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EDITORIAL



I am happy to place on record that CSR&TI, Berhampore is rendering R&D, technical, technological, innovation, extension, human resource development and service support to the sericulture farmers / stakeholders of Eastern and NE regions covering 13 states namely, West Bengal, Bihar, Jharkhand, Orissa, Chhattisgarh, Sikkim, Assam, Manipur, Mizoram, Meghalaya, Nagaland, Arunachal Pradesh and Tripura. This institute is playing major role in all round development of

stakeholders/ seri-farmers in this region. Due to high population pressure, shrinkage of land holding, high nutrient mining under mulberry field is very common for its perennial nature, which requires balanced nutrients throughout the year for quality leaf production. To solve the problem, soil testing service is being provided to the seri-farmers at free of cost. Since long, with the help of the CSB' extension machineries and the DoS / DoT (Seri), the improved technologies developed by the CSB R&D Institutes are disseminating in the field. Prime importance has been given to the monitoring system and quality management of the breed/ hybrids developed. Three seri resource centres have been established in attached three districts, viz. Murshidabad, Malda and Nadia for generation of resource potentiality personnel, which will be helpful to meet up the scarcity of skilled manpower of the industry. Our efforts continued to meet the silk production target set for 2020 & 2030 and ensure the supply 100% chawki worms to the bi-voltine farmers to meet the silk production target set for 2020 & 2030, along with 3 RSRs and 14 RECs, 15 Bivoltine clusters and 16 Seri model villages are working continuously and accelerated the production of bivoltine silk in this regions. It is to mention that the sericulture progress in West Bengal covering an area of around 14468 hectares producing 2029 mt of raw silk, of which, Bivoltine production share is 14 mt with 350 % achievement. For successful harvest of cocoon crop, stress has been laid to develop new hardy Bivoltine hybrids/ Multi x Bi hybrids with higher shell% and neatness and new *Id* breeds by which Bi x Multi dfls can be used without acid treatment. On mulberry variety development / improvement for water stress condition, mulberry variety authorization programme is also going on. Digital Data Bank on Sericulture farmers have been set up and input is being provided continuously which is very much helpful to know the status of stakeholders.



एक कदम स्वच्छता की ओर

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Forewarning and management of mulberry diseases in Murshidabad

Diseases cause 10-15% leaf loss quantitatively in mulberry and pose a serious constraint for the production of quality leaves. Incidence and severity of diseases is affected by climatic factors to a great extent. Over a period of five years (April, 2012 - March, 2017), data on disease incidence and meteorological parameters were collected from Murshidabad district by CSR&TI, Berhampore and was analysed. Severe infestation of Bacterial leaf spot (BLS), *Pseudocercospora* leaf spot (PLS), *Myrothecium* leaf spot (MLS), Powdery mildew (PMLD) and leaf rust (LR) were found in mulberry fields of Murshidabad district. The prediction equations developed by regression analysis based on weather parameters viz., maximum temperature (°C), minimum temperature (°C), maximum relative humidity (%), minimum relative humidity (%) and rainfall (mm) are given below.

$$\text{BLS: } Y = -2.70 - 0.03X_1 + 0.08X_2 + 0.20X_3 - 0.13X_4 + 0.02X_5$$

$$\text{PLS: } Y = 8.69 - 0.12X_1 + 0.11X_2 + 0.24X_3 - 0.23X_4 + 0.02X_5$$

$$\text{PMLD: } Y = 10.88 - 0.05X_1 + 0.03X_2 - 0.02X_3 - 0.27X_4 - 0.08X_5$$

$$\text{LR: } Y = 1.895 + 0.06X_1 - 0.04X_2 - 0.16X_3 + 0.10X_4 - 0.01X_5$$

$$\text{MLS: } Y = 6.64 + 0.05X_1 + 0.06X_2 - 0.01X_3 + 0.14X_4 - 0.03X_5$$

(where X1 = max. Temp.; X2 = min. temp.; X3 = max. RH; X4 = min. RH; X5 = rainfall)

These equations may be utilized for the forewarning of mulberry diseases well in advance and for their effective management. When the value of "Y" in any of above equations stands 5 or above, it demands immediate spraying. Application of 0.1% Carbendazim, is recommended for the management of Powdery mildew, *Myrothecium* leaf spot and *Pseudocercospora* leaf spot while Leaf rust is managed by the application of 0.2% Mancozeb. For the management of bacterial leaf spot application of 0.01% of Plantomycin is recommended.

