

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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## Seaweed Cultivation in Coastal Areas

Bangladesh has a coastline of 710 km that constitutes about 25,000 sq. km coastal areas extending over 76 Upazilas (Sub-Districts) with a large population. This huge population depends for their livelihood on fishing, fishery exploitation and other associated activities. In Bangladesh, seaweeds or marine macro-algae grow abundantly in restricted areas like the rocky coast of the St. Martin's Island and Innani beach, Cox's Bazar and a few on mangrove trees along the coast and the Sundarbans. The important characteristics of seaweeds are its ability to absorb nutrients from water through their body surface, and can grow on any artificial hard substratum.



*Demonstration plot at Nuniarchara*

Seaweed abounds in vitamins, including beta-carotene, vitamins of the B group, including B<sub>12</sub>, vitamin C, D, E and K. Seaweeds reduce high blood pressure, cholesterol and prevent strokes. Phycocolloids (agar, carrageenan and alginate) extracted from cell walls have high industrial and pharmaceutical values. The coastal people have the opportunity to produce compost and biogas using those seaweeds.

Realizing the importance of seaweed potentialities, Bangladesh Agricultural Research Council (BARC) has undertaken a project named *Capacity Building for Conducting Adaptive Trials on Seaweed Cultivation in Coastal Areas*. The project is being executed by Bangladesh Agricultural Research Institute (BARI). The project was funded by Krishi Gobeshona Foundation (KGF). The Project Coordinator is Dr. Md. Aziz Zilani Chowdhury, Member Director, Crops Division, BARC. Dr. Kabir Uddin Ahmed, Principal Scientific Officer, Planning & Evaluation Division, BARC is working as Principal Investigator. In BARI part Dr. A S M Mahbubur Rahman Khan, Chief Scientific Officer & Head, On-Farm Research Division (OFRD) is

working in this project as a Principal Investigator and Dr. Md. Kamrul Hasan, Principal Scientific Officer, (OFRD) and Mr. Mostak Ahmed (OFRD), Cox's Bazar are the Co-Investigators of the project. Professor Dr. Abdul Aziz, Dept. of Botany, Dhaka University was a consultant for a period of 2016 to 2017.

So far, 7 species of seaweed ie. *Hypnea musciformis* (Red), *Caulerpa racemosa* (Green), *Asparagopsis taxifolia* (Red), *Spatoglossum asperum* (Brown), *Dictyota robusta/ciliolata* (Brown), *Sargassum flavicans.* (Brown), *Ulva linza* (Green) have been identified and grown successfully in the nursery in Teknaf of Cox's Bazar District. One species named *Hypnea musciformis* has been successfully grown in open sea at Nuniarchara, Cox's Bazar which has commercial value in the world market. The seaweed is growing in two methods. One-step seed method, seaweed is grown by cutting of seaweed 5-10 cm long pieces depending on species; other is multi-steps method where seed is produced in laboratory. Both the land-based (nursery) and 'open sea' cultivations were carried out in the project. In open sea culture, the performance of *Hypnea* species in single row situation was better than double row cultivation. In seaweed culture laboratory at Cox's Bazar seaweed seeds has been growing in Multi-steps culture (spore culture) method for off season. About 320 farmers have been trained through

five farmer's training and two field day programs. Five workshops have been conducted for awareness building of stakeholders like BARI, BFRI, DAE, BAU, BSMRAU, DU, CU, MSI, private entrepreneurs, NGOs, Hortex foundation, BIRTAN. At present 100 farmers are growing seaweeds from supplied seaweed seed cutting through this project under direct supervision of the project scientists.



Experiment Field at Cox's Bazar

Seaweed has the horizon opportunities in meeting growing demand for food and nutrition for country's increasing population. Seaweed can also play a pivotal role in preserving sea diversity and fighting global warming and sea pollution. In future, seaweed might be the source of food and nutrition of 3 core people in the coastal area.

## AFACI Coordination Meeting

A coordination meeting of AFACI-Postharvest project was held on 29 November 2017 at BARC. The meeting was



Coordination Meeting on AFACI-Postharvest Project

chaired by Dr. Paresh Chandra Golder, Member-Director, Planning & Evaluation and acting Executive Chairman of BARC and National Contact Person of AFACI projects in Bangladesh. Dr. S. M. Khorshed Alam, Director, Manpower & Training and PI of the AFACI-Postharvest project presented the progress of the project and tentative work plan for 2018. The participants discussed the progress of the project so far achieved. The tentative work plan for 2018 was also discussed in the meeting.



## Appointment of Dr. Md. Kabir Ikramul Haque as new Executive Chairman of BARC

Dr. Md. Kabir Ikramul Haque joined Bangladesh Agricultural Research Council (BARC) on December 28, 2017 as Executive Chairman replacing his predecessor Dr. Bhagya Rani Banik. Earlier he served as the Member Director (Fisheries) of BARC and Director of Project Implementation Unit (NATP Phase-I and Phase-II) in the same organization. He is holding position of chairman of Governing Board of SAARC Agriculture Centre. He also acts as the General Secretary of Fisheries Society of Bangladesh.

Dr. Md. Kabir Ikramul Haque was born in Dhaka in 1961. Dr. Haque obtained B.Sc. in Fisheries (Honours) from Bangladesh Agricultural University, Mymensingh in 1984. Later, he obtained his post graduate degree from the same University in Fisheries Biology and Limnology in 1985. He did his PhD in Hydro Biology (Fisheries) in 1995 from Kharkov State University, Ukraine. He began his career as Scientific Officer at Bangladesh Fisheries Research Institute (BFRI), Mymensingh in 1987. He subsequently joined BARC as Principal Scientific Officer (Fisheries) in 2007 and promoted to the position of Chief Scientific Officer in 2013.

Dr. Md. Kabir Ikramul Haque has working experiences of 31 years in the field of agricultural research management, project management and policy development. He has contributed substantially in developing agriculture policies, Research Priorities in Bangladesh Agriculture (Agricultural Research Vision 2030 and Beyond). Dr. Kabir also contributed to developing many technologies. He is blessed with two sons who are now university students.

He visited USA, Germany, China, Thailand, India and other countries for participation in seminar/workshop on agricultural research. He is an enthusiastic scientist and has keen interest in research.



## NATP-2 BARC Component Activities

The first Implementation Support Mission (ISM) meeting of World Bank was held on during 11-12 December 2017 at BARC. The implementation progress status, challenges

and way out mechanisms of National Agricultural Technology Program Phase II Project (NATP-2) were presented by PIUs (BARC, DAE, DLS and DoF) and PMU in the mission of World Bank IFAD and USAID. The plenary session was chaired by Shah Muhammad Nasim ndc, Project Director, (Additional Secretary)

NATP-2. Dr. Bhagya Rani Banik, Executive Chairman, Bangladesh Agricultural Research Council and Dr. Wais Kabir, Executive Director, Krishi Gobeshona Foundation were presented as guest in the plenary session. Mr. Manivel Sene, Task Team Leader, World Bank, and Md. Saiful Islam, Consultant, IFAD were present in this meeting as a mission member.

NATP-2, BARC invited Concept Note (CN) for CRG sub projects. A total of 537 CRG research proposal were received. Nine Technical committees reviewed 537 of CRG subprojects and selected 206 CN



A Planner Session of 1st Implementation Support Mission (ISM)

for submission of full proposals. Principal Investigator (PI) of successful CN submitted full proposal. Technical division of BARC prepared independent reviewer panel. According to Project Implementation Manual (PIM), each full proposal reviewed by two independent reviewers. After review, Executive Council of BARC approved 190 CRG sub projects those are awarded to the 27 NARIs and non-NARIs institutions against the targeted 100 CRG

Dr. Wais Kabir, Executive Director, Krishi Gobeshona Foundation and Shah Muhammad Nasim ndc, Project Director (Additional Secretary), NATP-2 were present as special guests. Dr. M. Kabir Ikramul Haque, Director, PIU-BARC, NATP-2 delivered the welcome address. All Principal Investigators (PI) and Co-Principal Investigators (Co-PI) attended in this workshop. The objective of the workshop was to share the progress and constraints of the



Principal Investigator of CRG sub projects under NATP-2, BARC Component

sub-projects. The implementation progress of awarded CRG sub-projects is being regularly monitored. PIU-BARC organized a day long workshop on *Implementation Progress of CRG sub projects* on 21 December 2017 at BARC Auditorium. In this workshop, Dr. Bhagya Rani Banik, Executive Chairman, BARC was the chief guest where Dr. Paresh Chandra Golder, Member Director (Planning & Evaluation) BARC chaired the workshop.

sub projects and solved these constraints.

The PBRG research proposals are being selected on research priority basis using calls for proposals and subjected them to rigorous review by the peer reviewers before being selected for funding. Out of targeted 33 PBRG sub-projects, 26 research proposals have been approved by the Executive Council of BARC. After



A view of PhD. Scholarship Awardees



required formalities, the approved PBRG sub-projects will be offered for funding. The remaining 7 PBRG sub-projects will be completed by March 2018.

Doctoral program (PhD) studies under the human capacity development, NATP-2, BARC offered for outstanding medium-level NARS scientists. PIU received 122 applications for In-country PhD and 163 applications for foreign PhD. After rigorous screening and evaluation of applications, PIU awarded 119 nos. of PhD scholarship of which 60 for foreign and 59 for in-country. NATP-2, BARC arranged awarding ceremony of the national and international PhD. scholarship for scientists of NARS and related organization on 27 December 2017 at BARC. In this workshop, Dr. Bhagya Rani Banik, Executive Chairman, BARC was the chief guest where Dr. Paresh Chandra Golder, Member Director (Planning & Evaluation) BARC chaired the workshop. Shah Muhammad Nasim ndc Project Director (Additional Secretary), NATP-2 were present as special guest. Dr. M. Kabir Ikramul Haque, Director, PIU-BARC, NATP-2 delivered the welcome address.

## BARC Executive Council Meeting

The 26th Meeting of the Executive Council of Bangladesh Agricultural Research Council (BARC) was held on 20 November 2017. The meeting was presided over by Dr. Bhagya Rani Banik, Executive Chairman, BARC and Chairman, Executive Council and moderated by Dr. Paresh Chandra Golder, Member-Director, Administration & Finance, BARC and Member-Secretary, Executive Council. In the meeting, research programme of Bangladesh Sugarcrop Research Institute for 2017-18 with budget was presented by Dr. Md. Amzad Hossain, Director General of the institute.



A view of 26th Executive Council Meeting

Detailed discussions with some comments/suggestions were made on the presentation. Thereafter, the research programmes were approved with proposed budget.

Besides, a total of 22 Programme-Based Research Grant (PBRG) sub-projects under NATP-2 were discussed and approved for implementation by the different NARS institutes and public universities.

The 27th Meeting of the Executive Council of Bangladesh Agricultural Research Council (BARC) was held on 24 December 2017. Dr. Bhagya Rani Banik, Executive Chairman and Chairman, Executive Council of BARC presided over the meeting. Dr. Paresh Chandra Golder, Member-Director, Administration & Finance and Member-Secretary, Executive Council moderated the meeting. In the meeting, four new Programme-Based Research Grant (PBRG) sub-projects were presented by Dr. Md. Kabir Ikramul Haque, Director, Project Implementation Unit (PIU)-BARC of NATP-2. Detailed discussions with some comments and suggestions were made on the sub-projects. Thereafter, all the four sub-projects were approved for implementation by the NARS institutes and public universities.

## Training course on Peste des Petits Ruminants

Livestock Division, Bangladesh Agricultural Research Council organized two batches of the training course on *Peste des Petits Ruminants (PPR)*. First batch of the training course was held at Poultry Research and Training Center, Chittagong Veterinary and Animal Sciences University (CVASU) on 5 December 2017 and the second batch was held at BARC on 7 December 2017. In each batch, 30 Veterinary surgeon and Upazilla Livestock Officers from the Department of Livestock Services (DLS) of Chittagong Division attended the training.



A view of inaugural session of the meeting

Prof. Dr. Goutam Buddha Das, Vice Chancellor, CVASU and Dr. Bhagya Rani Banik, Executive Chairman, Bangladesh Agricultural Research Council were present as Chief Guests in the first and second batch.

Inaugural session of the both batches were presided by Dr. Shah Md. Ziqrul Haq Chowdhury, Member Director (Livestock), BARC. Both batches of the training course were successfully completed and the course comprised of the following five subjects: Recognition of PPR, Epidemiology and Geographical Distribution of PPR, Molecular Diagnosis of PPR and Lab visit, Treatment, Prevention and Control of PPR, PPR control model for Bangladesh. The classes were taken by the expert resource persons of BARC, CVASU and DLS.

## Improved Post-harvest Handling Fruits and Vegetables

A two-day training program on *Improved postharvest handling of fruits and vegetables* was held during 27-28 December 2018 at BARC under the AFACI-Postharvest project. Around 40 participants from BARC, BARI, BINA, BCSIR., DAE, BADC, Hortex Foundation, BRAC, ACI Ltd, Lal Teer Seed Ltd, PRAN-RFL Group, and Agricultural universities attended the training program.



*Inaugural Session of the training programme*

The main objective of the training was to reduce the post-harvest losses of horticultural crops mainly fruits and vegetables through application of improved postharvest technologies in different stages of supply chain. Postharvest experts from BARC, BARI, BAU, and relevant organizations were delivered lectures in the training. In the inaugural Session, Dr. S. M. Khorshed Alam, Director (Manpower & Training), BARC and PI of AFACI-Postharvest project welcomed the participants, while Dr. Paresh Chandra Golder, Member-Director (P & E), BARC and Dr. Bhagya Rani Banik, Executive Chairman, BARC delivered their address as the Special and Chief Guest, respectively, while Dr. Md. Aziz Zilani Chowdhury, Member-Director (Crops), BARC chaired the session. In the closing session, Dr. Md. Kabir Ikramul Haque, Executive Chairman, BARC was presented as the chief guest and distributed certificates among the participants.

The closing session was also chaired by Dr. Md. Aziz Zilani Chowdhury, Member-Director, Crops, BARC. The

training was coordinated by Dr. S. M. Khorshed Alam, Director, Manpower & Training and Principal Investigator of the AFACI-Postharvest project. The two-day training program covered important issues like magnitude of improved pre- and postharvest practices for assuring quality and safety, national and international standards, modern and applicable postharvest technologies.



*Closing Session of the training programme*

It is expected that the gained knowledge and skills from the training will greatly contribute to reduce the postharvest losses and improve quality and safety of fresh produces in Bangladesh.

## Transfer and Monitoring Activities: BARI Developed Fruit Saplings and Sweet Potato Vines for Green Economy

Honourable Prime Minister Sheikh Hasina said, green economy should be brought in the mainstream in all national activities to achieve Sustainable Development Goals (SDGs). On this background, to disseminate the BARI generated saplings of fruits and sweet potato vines all over the country through DAE and BADC, 3 meetings were held under the coordination of Technology Transfer and Monitoring Unit (TTMU), BARC. According to the decision of the meeting, BARI developed 3211 fruit saplings and 15,000 sweet potato vines were transferred to 78 Horticulture Centers, DAE and 976 fruit saplings and 6500 sweet potato vines at 23 number of Horticulture Centers of BADC in 2015 and 2016. In 2017, BARI transferred 100 and 150 saplings of BARI Mango-11 to BADC and DAE respectively. BARI transferred 60 saplings of BARI Guava-4 to DAE. Scientists of Fruit Saplings Monitoring and Evaluation Committee organized two monitoring programs on fruit saplings and



sweet potato vines on 07 December 2017 at Kashimpur Horticulture Development Division, BADC and on 28 December 2018 at Sobhanbagh and Rajalakh, Savar Horticulture Centres, DAE.

Dr. Modon Gopal Saha, and Dr. Monoranjan Dhor, CSO HRC, BARI, Gazipur, Dr. Md. Golam Mostafa, Manager (Horticulture) BADC, Dr. Mahbub Alam, Joint Director; Kashimpur, BADC and Dr. Fauzia Yasmin, PSO, TTMU, BARC, Dhaka monitored Horticulture Development Center, BADC, Kashimpur.



*Monitoring Team of Fruit Saplings Distribution*

Total 631 number of fruit saplings of 19 fruits (Mango, Lemon, Malta, Litchi, Sofeda, Dragon fruit, Amloki, Jamrul, Guava, Amra, Asfol, Bilati gab, Kul, Jackfruit, Orange, Kamranga, Strawberry, Tetul and Lotkon) were distributed to 8 centres of Horticulture Development Division, BADC (Kashimpur, Putia, Rajshahi, Jessore, Bogra, Comilla, Kushtia, Muktagasa). It was found that 325 fruit saplings are in good condition at Horticulture Development Division, BADC, Kashimpur.

Total 2025 sweet potato vines were distributed to 7 centers (Kashimpur, Putia, Rajshahi, Jessore, Bogra, Tangail and Kushtia) Horticulture Development Division, BADC. At Kashimpur, the number of sweet potato vines was 1000; among which vines of Sweet Potato BARI-2, BARI-4, BARI-5, BARI-8, BARI-12 and BARI-13 were distributed in number of 200, 200, 200, 200, 100 and 100 respectively. Most of the vines were already distributed to farmers free of cost during 2015-17.

Dr. Monoranjan Dhor, CSO, HRC, BARI, Gazipur and Mr. Md. Khairul Alam, Assistant Director (Horticulture) BADC, Kashimpur; Mr. Md. Zohirul Haq, Deputy Director, Sobhanbag, DAE and Mr. Md. Kazi Nazrul Islam, associate Director, DAE, Rajalakh and Dr. Fauzia

Yasmin, PSO, TTMU, BARC monitored Horticulture Development Center, DAE, Sobhanbag and Rajalakh, Savar, Dhaka.

The monitoring team found the growth of BARI developed 18 saplings of 5 fruits (Mango, Jamrul, Multa, Litchi, Sofeda) are in good condition which are collected on 20.8.2015 by the Horticulture Centre of DAE, Sobhanbag, Savar. But 8 saplings of Mango BARI-10(2) Jamrul BARI-2(2) Malta BARI-1(2) Litchi BARI-4 (2) are found died due to waterlogging problem.

They also found out of 13 fruit saplings (Lemon, Amloki, Litchi, Kamranga, Guava, Amra, Asfal, Bilati Gab, Mango, Jamrul, Kul, Jackfruit, Lotkon) collected by the centre of DAE, Sobhanbag, Savar on 22.08.16, 11 Saplings of Guava BARI-2(2), Amra BARI-1(2), Bilati Gab BARI-1(1), Kul BARI-1 (2) Jackfruit BARI-2(2), Jackfruit BARI-3(2) were died due to waterlogging. The growth of other saplings are in good condition. DAE, Sobhanbag, Savar did not collect any Sweet Potato Vines.

BARI developed saplings of 14 fruits (Mango, Lemon, Amloki, Jamrul, Litchi, Guava, Amra, Asfol, Biloti Gab, Kul and Jackfruit) which were collected by DAE, Rajalakh, Savar on 03.10.2016 were found in good condition. But Amloki, BARI-1, Amra B-1, Kul B-1 saplings died due to water logging problem. DAE, Rajalakh, Savar did not collect any Sweet Potato Vines.

## 2017 Planning Workshop on New AFACI Projects

*A planning workshop on New AFACI Projects (2017) was held in Jeonju, Korea during 23-27 October, 2017.*



*AFACI workshop participants in Jeonju, Korea*

Participants from Bangladesh, Lao PDR, Mongolia, Srilanka, Vietnam, Myanmar, Philippines, South Korea, Thailand, Indonesia attended. Nine new projects on

hydroponic technology, Integrated Pest Management (IPM), livestock health management, organic livestock, rice cropping system, rice-vegetables pest management, urban safe vegetables, and collection and characterization of rice and sweet gourd germplasm were proposed from Bangladesh. Dr. Paresh Chandra Golder, Member-Director (Planning & Evaluation), Bangladesh Agricultural Research Council presented the new proposals. The decision on the new proposals will be taken in the next general body meeting of AFACI in April 2018.

### Training on Integrated Approaches to Food Security in Wageningen University, Netherlands.

Dr. Md. Abdul Awal, Chief Scientific Officer, Planning and Evaluation Division, Bangladesh Agriculture Research Council attended a training on “*Integrated Approaches to Food Security*” that was held during 16-27 October 2017 at the Centre for Development Innovation (CDI), Wageningen University & Research (WUR), the Netherlands under the NICHE-BGD-156 Project funded by NUFFIC.



Participants of the training programme at WUR, the Netherlands.

The training lectures addressed visible and invisible talent hunt, right and wrong decision in agricultural research, knowledge management in agriculture, marketing of agricultural produces, sharing of leadership in agricultural research, networking of research management, quality education and research management, organizational capacity building including organizational management, research coordination and management for achieving food security, negotiation skill, etc. which will help to improve the research coordination, management capacity of National Agricultural Research System (NARS) and Bangladesh Agricultural Research Council (BARC).

### Climate-Smart Agriculture in Asia: Beyond pilot evaluations and models

The Consultative Group for International Agricultural Research Program on Climate Change, Agriculture, and Food Security (CCAFS) was organized a partner’s meeting and workshop during 20-23 November 2017 in Hanoi, Vietnam.



CCAFS. SA Project Leaders and Partners Meeting

Dr. Kabir Uddin Ahmed, Principal Scientific Officer, Planning, and Evaluation Division, Bangladesh Agriculture Research Council attended in the partner’s and project leaders meeting followed by a workshop *Climate-Smart Agriculture in Asia: Beyond pilot evaluations and models*. Dr. Kabir presented a paper addressing the linking CCAFS research with Bangladesh’s Agriculture Development Strategy in the partners and project leaders meeting held on 20th November 2017. In his presentation, Dr. Ahmed described the present status of agriculture in Bangladesh and highlighted the major problems, scopes, and future opportunities for sustainable agriculture in changing climates. He described the Climate Smart Agriculture (SCA) technologies which are practicing in Bangladesh. He also highlighted the opportunities of collaboration programs and projects among the participating countries.

### Fourteenth Session of the Governing Council of the Centre for Alleviation of Poverty through Sustainable Agriculture

The *fourteenth session of the Governing Council of the Centre for Alleviation of Poverty through Sustainable Agriculture (CAPSA)* was held in Bangkok, Thailand, on 13 December 2017. Dr. Md. Mosharraf Uddin Molla,



Principal Scientific Officer (AERS), BARC participated in the session on behalf of the Ministry of Agriculture, Bangladesh. Nine member countries of CAPSA, namely Bangladesh, Cambodia, Fiji, Indonesia, Malaysia, Pakistan, the Philippines, Sri Lanka and Thailand attended the session while Nepal and JIRCAS was present as observers.



A group Photo of CAPSA meeting

The fourteenth session of CAPSA Governing Council marked a critical change in CAPSA's institutional future. The session concluded with a decision by the member countries for transition of CAPSA from a subsidiary body of the Economic and Social Commission for Asia and the Pacific (ESCAP) into an independent intergovernmental organization outside of the UN system by 30 June 2018. Mr. Sahat Pasaribu of the Indonesian Ministry of Agriculture, who chaired the Session, announced the readiness of the Indonesian Government to lead and support the transition of CAPSA to a new organization. Mr. Kaveh Zahedi, Deputy Executive Secretary, ESCAP was also attended in the session.

### Promoting Sustainable Family Farming Agriculture to Achieve SDG 1 and SDG 2

Dr. Kabir Uddin Ahmed, Principle Scientific Officer, Planning, and Evaluation Division, Bangladesh Agriculture Research Council attended South-South Cooperation in South Asian Forum held at Kathmandu, Nepal during 14-16 December 2017. He presented Bangladesh experience on Agroforestry activities for Promoting Sustainable Family Farming Agriculture to achieve SDG-1 and SDG-2 in Plenary Session-2: Promoting Sustainable Forestry/ Agro Forestry. The program was organized by Asian Farmers Association for Sustainable Rural Development

(AFA), with Food and Agriculture Organization the United Nations (FAO), the secretariat of the South Asia Association for Regional Cooperation (SAARC) and the SAARC Agriculture Center (SAC).



Plenary Session-2: Promoting Sustainable Forestry/Agro Forestry

This Forum aims to share and learn from experiences of various organizations (from government, farmers' organizations and intergovernmental organizations) in promoting policies and programs on sustainable agriculture, livestock, fishery and forestry with emphasis on the strong involvement of women and youth. The experiences were shared among the countries of Afghanistan, Bhutan, India, Maldives, Nepal, Pakistan, Indonesia, Philippines, Sri Lanka, Myanmar and Thailand.

### Regional Expert Consultation on Underutilized Crops for Food and Nutritional Security in Asia and the Pacific

The Regional Expert Consultation on Underutilized Crops for Food and Nutritional Security in Asia and the Pacific was held in Bangkok, Thailand during 13 to 15 November, 2017. Dr. Rina Rani Saha, Principal Scientific Officer, Crops Division, BARC participated to Regional Expert Consultation which was organized by the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and Council of Agriculture

Dr. Rina Rani Saha, Principal Scientific Officer, Crops Division, BARC participated to Regional Expert Consultation which was organized by the Asia-Pacific Association of Agricultural Research Institutions (APAARI) and Council of Agriculture



Dr. Rina Rani Shaha presenting her paper

(COA), Taiwan, in collaboration with World Vegetable Center, ICRISAT, Crops for the Future, ICARDA and Bioversity International. The objectives of the Regional Expert Consultation were i) to create much needed awareness on the role and value of underutilized bio-resources that have potential for diversification of food basket to ensure better food and nutritional security in Asia Pacific ii) to share experiences and learn lessons to accelerate the use of underutilized plants as crops for the future iii) to assess research and development status on priority crops and policies that are needed to promote the use of these 'Crops for Future' in Asia and the Pacific region. At total of 47 participants including senior officials from organizers, participating NARS, CG Centres, experts in the fields of underutilized crops, representatives of research institutions, donors, private sector, NGOs and farmers attended. Dr. Rina Rani Saha presented paper on Status of Underutilized Crops for Food and Nutrition in Bangladesh. She also participated in the working group discussion regarding Utilization of Underutilized Crops: Value addition, Marketing and Export.

### The UNESCO –NDL International Workshop on Knowledge Engineering for Digital Library Design

Dr. Susmita Das, Senior Documentation Officer, Bangladesh Agricultural Research Council (BARC) attended the *International Workshop on Knowledge Engineering for Digital Library Design* held on 25-27 October, 2017 organized by UNESCO and National Digital Library of India. Dr. Susmita spoke on behalf of South Asia Open Access activities.



Dr. Susmita Das presenting her paper on South Asia Open Access activities

This workshop was intended to deliberate on the state-of-the-art technology practice as internationally accepted and available in the domain of digital libraries and established connections among digital libraries professionals. The Workshop led to establishment of a forum of professions of the international digital library community for regular and sustained interaction towards development of the profession.

The participants of the workshop comprised of professional and research of the concerned technical and library science domains, senior librarians and digital library professionals of leading libraries.

Dr. Susmita also attended another International Conference of Asian Libraries of ICAL -2017 on Expanding Digital Footprints: Role of Libraries & Information Centres held on 28 October 2017 organized by Asian Library Association and Jamia Millia Islamia University, New Delhi, India and participated a panel discussion as a panelist & spoke about Libraries should outdo to survive beyond 2050.



Dr. Susmita Das receiving certificate from Prof. Dr. Jagtar Singh and Dr. Anup Das

### Asian Regional Meeting of Open in Action and Asian Open Access Meeting

Dr. Susmita Das, Senior Documentation Officer, BARC & Joint Convener Open Access Bangladesh has attended Asian Regional Meeting 2017 on Open in Action: Bridging the Information Divide as one of the speakers organized by Nepal Open Access. She presented on *Open Data and discussed on status, challenges and future Strategy of Open Data with respect to Research Data sharing Movement*.

Dr. Das also attended and spoke on Asian Open Access Meeting hosted by Confederation of Data Access Repositories (COAR) which will be held on 4-6 December at Hotel Mirage Lords Inn, Battisputali,





Santosh Gastanla, Dr. Susmita Das, Dr. Sudhamshu Dahal and Kshitiz Khanal were the Panelists of Open Data Session

Kathmandu. She spoke about *Open Access & Open Data status in Bangladesh at the event. Open access, and more broadly open science, is a global trend that promises to advance discovery, accelerate innovation and improve education.* In order to support open science, governments, universities and other stakeholders must adopt policies, develop services and change their practices around sharing research outputs. The Asian region, in all its diversity, has a strong and expanding position in the international scientific community. This is also reflected in the realm of open science as countries and institutions in Asia implement policies and services to support greater openness.

Asia OA is a special forum hosted by COAR in which members of the Asian open access community share information, meet each other and build relationships. The meeting provided participants with an opportunity to learn about global trends, share information across Asian countries, and help with local strategies for increasing the adoption of OA in Nepal. The meeting provides an opportunity to learn about global trends, share information across Asian countries, and help with local strategies for increasing the adoption of OA in Nepal.

## Roof Gardening: An Innovation Idea

According to the decision of innovation work-plan meeting at Computer and GIS Unit, Dr. Fauzia Yasmin, PSO (TTMU) arranged two visits with the DAE personnel of DAE members of Innovation Committee Team, Mr. Md. Hamidur Rahman, Director, Computer and GIS Unit, Mr. Md. Rafique Mostafa Kamal, Director, AIC, Dr. Kabir Uddin Ahmed, PSO P and E, Dr. Fauzia Yasmin, PSO

TTMU visited two roof gardens; one of Mr. Md. Siddique Abedin, 112, East Rajabazar and another of Mr. Md. Tofazzal Hossain, 31, Indira Road at Farmgate Block, Dhaka arranged by DAE. on 02.1.17.

The visited roof garden is mainly fruits garden where about 20 species of fruits plants are found. Some flowers and very few of vegetable plants are found. Actually they started roof gardening almost 15 years ago. The personnel of DAE, linked with Mr. Md. Siddique Abedin for sharing problems and maintaining Register Book.

The specialty of this roof gardening is, the involvement of rearing of Turkey. Both roof gardening and Turkey rearing are profitable.



At Siddiq Abedin, East Rajabazar, Farmgate Block, Dhaka

The roof garden mainly fruits garden where about 10 species of fruits' plants few of flowers and very few of vegetable plants are found. They started roof gardening few years ago. They were inspired by seeing others' roof gardening. The personnel of DAE, FAO and Green Saver linked with Mr. Md. Tofazzol Hossain, Dhaka.

## Acknowledgment

This Newsletter is published with the information and illustrations contributed by different division/units/centres of BARC and other concerns. The contributors have also provided valuable advice and comments to make the publication informative and attractive. Their supports in bringing out the publication are warmly acknowledged with the aspiration of continued co-operation for the forthcoming issues. Comments and suggestions for our future endeavour would be highly appreciated.

## 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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