agricultural Engineering Unit, BARC delivered the welcome address. In the closing session, Dr. S M Bokhtiar, Executive Chairman, BARC was present as chief guest and provided certificates to the trainees. Dr. Nazmun Nahar Karim, MD (Livestock) was present as a special guest and Dr. Md. Baktear Hossain, MD (NRM), BARC presided over the session.



Training on IoT Based Precision Agriculture for Sustainable Production

Workshop on Fourth Industrial Revolution (4IR)

A day-long workshop titled *To meet the challenges of the fourth industrial revolution* was held at the BARC training building on 14th February 2023. The workshop was organized in accordance with the Annual Performance Agreement (APA) as part of the government's overall development plan. The Computer and GIS Unit of BARC organized the event, which was attended by 60 BARC scientists and officers. The workshop was presided over by Mr. Hasan Md. Hamidur Rahman, Director of Computer and GIS unit. The chief guest was Dr. S M Bokhtiar, EC, BARC, and the special guests were Dr. Md. Mosharraf Uddin Molla, MD, AERS, and Dr. Md. Baktear Hossain, MD, NRM. Mr. Hasan Mahmud, Senior System Analyst of Computer and GIS, delivered the welcome speech. Dr. Kabir Uddin



Workshop on Fourth Industrial Revolution (4IR)

Ahmed, Director, AIC presented the main article on the MoA's integrated work plan in line with 4IR, and the required actions (short-term, mid-term, and long-term) were discussed in the presentation. During the follow-up discussion session, participants spontaneously contributed to the conversation, discussing different

aspects of each action. It was decided that another workshop would be conducted with the representatives of all NARS institutes. This workshop will motivate the scientists and other officials to perform their tasks based on 4IR action plan within the given time frame.

Training on the Use of Modern Farm Machinery for Ensuring Food Security

A 3-day long training course on the *Use of Modern Farm Machinery for Ensuring Food Security* organized by the Agricultural Engineering Unit during 12-14 March 2023 was held at the Training Building, BARC. Thirty participants from NARS institutes (BARC, BARI, BRRI, BINA, BSRI, and BWMRI), BADC, DAE, and BAU attended the training. Fifteen lectures on different topics focusing on the status, prospects, and challenges of mechanization, NARS institutes and private sector initiatives, the business model of farm machinery, renewable energy uses and farm machinery use in crops field, and plan and policies of mechanization in Bangladesh were delivered by the renowned



Training on the Use of Modern Farm Machinery for Ensuring Food Security

scientists, teachers, and experts from different government, private organizations, and universities. The training program was directed and coordinated by Dr. Md. Baktear Hossain, MD (NRM),

BARC, and Dr. Md. Ashraful Alam, PSO, Agricultural Engineering Unit, BARC, respectively. The inaugural session was presided over by Dr. Md. Baktear Hossain, MD (NRM), BARC, and Dr. Nazmun Nahar

Karim, Member Director (Livestock), BARC & CSO (Agricultural Engineering), BARC was present as chief guest and Dr. Md. Saifullah, Member Director (A&F), BARC, was present as special

guest. Dr. Md. Ashrafal Alam, Principal Scientific Officer, Agricultural Engineering Unit, BARC delivered the welcome address. In the closing session, Dr. Md. Baktear Hossain, MD (NRM),

and Dr. Md. Saifullah, Member Director (A&F), BARC were present in the closing session and distributed certificates among the trainees.

Training on Contemporary Issues and Technologies in Forestry and Agroforestry

A two days long training course on *Contemporary Issues and Technologies in Forestry and Agroforestry for Professionals* was organized at BARC on 1-2 March 2023. Forty participants came from different 18 organizations like, NARS institutions (BARC, BARI, BRRI, BJRI, BSRI, BFRI, BWMRI, SRDI, CDB, etc.), DAE, BFIDC, SPARRO, NGOs (CNRS and Friendship) and CEGIS were attended. Among them, five were female participants. Participants enjoyed the ten different lectures delivered by different renowned scientists and experts on specific topics. Dr. Nazmun Nahar Karim, Member



Contemporary Issues and Technologies in Forestry and Agroforestry for Professionals

Director (Livestock) inaugurated among the participants during the the ceremony and also distributed closing ceremony. course completion certificates

Training on Citizen Charter

The Manpower & Training Unit of BARC organized a day-long in-house training program on *Citizen Charter* as per APA 2022-23 Work Plan on 9 March 2023 at BARC. The objective of the training is to enhance the responsibilities and duties of employees for ensuring quality service timely to the citizen. A total of 50 employees in grades 16-20 participated in the training program. The APA team members of BARC conducted training sessions as resource persons. The training program was inaugurated by Dr. S M Bokhtiar, EC, BARC as the chief guest.



Inaugural Session on Public Procurement Management Training

Agricultural Technology Uptake Assessment Workshop In Barishal and Rangpur Region

A Workshop on *Agricultural Technology Uptake Assessment Workshop in Barishal Region* was held on 20 March 2023 at Regional Station, BARRI, Barishal. Dr. N. I. Bhuiyan, Member, External Panel of Experts, and former DG, BARRI was the chief guest, while the technical session was presided by Md. Showkat Osman, Additional Director, Barishal Region, DAE. All DDs of the Barishal region (Barishal, Patuakhali, Borguna, Bhola, Jhalokathi, and Pirojpur districts) presented the technologies adopted by their own district that are generated by the NARS institutes. The workshop was jointly organized by the Department of Agricultural Extension (DAE) and the Bangladesh Agricultural Research Council (BARC).

Another *Workshop In Rangpur Region* was held on 26 February 2023 at OFRD, Rangpur. Prof. Dr. Z.



Agricultural Technology Uptake Assessment Workshop

Karim, Chairman, EPE and Former Secretary, Bangladesh Secretariate and Chairman, BARC presented the workshop and facilitated the open discussion. The workshop was chaired by Md. Tajul Islam Patwary, Director, Field Service Wing, DAE. All the DD's of the Rangpur Region (Rangpur, Kurigram, Nilphamari, Gaibandha & Lalmonirhat districts) presented the technologies adopted in their

own district. The workshop was jointly organized by DAE and BARC.

All External Panel of Experts Members, Scientists of NARS, and representatives from BADC, SCA, NGO, farmers, and all relevant shareholders were present in the workshop.

Training on Public Procurement Management

The Manpower & Training Unit of BARC organized a two-day in-house training on *Public Procurement Management* for mid-level scientists/officers during 19-20 March 2023 at BARC. The objective of the training is to increase the knowledge and skills of mid-level officials in managing the procurement function following the Public Procurement Act. 2006 & Public Procurement Rules 2008. The procurement specialists of different public and private organizations conducted the training sessions on assigned



Training session on Public Procurement Management

topics as resource persons. A total of 35 employees of BARC participated in the training program. Dr. S M Bokhtiar,

Executive Chairman of BARC distributed training certificates among the trainees at the end of training.

Application of Quantitative and Qualitative Methods for Scientific Paper Writing

A training program on *Application of Quantitative and Qualitative Methods for Scientific Paper Writing* was held on 12-16 February 2023 at Computer Lab., BARC organized by AERS Division. The Resource Speakers were the Professors from Sher-e-Bangla Agricultural University, Dhaka. Twenty Agricultural Economist from NARS Institutes (sixteen participants from BARI, BRRI, BINA, BSRI, BLRI and BFRI) and agricultural universities (four participants from Sylhet Agricultural University and Sher-e-Bangla Agricultural University) attended the training program. Dr. Md Saifullah, Member Director (A&F), BARC was the chief guest at Concluding Session and handed over the certificates to the participants of the training Program.

This training aims to enable the participants to understand the



Hon'ble Guests and the Participants

importance of data analysis and learn about application of different analytical techniques in social research; to develop understanding about importance of scientific writing; to learn the process of writing of scientific articles for journals; to be able to select right journal for publishing article. The overall objective of the course is to improve the

knowledge and analytical skills of scientists in the application of quantitative and qualitative methods for scientific paper writing. The scientists themselves applied the method using a data set provided for the purpose. They also developed their skill in the operation of the software packages such as STATA, Eviews and R software.

Visit Abroad

Dr. Nazmun Nahar Karim, Member Director (Livestock) and CSO (Agricultural Engineering Unit), BARC participated in the regional knowledge forum on Energizing Agriculture and Enabling Just Energy Transitions in South Asia at the Indian Institute of Technology (IIT), Gandhinagar, Ahmedabad, Gujarat, India during 6-7 February 2023. She participated in the technical sessions, discussions, and knowledge sharing on the topic of *Energizing Agriculture and Enabling Just Energy Transitions in South Asia*. She also participated in the panel discussion session as a panel discussant. She visited the solarization of 11 KV Nityanand Feeder as a part of Suryashakti



Energizing Agriculture and Enabling Just Energy Transitions in South Asia

Kishan Yojna (SKY) project, Uttar Gujarat Vij Company Limited, Sabarmati, Vehlal, Ahmedabad; 10 MW canal top solar power plant, Vadodara and Gujarat Energy Research and Management

Institute during 8-10 February 2023. International Water Management Institute organized this regional knowledge forum and exposure visit.

The BARC Newsletter is published quarterly by Bangladesh Agricultural Research Council (BARC) to provide news and information on agricultural research and development of the NARS and other concerned organizations in Bangladesh.

Any query concerning the Newsletter or its contents, comments and suggestions for our Endeavour would highly be appreciated.

Compiled and Edited by : **Dr. Kabir Uddin Ahmed**, Director
Dr. Susmita Das, Principal Documentation Officer
Md. Sazzadur Rahman Sarker, Senior Reprographic Officer
Dr. Mst. Sufara Akhter Banu, Senior Scientific Editor
Md. Saimum Hasan, Information Officer

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Bangladesh Agricultural Research Council (BARC)
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E-mail: dir.aic@barc.gov.bd
Website: www.barc.gov.bd

Illustration & Print : Generation PPA, Dhaka, Cell: 01819 230291



BANGLADESH AGRICULTURAL RESEARCH COUNCIL

New Airport Road, Farmgate, Dhaka-1215