Tr-23: a new promising mulberry variety for Hills and Foot-hills of West Bengal

Soil acidity is one of the major problems in Eastern and North Eastern region that hampers the growth and development of mulberry plant, which ultimately result in poor quantity and quality of the leaf. The soils of West Bengal were grouped into seven classes and northern hilly region consist of brown forest soil (Darjeeling) and *Teesta-Tarai* alluvial soil (Jalpaiguri, Coochbehar and Dinajpur), which are strong to moderately acidic in reaction (pH 4.2-5.8). The amelioration of acidic soil through application of dolomite or lime needs a recurring expenditure. Hence, development of mulberry variety for this zone provides a long term and cost effective strategy for poor sericulture farmers.

With this objective, the scientists working under CSR&TI Berhampore, evaluated some promising mulberry genotypes in the direction of developing acidity tolerant mulberry genotypes. Among the test genotypes, Tr-23 recorded better growth parameters like total shoot length (891 cm), Leaf moisture content (75.10 %), 68% cutting survival, and moderately resistant to biotic agent's viz., leaf webber and root mealy bug. It also exhibited high net photosynthetic rate (13.25 $\mu\text{mol m}^{-2} \text{s}^{-1}$), nitrate reductase activity (12.59 $\mu\text{mol NO}_2 \text{ h}^{-1} \text{ g}^{-1}$ fresh wt.), total chlorophyll content (J.82 mg g⁻¹ fr. wt.), soluble sugar (31.50 mg g⁻¹ fr. wt.) and soluble protein content (25.44 mg g⁻¹ fruit wt.). Silkworm (SK-hybrid) rearing during spring and autumn 2016 revealed that Tr-23 fed silkworm recorded maximum cocoon yield by number & yield (~ 10% more) over zonal check S-146 with better single cocoon weight and Shell weight.

Tr-23 recorded highest leaf yield of 11-12 tons at Hills and 24-25 t/ha/yr at Foot-hills as compared to ruling variety, BC₂59 (5.7 tons at Hills and 8.1 tons at foot-hills) and S-146 (8.62 tons at hills). It was also found superior in All India Co-ordinated Experimental Trials for Mulberry (AICEM)-Phase-III trial. It is a triploid (2n=3x=42) variety evolved from hybridization between a tetraploid T-20 with diploid parent S-162. It has erect bush, straight brown colour branches. The leaves are medium size, thick, entire, glabrous, green coloured, dentate margin with acute apex. This new promising triploid variety with improved leaf productivity will enhance the profitability of sericulture farmers of hills of W.B.

राजभाषा संगोष्ठी : “शहतूती रेशम का विकास – नयी तकनीकियों के साथ”

कार्यशाला की रिपोर्ट

के.रे.उ.अ.व.प्र.सं., बहरमपुर (प.बं.) में दिनांक 20.01.2017 को “शहतूती रेशम का विकास – नयी तकनीकियों के साथ” विषयक एक दिवसीय राजभाषा संगोष्ठी का आयोजन किया गया। संगोष्ठी का प्रमुख उद्देश्य रेशम उद्योग से जुड़े वैज्ञानिकों, कार्मिकों, प्रगतिशील कृषकों तथा रेशम पणधारियों समेत शहतूती रेशम पर पठन-पाठन तथा तदविषयक शोध कार्य आदि में रत विभिन्न विश्वविद्यालयों, कॉलेजों के प्राचार्यों एवं शोधार्थियों को मूल रूप से हिंदी में लेखन हेतु प्रेरित एवं प्रोत्साहित करने के साथ ही संवैधानिक अपेक्षाओं की पूर्ति एवं अनुपालन था ताकि संस्थान के अधिकारियों/कर्मचारियों में राजभाषा हिन्दी के प्रति प्रेरणा व प्रोत्साहन की भावना संचारित होने के साथ ही साथ राजभाषा प्रावधानों के सम्यक कार्यान्वयन व अनुपालन में और भी गति आ सके। संगोष्ठी की अध्यक्षता संस्थान की निदेशक महोदया डॉ. कणिका त्रिवेदी द्वारा किया गया। संगोष्ठी के दौरान डॉ. एम. वी. सैमसन, निदेशक [सेवानिवृत्त], केरेबो, श्री राजेश बघेल, संयुक्त निदेशक, रेशम निदेशालय, बिलासपुर तथा डॉ. एम. डी. माजि, वैज्ञानिक-सी [सेवानिवृत्त], केरेबो क्रमशः सामान्य रेशम उत्पादन सत्र, रेशम संवर्धन सत्र एवं शहतूत संवर्धन सत्र के अध्यक्ष के तौर पर इस संगोष्ठी में विराजमान थे।

संगोष्ठी का शुभारंभ संस्थान के सहायक निदेशक [रा.भा.], श्री आर. बी. चौधरी द्वारा इस अवसर पर उपस्थित सभी अधिकारियों, वैज्ञानिकों व अधिकारियों/पदधारियों का हार्दिक अभिनन्दन तथा संस्थान की निदेशक महोदया, डॉ. कणिका त्रिवेदी द्वारा मंचासीन सभी अधिकारियों को पुष्पगुच्छ और कजली पर्ण से स्वागत व विभिन्न सत्रों के सत्राध्यक्ष तथा संस्थान की निदेशक महोदया और उपस्थित अतिथिगण व प्रगतिशील कृषकों आदि के कर कमलों द्वारा शहतूत पौध में जल अर्पण कर किया गया। इसके अतिरिक्त, इस अवसर पर 28 शोध-सारांशों से परिपूर्ण “शहतूती रेशम का विकास - नयी तकनीकियों के साथ” विषयक एक “प्रोसिडिंग” का विमोचन भी संस्थान की डॉ. कणिका त्रिवेदी, निदेशक व अध्यक्ष, नराकास, बहरमपुर, डॉ. एम. वी. सैमसन, निदेशक [सेवानिवृत्त], केरेबो, श्री राजेश बघेल, संयुक्त निदेशक, रेशम निदेशालय, बिलासपुर तथा डॉ. एम. डी. माजि, वैज्ञानिक-सी [सेवानिवृत्त], केरेबो के कर-कमलों द्वारा किया गया।

तत्पश्चात, डॉ. एम. वी. सैमसन, निदेशक [सेवानिवृत्त], केरेबो की अध्यक्षता में प्रथम सत्र में कुल 04 शोध-सारांश [03 मौखिक एवं 01 पोस्टर] पावर प्वाइंट एवं पोस्टर प्रस्तुती के जरिये प्रस्तुत किए गए। दूसरे सत्र का प्रारंभ डॉ. एम. डी. माजि, वैज्ञानिक-सी [सेवानिवृत्त], केरेबो की अध्यक्षता में शुरू की गई जिसके अंतर्गत कुल 13 शोध-सारांश [05 मौखिक एवं 08 पोस्टर] प्रस्तुत किए गए।

श्री राजेश बघेल, संयुक्त निदेशक, रेशम निदेशालय, बिलासपुर की अध्यक्षता में तृतीय सत्र आरंभ हुआ जिसके अंतर्गत कुल 06 शोध-सारांश [05 मौखिक एवं 01 पोस्टर] प्रस्तुत किए गए।

संगोष्ठी में शोध-सारांश के मूल्यांकन हेतु नामित निर्णायक मंडली अर्थात् डॉ. यू. के. बंधोपाध्याय, वैज्ञानिक-डी [सेवानिवृत्त], केरेउअवप्रसं, बहरमपुर एवं श्री सफीकुर रहमान, वैज्ञानिक-सी [सेवानिवृत्त], केरेउअवप्रसं, बहरमपुर ने समस्त शोध-सारांश की सफल प्रस्तुती के उपरांत अपना निर्णय प्रस्तुत किया गया। इस प्रकार, संगोष्ठी में सर्वश्रेष्ठ मौखिक एवं पोस्टर प्रस्तुती के लिए संस्थान की निदेशक महोदया एवं सत्राध्यक्षों द्वारा क्रमशः प्रथम, द्वितीय तथा तृतीय पुरस्कार से शोध-सारांश प्रस्तुत करने वाले वैज्ञानिकों को सम्मानित कर प्रोत्साहित किया गया। साथ ही साथ, संगोष्ठी में सभी शोध-सारांश प्रस्तुत करने वाले वैज्ञानिकों को भी प्रोत्साहित करने की दृष्टि से प्रोत्साहन स्वरूप एक-एक स्मृति चिह्न प्रदत्त किया गया।

सर्वशेष में संस्थान के कनिष्ठ अनुवादक [हिंदी] द्वारा इस दौरान पधारे मुख्य अतिथि समेत संस्थान के समस्त अधिकारियों/पदधारियों को इस समारोह को सफल बनाने में प्रदत्त सहयोगिता व प्रतिभागिता के लिए धन्यवाद ज्ञापन के साथ समारोह की समाप्ति की घोषणा की गई।

के.रे.उ.अ.व.प्र.सं., बहरमपुर (प.बं.) में दिनांक 05.04.2017 को “राजभाषा के विकास में ई-टूल्स का योगदान” विषयक एक हिंदी कार्यशाला का आयोजन किया गया। कार्यशाला का प्रमुख उद्देश्य अधिकारियों/पदधारियों को राजभाषा हिंदी के प्रावधानों के सम्यक जानकारी देने के साथ ही राजभाषा विभाग द्वारा हिंदी के कार्यान्वयन में और भी गतिशीलता लाने की दृष्टि से ई-टूल्स आदि का व्यावहारिक अनुप्रयोग व प्रशिक्षण प्रदान करना था। संस्थान के विभिन्न संवर्गों के कुल 42 अधिकारियों/पदधारियों को राजभाषा नीति व इसके उपबंधों के सफल व सम्यक कार्यान्वयन और प्रचार-प्रसार के उपयोगार्थ विकसित विविध टूल्स यथा गूगल वाइस टाइपिंग, हिंदी स्वयं शिक्षण पैकेज: लीला, प्रबोध, प्रवीण एवं प्राज्ञ, मशीन अनुवाद, प्रवाचक-राजभाषा [हिंदी टेक्सट से हिंदी स्पीच] एवं ई-महाशब्दकोश आदि की विस्तृत जानकारी तथा इसके अनुप्रयोग व प्रचालन विधि पर व्यावहारिक प्रशिक्षण प्रदान किया गया।

कार्यशाला के आरंभ में संस्थान की निदेशक महोदया डॉ. कणिका त्रिवेदी ने क्षेत्रीय कार्यान्वयन कार्यालय [पूर्व क्षेत्र], गृह मंत्रालय, राजभाषा विभाग, भारत सरकार, कोलकाता से पधारे अतिथि वक्ता श्री अजय मलिक, उपनिदेशक [कार्यान्वयन] का पुष्प गुच्छ से स्वागत करते हुए उन्हें हिंदी कार्यशाला के संचालन हेतु आमंत्रित किया।

तत्पश्चात, श्री अजय मलिक, उपनिदेशक [कार्यान्वयन] ने राजभाषा विभाग, भारत सरकार द्वारा विकसित विविध उक्त टूल्सों के बारे में एक-एक कर विस्तृत जानकारी मुहैया कराया और सभी टूल्स के तकनीकी व इसके व्यावहारिक पहलुओं की व्याख्या करते हुए इसके माध्यम से कंप्यूटर पर किस तरह सरलता से हिंदी में कार्य किया जा सकता है, इस तथ्य को विस्तार से समझाने के साथ ही साथ उन्होंने कार्यशाला में उपस्थित सभी अधिकारियों/पदधारियों को इसका व्यावहारिक उपयोग करके भी दिखाया ताकि अपने-अपने दैनिक सरकारी कामकाज के निपटान हेतु इसका सफलता पूर्वक उपयोग कर सकें। इसके अतिरिक्त, उन्होंने भारत सरकार द्वारा विकसित ऑनलाइन हिंदी स्वयं शिक्षण पैकेज: लीला, प्रबोध, प्रवीण एवं प्राज्ञ पाठ्यक्रम के दृश्य-श्रव्य पाठ्यक्रम का विडियो दिखाया और उन्हें अपना सरकारी कामकाज हिंदी में निष्पादित करने हेतु प्रोत्साहित किया।

कार्यशाला के समापन समारोह के दौरान संस्थान की निदेशक महोदया, डॉ. कणिका त्रिवेदी द्वारा अपने अध्यक्षीय अभिभाषण के दौरान इस बात पर हर्ष व्यक्त की कि आज का हिंदी कार्यशाला अत्यंत ज्ञानवर्धक और रोचक रहा। हम, यह उम्मीद करते हैं कि इससे सभी पदधारियों को भरपूर लाभ मिलेगा और वे इसका उपयोग अपने दैनिकी के सरकारी कामकाज में कर राजभाषा हिंदी में अपना-अपना काम सहजता पूर्वक निष्पादित कर सकेंगे। तत्पश्चात, निदेशक महोदया एवं श्री अजय मलिक, उपनिदेशक [कार्यान्वयन] द्वारा इस अवसर पर उपस्थित सभी प्रतिभागियों को सहभागिता प्रमाण-पत्र भी प्रदान किया गया।

सर्वशेष में श्री आर. बी. चौधरी, सहायक निदेशक [रा.भा.] के द्वारा धन्यवाद ज्ञापन के साथ इस कार्यक्रम की समाप्ति की घोषणा की गई।



नगर राजभाषा कार्यान्वयन समिति की 33वीं बैठक

नगर राजभाषा कार्यान्वयन समिति, बहरमपुर (प.बं.) की 33वीं बैठक संस्थान की निदेशक महोदया, डॉ. कणिका त्रिवेदी, की अध्यक्षता में दिनांक 05.04.2017 को अपराह्न 2.30 बजे केन्द्रीय रेशम उत्पादन अनुसंधान एवं प्रशिक्षण संस्थान, बहरमपुर के बैठक कक्ष में संपन्न हुई। इस बैठक में राजभाषा विभाग से उपनिदेशक [कार्यान्वयन] भी उपस्थित थे जिन्होंने राजभाषा की दिशा में संस्थान तथा नराकास, बहरमपुर के सदस्य कार्यालयों को बहुमूल्य सुझाव दिए।

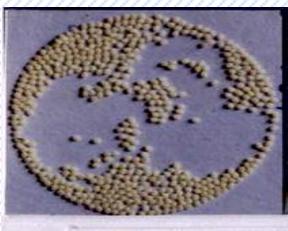


Diapause Inhibitor Breed- A New Finding

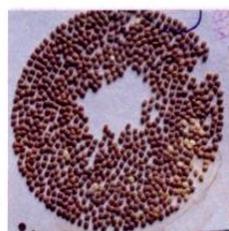
Normally, multivoltine (V_3) females lay non-diapausing yellow colour eggs irrespective of mating with multivoltine or diapausing univoltine (V_1) or bivoltine (V_2) males. Similarly, bivoltine females lay diapausing eggs irrespective of diapausing and non-diapausing male source(s). But when developed homozygous dominant Inhibitor of Diapause (*Id*) gene carrier male is crossed with any bivoltine female, it will always lay non-diapausing eggs. By utilizing this male the production of multi x bi (reciprocal) dfls can be increased manifold which may be used without acid treatment. This breed has unique characteristic importance in Indian sericulture with special reference to Eastern and North Eastern zones during highly variable climate from April to October.

Newly isolated avoltine (V_0) silkworm breed (Rajendra et al., 2004) having paternally controlled unique characteristic importance as a pseudo pigmented diapause inhibitor non diapausing but has not received due importance in Indian sericulture research till date due to its **low survival in tropical climate**. This avoltine (V_0) phenomenon in silkworm *Bombyx mori*, L has changed the well-established genetic concept of voltinism (Toyama 1906). It was stated that voltinism is a maternally inherited obligatory phenomenon, followed by classification of silkworm, *Bombyx mori* L as univoltine (V_1), bivoltine (V_2) and multivoltine (V_3) and genetically expressed as $V_1 > V_2 > V_3$ under the control of sex-linked genes. Snobe and Odake (1986) stated two theories- i) Diapause is the phenomenon predetermined by the diapause factor during embryogenesis ii) Diapause is the process determined by the genetic factor during embryogenesis. Rajendra et al., 2004 observed the exception in the well established obligatory character diapause where bivoltine (V_2) females lay non-hibernating eggs mate with V_0 males carrier of homozygous *Id* gene in autosome. The gene contributed by homozygous male supersedes the gene action of different diapause related genes contributed by the mother.

This Institute developed **homozygous dominant *Id* gene carrier female and male congenic multivoltine breed with high survival silkworm *Bombyx mori*, L.** by utilizing this V_0 males. During development period non-pigmented non-diapausing diapause inhibitor homozygous *Id* gene carrier breed also isolated which is new information in sericulture. The *Id* character was assessed by crossing with congenic and pure bivoltine females.



Normal Multivoltine Eggs

Pseudo pigmented Eggs
(Diapause Inhibitor)Non Pseudo pigmented Eggs
(Diapause Inhibitor)

SWACHHATA PAKHAWADA

A **Swachhata** drive was undertaken on 05.05.2017 around the rearing house by Director, scientists and other staff members. It was extensive cleaning initiative which was successfully completed for maintaining cleanliness in and around the working place.

RSRS, Kalimpong, WB observed "**Swachhata Pakhwada**" at Basant Maya Junior Basic School, Mahakaldara, Bara Bhalukhop, Kalimpong alongwith the teachers and students. A drawing competition is also held on **Swachha Bharat** amongst the students of the School. Three best drawings were selected and awarded with Prizes. Slogans in Hindi and English on **Swachha Bharat** were displayed and taught to the students.

Conducted on "**Swachhata Pakhwada**" at Resham Gram village, Mahakaldara, Kalimpong in presence of Dr. Ranjit Kar, along with all technical staff and Sericulture Farmers of the surrounding locality. Cleaning up of new mulberry field and application of FYM had been done by the Farmers and the participants in the field of Smt. Munna Pradhan (Seri. farmer). The Programme is followed by cleaning of Rain Water harvesting Tank and its utility with the help of Solar heating system.



Cleaning the roadside near mulberry garden



Basatmaya Junior Basic School



Distribution of dustbin, broom & disinfectants etc.

Major ECPs

Field Day cum awareness programme on UPI was organised at Balashpur in Murshidabad district on 20.03.17, to disseminate the advanced technologies at the farmers' level. The Chief Guest, Dr. Kanika Trivedy, Director, CSR&TI, Berhampore welcomed all the participants and expressed her pleasure on being able to participate in such a programme where the major stakeholders of the sericulture industry in Murshidabad district were present. The UPI being a priority of the Central Govt. the programme initiated prioritizing the same.

Mr. Shafi Afroz, Sci-B of the institute explained the advantages of cashless transaction through UPI in general and for the sericulture farmers in particular along with the different modes applicable in this regard. Mr. Debojit Das, Sci-D gave a short speech on the exquisite details of the advanced Mulberry cultivation package and disease – pest management on the same, based on the advanced weather friendly technologies. Dr. Tapati Datta Biswas, Sci-D explained detailed on the intricacies of advanced silkworm rearing techniques along with disease – pest management for a healthy crop and availing maximum yield, keeping in view the maximum possible *Benefit – Cost* ratio.

A detail interactive session, in which the farmers raised different queries on varied aspects which was clarified thoroughly to the complete satisfaction of the participants. This was followed by an extempore *Question – Answer* session in which the participating farmers were asked questions on different aspects of sericulture and the 20 successful farmers were awarded with a Torchlight each. Moreover, towards progress of scientific sericulture in the micro-cluster 4 Knapsac Sprayer, 2 Hygrometer and 200 Rearing Nets were distributed among the farmers which highly enthused them.

At the concluding session, the Director, CSR&TI Berhampore expressed his satisfaction and assured the farmers that the institute is always open to them for any help, suggestion and crisis management towards overall improvement of the sericulture industry.



Distribution of Rearing Nets by Director



Interaction with the farmers

SWACHHATA PAKHAWADA

RSRS, Koraput, Odisha observed Swachhata Pakhwada during 01.05.2017 to 15.05.2017. The programme was inaugurated by Shri Jagannath Raiguru, DIPRO, Koraput. Cleanliness programmes at the office, Residential quarters and awareness prog. with participatory mode have been conducted in the villages of Landiguda, Koraput on 06.05.2017.

On 8th day of the cleanliness drive mission was conducted in the village Kumbharashila on dated 08.05.2017. Smt Sangita Behera, the Asst Agricultural officer Kashipur Block, Kashipur, Shri Lakkidhar Jhadia the President, Mulberry rearers Cooperative society, Shri S. K. Misro Sci-C RSRS Koraput and Shri Khokon Dhali, Sericulture Extension Officer, Kashipur attended the programme. Farmers from different villages viz Siriguda, Bhagamunda, Katali attended the programme. The Local leader Shri Lakkidhar Jhadia and Government officers Smt. Sangita Naik, Asst. Agricultural Officer, Kashipur have also encouraged the villagers. Cleaning of the village roads & open areas, Sprinkling of Bleaching powder and spraying of Phenyle solution was taken up in the whole village. The villagers were made aware of the temperature raise & cause of uneven rains. They were motivated to raise plantation with a slogan of "**one man one plant**".

The valedictory session occurred on 15.05.2017 at the premises of RSRS Koraput, Odisha. Shri Bhagaban Bahinipati, Chairman, Koraput Municipality, the Chief Guest of the occasion, addressed the gathering expressing his happiness over the mission mode approach of the organization for the cleanliness drive. He stressed to maintain "**Clean Koraput & Green Koraput**". The best performers in the essay competition on cleanliness drive were awarded on the occasion.



Resham Krishi Mela & Hindi Seminar

GUEST LECTURES

On **04.01.2017**, a RKM was organized at CSR&TI, Berhampore, West Bengal. Hon'ble Chairman, CSB, Bangalore, **Shri K.M. Hanumantharayappa** attended the programme as Chief Guest. Awareness on Cashless Payment System in India - **Unified Payment Interface (UPI)** was also discoursed in the RKM. An Exhibition stall was installed at the RKM premises to disseminate the latest technologies and product developed by the institute. On the occasion 8 farmers from different district of West Bengal were awarded for their outstanding achievements. One farmer of Kalimpong, WB was awarded cash prize for his innovative idea of **preparing low cost mountages**. Awareness on Cashless Payment System in India - Unified Payment Interface (UPI) was also discoursed in the mela.

On **21.01.2017**, a seminar on "**Disciplinary Proceedings**" was organized at the Institute to update knowledge on rules and regulation of disciplinary proceeding. Shri Chakrapani Pal, a Senior Audit Officer, Kolkata was invited as a guest faculty. A total of 41 participant of this Institute and its nested units were attended the programme

On **25.01.2017**, a RKM was conducted at REC, Agartala, Tripura. An exhibition was inaugurated by the Dr. P. Jayaprakash, Director, NSSO and Dr. Kanika Trivedy, Director, CSRTI Berhampore. An awareness programme on **Seed Act** was also held on this occasion. A total of 1045 farmers of Malda, