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BJRI signed MoU

Dr. Md. Monjurul Alam, DG, BJRI chaired the MoU signing ceremony

Bangladesh Jute Research Institute (BJRI) signed a Memorandum of Understanding (MoU) with Waste Agro Ltd. on 15th June, 2017. Dr. Md. Monjurul Alam, Director General (DG) and Mr. Md. Khorshed Alam, Chairman, Waste Agro Ltd. were present on the occasion. With this agreement BJRI and Waste Agro Ltd. will help each other through technologies for developing diversified products by blending Banana tree' fibre and jute fibre. On behalf of BJRI Dr. Md. Abul Kalam Azad, Director (Jute-Tex.) signed the MoU where with Mr. Md. Mamuduzzaman, Managing Director, Waste Agro Ltd. was present.

Dr. Md. Monjurul Alam, DG, BJRI chaired signing occation. Dr. Md. Asaduzzaman, Director (Technology), Dr. Rahima Khatun, Director (Agriculture), Dr. Md. Abul Kalam Azad, Director (Jute-Textile), Md. Nazrul Islam, CSO (PTC) and Dr. S. M. Mahbub Ali, Director (A&F) were also present on the signing ceremony. The whole event is cordinated by Dr. S.M. Kamruzzaman, SSO, BJRI.

Contents

BJRI Signed APA

Dr. Md. Monjurul Alam, DG, BJRI with all the signing personnel

Bangladesh Jute Research Institute (BJRI) signed Annual Performance Agreement (APA) with in its different Directorates, Divisions, Regional and sub-stations on 15th June, 2017 at the Board Room of BJRI. To run BJRI Research activities smoothly APA is mandatory as per Government order. This agreement will obviously be expedited the regular research activities of BJRI finally help to obtain the target. The agreement will ensure the accountability and will help to achieve the target

Dr. Md. Monjurul Alam, DG, BJRI chaired the APA meeting. He signed APA with Senior Secretary, Ministry of Agriculture (MoA) previously at Bangladesh Secretariat. A part of that Agreement DG, BJRI signed APA with Dr. Md. Asaduzzaman, Director (Technology); Dr. Rahima Khatun, Director (Agriculture); Dr. Md. Abul Kalam Azad, Director (Jute-Textile); Md. Nazrul Islam, CSO, PTCD and Dr. S. M. Mahbub Ali, Director (A&F), respectively. Then Dr. Alam, DG signed APA with Dr. Md. Rafiqul Islam, PSO, Jute Agriculture Exparimental Station (JAES), Manikgonj; Dr. Md. Abul Fazal Mollah, PSO, Rangpur; Dr. Md. Lutfor Rahman, PSO, Kishoregonj; Dr. Md. Mojibur Rahman, SSO, Faridpur; Dr. Md. Mahmud Al Hossain, PSO, Potuakhali; Md. Monir Hussain, SSO, Comilla; Md. Sohariar Parvez, SO, Tarabo, Narayongonj; Md. Sakhaoat Hossain, SO, Monirampur, Jessore and Md. Tanvir Rahman, SO, Nashipur, Dinajpur.

In the Signing Ceremony of APA, Dr. Md. Monjurul Alam urged all the signing Officers to accomplish the tasks as cited in the APA and Technical Research Programme. He requested all the present personnel to uphold BJRI at the top of NARS. Dr. Alam said that it may be mentioned as a routine work for each of the Government institute to sign the APA. But we should to harness the potential benefit from the agreement. All the Officers accepted the challenge gladly and express their determination . Dr. S. M. Mahbub Ali, Director (A&F) and Md. Jahangir Alam, Deputy Director (Admin.) coordinated the APA signing ceremony.

USE JUTE
SAVE ENVIRONMENT
SAVE MANKIND

Internal Review of ARC

Dr. Md. Monjurul Alam, DG, BJRI chaired the ARC

The Internal Review Meeting of ARC held on 12-15 March 2017. Dr. Md. Monjurul Alam, DG, BJRI presided over the Review Meeting as Chief Guest. Dr. Md. Asaduzzaman, Director (Technology), Dr. Mrs. Rahima Khatun, Director (Agriculture), Dr. Md. Abul Kalam Azad, Director (Jute-Textile), Dr. S, M, Mahbub Ali, Director (A&F) were present in the meeting.

Agriculture Research on jute and allied crop leads with the objectives of increased productivity, low cost jute production technologies and development of biotic and abiotic stress tolerance high yielding varieties with quality fibre and seeds.

With this view, the scientists of agriculture research are directed to accomplish the multidisciplinary works such as (i) characterization and evaluation of the germplasm on morpho-agronomic and biotechnological approaches, (ii) development of disease and insects free high yielding variety with quality seed and fiber, (iii) appropriate agronomic practices with fertilizer management, (iv) improvement of fibre quality, and (v) sustainable jute based cropping systems in different agro-ecological zones of Bangladesh. The scientists have directly been engaged in their respective research areas with sincere efforts to accomplish the intended goals. The achievements of the research activities of Agriculture wing for the year 2016-2017 are briefly highlighted here.

Director (Agriculture), BJRI expressed his heartiest gratitude to all the scientists of Agriculture Research and the sub-committee members for the compilation and taking necessary steps to complete the task.

36th Internal Review meeting on Technological Research held

Dr. Md. Monjurul Alam, DG, BJRI delivared speech a chief guest

Internal Review of Technological Research of Bangladesh Jute Research Institute (BJRI) held at Board Room of Director General, BJRI on 25-27th April 2017.

Dr. Md Monjurul Alam, DG, BJRI Chaired the Internal Review Workshop of TRB, Where Dr. Md. Asaduzzaman, Director (Tech) was present as the Member Secretary. Dr. Mrs Rahima Khatun, Director (Ag.); Dr. A.K Azad , Director (Jute-Textile); Dr. S.M. Mahbub Ali, Director (A&F); were present on the occasion.

Dr. Md. Kamal Uddin. DG (Rtd.), M.A. Abdus Sobahan Sheikh. DG (Rtd.), Dr. Hosneara Begum, Professor, BuTex, Dr. Md. Mahbubul Islam, Professor, Daffodil International University and senior scientists, of Technology wing, were present as special guest and specialists on industrial research innovations were present at the 36th TRB Internal Review Meeting. Besides, all the scientists of TRB including CSOs were present and involved with the review meeting. In the inaugural session Dr. Md. Monjurul Alam praised TRB scientists, Specially Dr. Md. Asaduzzaman to have the Internal Review Meeting in time.

Dr. Md. Shahidullah, CSO delivered the welcome address and Dr. Md. Asaduzzaman, Director (Tech) described the total programme of 3 days' activities in the inaugural session.

The Internal Review programme was splited into two sessions. Where a concluding session had occurred at the 3rd day of the Internal Review meeting.

At the end of the Internal Review meeting Dr. Md. Monjurul Alam, DG, BJRI. requested scientists to held TRC very soon on the contests of the Review Meeting with Technical Research Programme (TRP); Technical Research Report (TRR) and Technical Research Highlight (TRH). He also expressed his satisfaction with the TRB scientist as they arranged the programme timely. He also committed to provide any type of helps in the research arena. He asked scientists to have segmentation as discipline on technical research of TRB.

Treatment Techniques of Natural Fibres

Dr. Md. Masroor Anwer

Principal Scientific Officer, Bangladesh Jute Research Institute, Manik Mia Avenue, Dhaka-1207

Jute fiber is a bast fiber obtained from the bark of jute plant containing three main categories of chemical compounds namely cellulose (58~63%), hemicellulose (20~24%) and lignin (12~15%). Jute fiber is composed of small units of cellulose surrounded and cemented together by lignin and hemi-cellulose. The low cellulose content, coarseness, stiffness, low extensibility, low grip performance and some other disadvantages seriously restrict the raw jute fiber for diversified uses. So physical, thermal, optical, chemical, plasma etc. processing techniques are needed to improve the quality of natural fibres.

(i) Corona treatment: Corona treatment is a surface modification technique that uses a low temperature corona discharge plasma to impart changes in the properties of a surface. Corona treaters increase the surface energy of fibres to improve wettability and adhesion of inks, coatings and adhesives. Corona discharge equipment consists of a high-frequency power generator, a high-voltage transformer, a stationary electrode and a treater ground roll. Standard utility electrical power is converted into higher frequency power which is then supplied to the treater station. The treater station applies this power through ceramic or metal electrodes over an air gap onto the material's surface. The corona plasma is generated by the application of high voltage to sharp electrode tips which forms plasma at the ends of the sharp tips. Materials such as fibres, plastics, cloth, or paper may be passed through the corona plasma curtain in order to change the surface energy of the material.

(ii) Ultraviolet radiation treatment: The use of ultraviolet (UV) radiation to modify the surface properties of fibres. UV light cannot penetrate beyond the surface fibres and leaving the bulk fibres unaffected. When the fibres surface is exposed to UV radiation to modify the fabric surface, UV radiation produce large numbers of highly reactive free radicals. In the presence of air and free radicals, oxidation on surface of the fibres occurs which alters their physical, chemical and mechanical properties. Surface of the fibres form a sacrificial layer beyond which a brief exposure to high-intensity UV is unable to penetrate. This protects the bulk fibres responsible for fabric strength. UV treatment can allow more rapid fixation of dyes, dye fixation under lower temperature, increased wettability of hydrophobic fibres to improve depth of shade in printing and is to improve quality and production efficiency of fabrics dyed with heavy shades. UV radiation is to reduce the cost of producing patterned fabrics.

(iii) Bleaching treatment: Bleach is a chemical that removes colors or whitens from fibres. The procedure of the treatment bleach consists of immersing the yarn or fibre in a solution of 10 ml/L, 35% (V/V) Hydrogen peroxide (H_2O_2); 6 g/L Sodium Silicate (Na_2SiO_3), 1 g/L Sodium Carbonate (Na_2Co_3) and 0.5ml/L wetting agent (Lissapol) at temperature of 80-85 °C in one and half hours time. Then at 60 °C temperature, hot washing should be done for 20 min. and later cold washing should be done several times.

(iv) Mercerization treatment: Mercerization is a process applied to fibre, yarn or fabrics, which gives to the sample a silk-like luster, greater strength than ordinary sample, a greater affinity for dyes and caused the fibre, yarn or fabrics to swell. The treatment consists of immersing the fibre, yarn or fabrics in a solution of 17.5% (V/V) Caustic Soda (NaOH) at material liquor ratio (MLR) 1:20 at room temperature and the duration of time is 10 min. Then the chemically treated samples should be hot washed and then cold washed several times. After this processes the mercerized samples will be neutralised by 10 ml/L Sulphuric Acid (H_2SO_4) and then cold washed should be done several times. Chemical treatments are expensive and are not ecological process. Chemicals which are used for treatments of jute are highly toxic and corrosive. Huge amount of water needed for such kinds of chemical treatments.

(v) Atmospheric plasma treatment: Plasmas are ionized gases. An ionized gas consists mainly of positively charged molecules or atoms and negatively charged electrons. A gaseous complex that may be composed of electrons, ions of both polarity, gas atoms and molecules in the ground or any higher state

of any form of excitation as well as of light quanta is referred to as plasma. Plasma has properties quite unlike those of solids, liquids or gases and is considered to be a distinct state of matter.

Atmospheric-pressure plasma treatment is very similar to corona treatment but there are a few differences between them. Both treatments may use one or more high voltage electrodes which charge the surrounding blown gas molecules and ionizes them. However in atmospheric plasma system, the overall plasma density is much greater which enhances the rate and degree to which the ionized molecules are incorporated onto a material's surface. An increased rate of ion bombardment occurs which may result in stronger material bonding traits depending on the gas molecules used in the process. Atmospheric plasma treatment technology also eliminates a possibility of treatment on a material's non-treated side; also known as backside treatment.

(vi) Chemical plasma treatment: Chemical plasma fields are generated from electrically charged air. But, instead of air, chemical plasma relies on a mixture of other gases depositing various chemical groups onto the treated surface.

(vii) Low temperature plasma treatment under reduced pressure: Now a days interest has increased in the use of low temperature plasma (LTP) technique which is a promising approach for surface modifications of human made as well as natural fibres. As a type of environmentally friendly physical surface modification technique, LTP treatment is one of the methods used to modify surfaces in a dry process. Advantages of this technique, compared to others, are: (a) Modification can be confined to the surface layer without modifying the bulk properties of the polymer. (b) the process is simpler- fewer steps and less time are required, involving no chemicals (c) excited species in a plasma can modify the surfaces of all polymers, irrespective of their structures and chemical reactivity (d) by the selection of the feed gas to plasma reactor, it is possible to achieve the desired type of chemical modification for the polymer surface (e) the use of plasma can avoid the problems encountered in wet chemical treatments such as residual chemical in the effluent and swelling of the substrate and (f) modification is fairly uniform over the whole surface.

BJRI Observed The International Women day 2017

The International Women day 2017 Observed by Bangladesh Jute Research Institute (BJRI) on the day of 8th March 2017. Dr. Md. Monjurul Alam, DG, BJRI was present as Chief Guest on the occasion at the Board Room, BJRI. Dr. Rahima Khatun, chaired the Discussion Meeting.

The Directors, CSOs and all the women employees of BJRI were present the occasion and took part on the Discussion Dr. Md. Monjurul Alam urged all the women employees to work without any hesitation and request come forward without fear. He uttered "Be Bold for Change". Women are the true asset of the society and allmost 50% people of Bangladesh are female. So for a total development women should come forward for the wellbeing of BJRI.

It may be mentioned that this is the First time BJRI celebrated the Women International day with due respect and discussion meeting as narrated.

Annual Sports at BJRI

Bangladesh Jute Research Institute arranged the Annual Sports at its premises on 8th February 2017. Dr. Md. Monjurul Alam, Director General (DG), BJRI inaugarated the Annual Sports as Chief Guest. Dr. Rahima Khatun, Director (Agriculture), Dr. Md. Asaduzzaman, Director (Technology), Dr. Md. Abul Kalam Azad, Director (Jute-Textile), Dr. S, M, Mahbub Ali, Director (A&F), all the CSOs, Officers and staffs were present on the day. Dr. Md. Monjurul Alam, DG delivered a speech on the opening and concluding ceremony of the sports and thanked Karmochary Kollayan Somitee to arrange the programme and successfully copmplete the event. He also distributed prizes among the winners in a congenial atmosphere.

Dr. Md. Monjurul Alam, DG, BJRI delivered speech on the sports day

Training News

TOT for Dissemination of Industrial Technologies on JUTE

A Training on TOT for Dissemination of Industrial Technologies on JUTE was hold at Training room of PTC Division, Bangladesh Jute Research Institute (BJRI) on 16th to 18th April 2017. Dr. Md. Monjurul Alam, DG, BJRI presided over the Training Programme as Chief Guest. Md. Nazrul Islam, CSO, PTC and Project Director, "Dissemination and Development of Agricultural Technologies of Jute and allied fibre". Dr. A. T. M. Morshed Alam, PSO, PTC was the Course Director and Md. Shafiqul Hasan, SSO, PTC was the Course Co-ordinator.

Besides, Dr. Md. Asaduzzaman, Director (Technology), Dr. Mrs. Rahima Khatun, Director (Agriculture), Dr. Md. Abul Kalam Azad, Director (Jute-Textile), Dr. S, M, Mahbub Ali, Director (A&F) and Deputy Project Director were present on the occasion.

Thirty participants from different District and Upazilla were attended in the training programme.

Financial Management

A Training on Financial Management was hold at PTC Division, Bangladesh Jute Research Institute on 30th May to 01st June 2017. Dr. Md. Monjurul Alam, DG, BJRI presided over the Training Programme as Chief Guest. Md. Nazrul Islam, CSO, PTC and Project Director, "Dissemination and Development of Agricultural Technologies of Jute and allied fibre". Dr. A. T. M. Morshed Alam, PSO, PTC Division was the Course Director and Md. Shafiqul Hasan was the Course Co-ordinator.

Besides, Dr. Md. Asaduzzaman, Director (Technology), Dr. Mrs. Rahima Khatun, Director (Agriculture), Dr. Md. Abul Kalam Azad, Director (Jute-Textile), Dr. S, M, Mahbub Ali, Director (A&F) and Deputy Project Director were present on the occasion.

Thirty Participants from different District and Upazilla were attended in the training programme.

Procurement of Goods, Works and Services

A Training on Procurement of Goods, Works and Services was held at training room of PTC Division Bangladesh Jute Research Institute, on 13th to 15th June 2017. Dr. Md. Monjurul Alam, DG, BjRI presided over the Training Programme as Chief Guest. Md. Nazrul Islam, CSO, PTC and Project Director, "Dissemination and Development of Agricultural Technologies of Jute and allied fibre" . Dr. A. T. M. Morshed Alam, PSO, PTC Division was the Course Director and Md. Shafiqul Hasan, SSO, PTC Division was the Course Co-ordinator.

Besides, Dr. Md. Asaduzzaman, Director (Technology), Dr. Mrs. Rahima Khatun, Director (Agriculture), Dr. Md. Abul Kalam Azad, Director (Jute-Textile), Dr. S, M, Mahbub Ali, Director (A&F) and Deputy Project Director were present on the occasion.

Thirty Participants from different District and institute were attended in the training programme.

Jute Market Report (TK.):

Raw Jute	April 2017		May 2017		June 2017	
	Per 100 kg	Per 40 kg	Per 100 kg	Per 40 kg	Per 100 kg	Per 40 kg
White Top	6625	2650	6625	2650	6625	2650
Tossa Top	6875	2750	6875	2750	6875	2750
Mesta Top	6625	2650	6625	2650	6625	2650
White Mid	5375	2150	5375	2150	5375	2150
Tossa Mid	5500	2200	5500	2200	5500	2200
Mesta Mid	5375	2150	5375	2150	5375	2150
White B. Bottom	5125	2050	5125	2050	5125	2050
Tossa B. Bottom	5250	2100	5250	2100	5250	2100
Mesta B. Bottom	5125	2050	5125	2050	5125	2050
White C. Bottom	4500	1800	4500	1800	4500	1800
Tossa C. Bottom	4625	1850	4625	1850	4625	1850
Mesta C. Bottom	4500	1800	4500	1800	4500	1800
White X. Bottom	4150	1650	4125	1650	4125	1650
Tossa X. Bottom	4250	1700	4250	1700	4250	1700
Mesta X. Bottom	4125	1650	4125	1650	4125	1650

Source: BJA (Bangladesh Jute Association, Narayangonj), Per 100 kg =1 Quintal, Per Md. = 37.324 kg

Subscription rate per year

Bangladesh	Tk.	100.00
Asia	$	15.00
Europe	$	18.00
Africa	$	18.00
America	$	20.00
Australia	$	20.00

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