



# BARC Newsletter

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

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## Constraints and ways of its elimination for transferring NARS developed technologies at farmer's level

A daylong workshop on *Identification of constraints and ways of its elimination for transferring NARS developed technologies at farmers level* was held on 15 February, 2017. Mr. Mohammad Moinuddin Abdullah,



Mr. Mohammad Moinuddin Abdullah, Secretary, Ministry of Agriculture was addressing the workshop as chief guest.

Secretary, Ministry of Agriculture was present as chief guest while Mr. Md. Monjurul Hannan, Director General, DAE was present as special guest. Mr. Fozle Wahed Khandaker, Additional Secretary (Research), Ministry of Agriculture was also present as special guest. The workshop was presided over by Dr. Mohammad Jalal Uddin, Executive Chairman, BARC. Dr. Shaikh Mohammad Bokhtiar, Director, TTMU, delivered welcome address highlighting the workshop background and initiatives taken by BARC based on above issue. Two technical sessions, I and II were chaired by Mr. Fozle Wahed Khandaker, Additional Secretary (Research), Ministry of Agriculture and Mr. Md. Monjurul Hannan, Director General, DAE respectively. After detailed discussion, the following recommendations were made by the participants:

★ All technical committees relate to technology transfer viz. NATCC-National Agricultural Technical coordination committee, RATCC-Regional Agricultural Technology Coordination Committee, DATCC-District Agricultural Technology Coordination Committee, UATCC- Upazilla Agricultural Technology Coordination Committee should be reactivated through approving government. order and 5 years fund allocation by Ministry of Agriculture. To review the progress of technology transfer, BARC could arrange national and regional workshop and proper endeavor should be taken based on recommendations from the workshop.

### Dr. Mohammad Jalal Uddin, New Executive Chairman of BARC

Kbd. Dr. Mohammad Jalal Uddin, an eminent agricultural scientist of the country, joined Bangladesh Agricultural Research Council (BARC), Farmgate, Dhaka as the Executive Chairman on 10 January, 2017.

Kbd. Dr. Mohammad Jalal Uddin began his career as a Scientific Officer at Bangladesh Agricultural Research Institute (BARI), Gazipur in 1983. He served in different important capacities and got promotion as Director in 2012. He served as the Director (Wheat Research Centre), Director (Tuber Crops Research Centre) and Director (Research). During his career at BARI he conducted and implemented different research programs on maize, barley, millet, various pulses and oilseed crops, wheat and tuber crops and thus contributed in developing more than 40 crop varieties along with some associated technologies. He visited many countries including the United Kingdom, South Korea, India and Thailand.

He was born in 1958 in a respectable Muslim family at the Sadar Upazila of Chuadanga. Kbd. Dr. Mohammad Jalal Uddin did his B.Sc.Ag (Hons) from Bangladesh Agricultural University, Mymensing in 1981 and M.Sc in Genetics and Plant Breeding in 1984 from the same University.

Dr. Jalal did his PhD research on Genetics and Plant Breeding in Bangabandhu Sheikh Mujibur Rahman Agricultural University, Salna, Gazipur and obtained the degree in 2002. He has a good number of publications of some national and international journals and newspapers.



- ★ A significant amount of breeder seed of newly developed varieties should be supplied to BADC for seed production within the possible shortest time. With the participation of Ministry of Agriculture, National Monitoring Committee should be formed for monitoring, production, distribution and effectiveness in the field of certified seed. More initiatives should be taken by Seed Promotion Committee.
- ★ For prompt transfer and extension of new technologies, On-farm Research Division (OFRD) of NARS institutes should be strengthened and established where required.
- ★ Field demonstration, agricultural fair, field day, training on new technologies should be conducted and technologies generated by other

institutes should be demonstrated in BARI "technology village".

- ★ Target for seed production of new varieties should be fixed by research institutes, DAE, and BADC jointly. BADC could take planning and implementation strategy for seed production of new variety.
- ★ Extension activities of NGO, seed company, non govt. business organization should be accountable through strong monitoring and networking system. Public Private Relationship (PPR) should be strengthened for extension of new varieties.
- ★ To rapid expansion of new technologies, campaign could be run through electronic and

social media viz. Agriculture information centre, BTV, Bangladesh Betar, newspaper, film, documentary, drama, song, mobile phone, ICT etc.

★ To sustain the agricultural mechanization, machineries maintenance workshop with skilled mechanic should be established. Testing lab should be established to develop and maintain versatile usable quality machineries.

★ Extension strategy of new technology could be made together with Department of Agricultural Extension, Department of fisheries, Department of livestock and Department of Agricultural Marketing.

### Training Workshop on Project Development and Management

A five day-long training workshop on *Project Development and Management* was organized by the Planning and Evaluation Division, BARC during 22-26 January 2017. Dr. A. S. M. Anwarul Huq, Member Director, AERS Division, BARC was present as chief guest in the inaugural session. Dr. Paresh Chandra Golder, Member-Director, P&E Division, presided over the inaugural ceremony. Thirty participants from the different NARS institutes including BARC attended the workshop. Dr. Md. Abdul Awal, Chief Scientific Officer, P&E, BARC and the course coordinator of the workshop delivered the welcome address.



*Certificate Awarding ceremony of project Development and Management Training Workshop*

Resource persons were from BARC, National Academy for Planning and Development (NAPD), Office of the Comptroller General of Accounts and Directorate of Fire service and Civil defense. The topics of the training workshop were project cycle, project appraisal, logical framework, preparation of different types of project documents (DPP/RDPP/TPP), developing winning research proposals, result based monitoring, PPR-2008, financial delegations, SWOT, Objectives and problem tree analysis etc. The workshop was conducted based on class lectures, practical sessions and open discussions. The chief guest in his speech mentioned that this training workshop was organized to make the participants conversant with project planning and management. The chairperson of the training workshop in his speech expected that this training would be helpful for the participants to prepare and manage different kinds of projects properly and efficiently.

The workshop ended on 26 January, 2017 through a certificate giving ceremony where Dr. A. S. M. Anwarul Huq, Member Director, AERS was present as chief guest.

### National Workshop on Plant Genetic Resources in Bangladesh

The National workshop on *Plant Genetic Resources (PGR)* was held at Bangladesh Agricultural Research Council during 20 and 21 March 2017 to capture the present status of the plant genetic status of different crops, their conservation, constraints, uses in varietal development and future plan of collection, characterization, preservation and varietal development by the different organization of Bangladesh.

The inaugural session of the workshop was presided over by Dr. Mohammad Jalal Uddin, Executive Chairman of BARC. As a chief guest, Mr. Md. Fazle Wahid Khondaker, Additional Secretary, Ministry of Agriculture was present as a chief guest in the occasion. Professor Dr. Lutful Hassan, Bangladesh Agricultural University,

Mymensingh presented the key note paper in the workshop.



*Mr. Md. Fazle Wahi Khondaker, Additional Secretary, MoA, was addressing the workshop as chief guest*

The Welcome address was delivered by Dr. Md. Aziz Zilani Chowdhury, Member-Director, Crops Division (Routine Charge), BARC. In his Welcome address, he highlighted the importance of plant genetic resources. He mentioned that the PGR is an important area in the sustainable development goal (SDG). The sharing of documents from different organizations would be helpful for planning and execution of research programme. The Chief Guest mentioned that the climate vulnerability might be worsened in future for that we have to collect, characterize and conserve the germplasms for developing varieties to adapt with vulnerable climate, he further added. He also emphasized for considering germplasm both of terrestrial and aquatic system. The Chairperson of the inaugural session emphasized on sea weed for addressing hidden hunger. A total of 22 presenters presented the status of plant genetic resources of different crops. A total of 73 participants from different organizations participated in the workshop. The participants from NARS institutes, BARC, BRRI, BARI, BINA, BSRI, BSRTI, CDB, BFRI, BJRI, BTRI; universities, BAU, BSMRAU, SAU; extension, DAE; ministry of agriculture; NGO, BRAC; private sector, Lal Teer Ltd., Supreme Seed, ACI Ltd. took part in the workshop.

## **Extension and Uses of Agricultural Machinery in the Field Level**

A workshop on *Present Status of Extension & Uses of Agricultural Machinery in the Field Level and Future Proposition* was held in Bangladesh Agricultural Research Council on 27th March 2017. About 80 participants from the National Agricultural Research Systems (BARC, BARI, BRRI, BJRI, BINA and BSRI), Bangladesh Agricultural Development Corporation, Department of Agricultural Extension, Barind Multipurpose Development Authority, Rural Development Academy, Manufacturer, Service Provider, and Farmers participated in the workshop. Dr. Mohammad Jalal Uddin, Executive Chairman, BARC chaired the inaugural session. The chief guest was Md. Fazle Wahid Khondaker, Additional Secretary (Research), Ministry of Agriculture and the special guest was Sanat Kumar Saha, Joint



*A view of the workshop on present status of Extension and uses of Agricultural Machinery in the Field level*

Secretary (Research), Ministry of Agriculture. The first technical session was chaired by Dr. Mohammad Jalal Uddin, Executive Chairman, BARC. Dr. A. K. M. Saiful Islam, PSO, BRRI and Mr. Ashok Kumer Biswas, Agril. Engg., DAE worked as rapporteur. The second technical session was chaired by Dr. Sultan Ahmmed, Member Director, Natural Resources Management Division, BARC. In the Session, eleven papers were presented by DAE, BMDA, RDA and BADC and fruitful discussions were

made on all the presentations. The concluding session was chaired by Dr. Mohammad Jalal Uddin, Executive Chairman, BARC.

### Fertilizer Technical Sub-Committee Meeting

A meeting of *Fertilizer Technical Sub-Committee* (FTSC) was held at BARC on 12 February, 2017. The meeting was presided over by Dr. Sultan Ahmed, Member-Director, NRM Division, BARC and Convener of the committee. Almost all the members of the committee attended the meeting. A total of 23 applications of organic fertilizers, bio-fertilizers and plant growth regulators (PGRs) that were under on-going standardization process were reviewed in the meeting. Field trial reports of nine organic fertilizers were thoroughly reviewed. Agronomic and economic performances of the fertilizers were found satisfactory. Based on the results, nine organic fertilizers were recommended to the National Fertilizer Standardization Committee at Ministry of Agriculture for approval. Besides, lab analysis reports of two organic fertilizers; new applications of eleven organic fertilizers, one chemical fertilizer, seven PGRs and one bio-fertilizer were also evaluated in the meeting. Composition of those fertilizers and PGRs were compared with the standard composition.

### Workshop on Matured Technology Developed by NARS Institutes

A two day long Review Workshop on *Matured Technology Developed by NARS Institutes (2013-14 to 2015-16)* was organized by Technology Transfer and Monitoring Unit, BARC during 03-04 January 2017. Dr. Abul Kalam Azad, Director General, Bangladesh Agricultural Research Institute, was present as chief guest in the inaugural session and also presided over the plenary session. Mr. Chaitanya Kumar Das, Director, Field service wing, DAE attended as special guest and Dr. Poresh Chandra Golder, Member-Director, P&E, BARC chaired the inaugural session. In the welcome address, Dr. Shaikh Mohammad Bokhtiar, Director TTMU



Dr. Abul Kalam Azad, DG, BARI was addressing the workshop as chief guest

presented the background, objectives as well as schedule of this workshop. In three technical sessions scientists of 12 NARS institutes viz. BARI, BRRI, BINA, BSRI, BJRI, BTRI, CDB, SRDI, BFRI (Forest), BFRI (fish), BSRTI and BLRI participated in this workshop and presented 397 technologies which are developed during 2013-14 to 2015-16. Dr. Abdur Razzaque, Programme Director (Crops), KGF and Former Director (TTMU), BARC; Dr. Abdul Qaiyum, Former CSO, BARI; Dr. Md. Abdur Razzaque, Former Executive Chairman, BARC; Dr. Kazi M. Kamaruddin, Executive Director, KGF, BARC campus were present as expert member in two day long workshop. After detailed discussion, the following recommendations were made by the experts:

- ✦ Technology workshop should be arranged annually with publishing a technology book.
- ✦ Matured technology should be in a package of varietal characteristics, pest management, fertilizer management, productivity and profitability followed by production technology under different cropping patterns.
- ✦ Each technology should be transferred properly to the ultimate technology users.
- ✦ During adopting a technology, economic analysis should be done to measure the yield performance between new and conventional technology.

- ★ Availability of newly developed machineries and it's parts should be ensured.
- ★ To identify the intake performance of mineral (zinc, iron, iodine) fortified rice, average consumption of mineral per man per day should be calculated.
- ★ Conservation system of seeds of new varieties should be specified.
- ★ Crops name must be mentioned before the name of variety (i.e. Sarisha Crop; BINA Sarisha 9,10).
- ★ Metric method should be followed in discussing technology.
- ★ Time of innovation and suitable location of new technologies need to be mentioned.
- ★ Experiment of test tube calf production and existing situation of monkey (Kolo) are not need to consider as transferable technology.

## Field Day and Monitoring of AFACI Seed Extension Project

Two Field Days on seed production of high yielding superior varieties of wheat were held under AFACI funded project entitled Demonstration Project to Distribute National Superior Seeds of Food Crops and Transfer Agricultural Technology (Seed Extension).

One was held at Regional Wheat Research Centre, Shahapur, Rajshahi on 16 March 2017 which is organized by BARI. The objective of this field day was to select of superior varieties of wheat with the participation of scientists, extension personnel, seed growers and about 100 farmers. Dr. Mohammad Jalal Uddin, Executive Chairman, BARC attended the meeting as chief guest. Dr. Shaikh Mohammad Bokhtiar, Director (TTMU), BARC and Principal Investigator of the project and Md. Hazrat Ali, Additional Director, Rajshahi Region, DAE were attended as special guests. Md. Akram Hossain Chowdhury, Chairman, Barind, Multipurpose Development Authority, Rajshahi was present as guest of honor in the occasion. This Field Day was presided over by Dr. Noresh Chandra Deb Barma,

Director, Wheat Research Centre, Rajshahi. Under AFACI-Seed Extension project, five wheat varieties viz. BARI Gom 25, BARI Gom 26, BARI Gom 28, BARI Gom 29, BARI Gom 30 have been used for field trial to select superior varieties for disseminating quality seeds to the local farmers.



A view of Field day where Dr. Mohammad Jalal Uddin, EC, BARC attended as Chief Guest

After detailed discussion in field day, experts, scientists, extension personnel, seed growers and farmers opined that BARI Gom 28 is the superior cultivar which is less prone to lodge with lower rat infestation. It is also tolerant to terminal heat stress than other varieties. They also opined that bed planting of wheat is a good technique for improving resource use efficiency and increasing more yield rather than conventional flat planting method.

Another Field Day was held under the same project at OFRD, BARI, Bhola on 23 March 2017. Dr. Sultan Ahmmed, Member Director (NRM), BARC attended the occasion as chief guest. Dr. Md. Baktear Hossain, Director (Computer and GIS Unit), BARC and Mr. Mohammad Riazuddin, Agriculture Officer, Bhola Sadar were present as special guest. This field day was presided over by Dr. Shaikh Mohammad Bokhtiar, Director (TTMU), BARC and Principal Investigator of AFACI Seed-Extension project. Under this project, same varieties have been used for field trial. After detail discussion, scientists, extension personnel,

seed growers and farmers made their recommendations that among five varieties, BARI Gom 25 is the superior cultivar in the southern region due to larger grain size, lower tendency to lodge and its tolerance to moderate level of salinity. Due to early maturity and tolerance to heat stress BARI Gom 28 and BARI Gom 30 cultivars were also recommended.



*Field day observed at OFRD, BARI, Bhola*

Field monitoring of AFACI funded Seed extension project was conducted at Bhola on 23 March 2017. Dr. Sultan Ahmmed, MD, NRM worked as the convener of the monitoring team and Dr. M. Baktear Hossain, Director Computer and GIS worked as member secretary of the committee. Dr. S.M. Bokhtiar, Principal Investigator of AFACI seed extension project was also present. A field day on wheat demonstration organized at Alinagar, Bhola Sadar. The field trail consists of five latest wheat varieties. The committee observed good condition of wheat field. Monitoring committee exchanged views and talked to farmers regarding the new wheat varieties. Farmers showed keen interest of cultivating the new wheat varieties.

### **Scientist of Crops Division Awarded in the Second Conference on Conservation Agriculture for Smallholder**

The Second Conference on *Conservation Agriculture for Smallholder (CASH II)* was held on 14 and 15 February 2017 at Sayed Nazrul Islam Hall, Bangladesh Agricultural University of Mymensingh. Dr. Md. Harunur Rashid, PSO,

Crops Division presented a paper entitled *Reduced Tillage and Mechanized Transplanting of Rice Enhances the System Productivity of Rice-Mustard-Rice Cropping Sequence*. He received a recognition award for Research and Development on Rice Establishment Technology for Conservation Agriculture.



*A view of second conference on Conservation Agriculture for smallholder where Dr. Md. Harunur Rashid, PSO, Crops Division, BARC awarded a recognition award*

### **BARC Scientist Attended Validation Workshop on Strengthening the Role of SAARC in the Sustainable Intensification of Agriculture in South Asia**

A South Asian workshop on *Strengthening the Role of SAARC in the Sustainable Intensification of Agriculture in South Asia* was organized in Kathmandu to validate the research findings of a report on sustainable intensification of agriculture in the region on 23-24 March, 2017. The objective of the workshop was to disseminate the major issues unearthed by the research and to seek key areas of cooperation. The research partners included South Asian Association for Regional Cooperation (SAARC) Secretariat, SAARC Technical Committee on Agricultural and Rural Development (TCARD), SAARC Agricultural Centre, South Asia Watch on Trade, Economics and Environment (SAWTEE) and International Fund for Agricultural Development (IFAD). In the opening session, Mr. M.J.H. Javed, Director, SAARC Secretariat pointed out the rationale for

sustainable development of agriculture and highlighted the necessity for regional cooperation in agricultural intensification in South Asia (SA). He alerted the audience on the need to double the output of agriculture in South Asia to feed its ever growing population. He encouraged the participating members for collaborative initiatives.

Dr. Mian Sayeed Hassan, Chief Scientific Officer Division, BARC as the focal point of TCARD attended the event. As a panel discussant on the paper on *Land and Soil Management for SIA in South Asia* he proposed to give priority on propagating vermicomposting technology, development of legume-based cropping pattern, efficient irrigation system, and increasing soil organic matters through adoption of Conservation Agriculture. Country wise activities priority matrix were developed for selection and execution in the priority areas.



*Dr. Mian Sayeed Hassan, CSO, Crops Division, BARC as the focal point of TCARD attended the meeting*

### **Delegates visited CIMMYT-SRFSI Site in Bangladesh**

A six member delegates from Bangladesh Agricultural Research Council, Department of Agricultural Extension, SAARC Agriculture Centre and International Maize and Wheat Improvement Centre (CIMMYT) visited CIMMYT-SRFSI sites in the north western Bangladesh during 28-31 March, 2017. They

visited the Conservation Agriculture based Sustainable Intensification (CASI) technology activities.



*Delegates attended in a field day on CASI technologies in maize and wheat*

The delegates attended in a field day on CASI technologies in maize and wheat crops at Bhaduria village, Charghat Upazila, Rajshahi organized by the DAE, Rajshahi. The CASI technologies found promising and accepted by the community. Mechanization with CASI technologies reduces the turnaround time in between two crops that results increased yield in wheat and maize. The team visited Premtoli node, Godagari-Rajshahi and observed sowing of strip tillage mungbean under “Wheat-Mungbean-T.Aman” cropping pattern trial. They also visited CASI technologies and Innovation Platforms activities in Mohonpur node, Birganj-Dinajpur and Baro-dargah node, Pirganj-Rangpur; on-station trials on weed management in maize for CASI technology at Wheat Research Centre, BARI-Dinajpur and On-Farm Research Division, BARI-Rangpur.

### **Dr. Sultan Ahmmed elected as Vice Chairman of GC of CSAM**

Dr. Sultan Ahmmed, Member Director, NRM Divison, Bangladesh Agricultural Research Council participated in ‘Twelfth Session of the Governing Council of CSAM’ in Bangkok on 16 March 2017. Dr. Ahmmed has elected Vice-Chair for 13th Session of GC. Dr. Ahmmed also

participated in a Panel Discussion on Sustainable Agricultural Mechanization which was organized by the Centre for Sustainable Agricultural Mechanization (CSAM) in collaboration with the German Agricultural Society (DLG) during the AGRITECHNICA ASIA Exhibition on 17 March 2017.



*Dr. Sultan Ahmed, MD (NRM) BARC attended the Pannel Discussion*

During the Panel Discussion, country representatives shared some common challenges in the Asia-Pacific region in developing

sustainable agricultural mechanization including those related to a high proportion of farmers being smallholders, scarcity of agricultural labour in many areas, inadequate agricultural infrastructure such as irrigation facilities, low quality of agricultural machinery, weak enforcement of policies, as well as the high-risk nature of agriculture itself. In the context of the challenges posed by climate change and soil degradation, the need to promote environment friendly machinery and practices was noted.

The Panel Discussion also underscored the need for intensifying efforts to help countries in the region to achieve sustainable agricultural mechanization. It recognized the necessity of having strong support from governments and a favorable environment for regional trade and investment. Adoption of appropriate standards to ensure the quality of machinery produced and traded, enabling provision of financial support to smallholder-friendly practices like Custom Hiring, ensuring availability of spare parts and maintenance services, and conducting awareness improvement activities for farmers.

### **Acknowledgement**

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### **Readers and Contributors**

The scientists, technologists and concerned officials involved in NARS institutes are requested to send articles, success stories, research highlights and reports on important events with quality photographs for BARC Newsletter. Cooperation in this regard as well as your valuable comments and suggestions for our future endeavour would be highly appreciated.

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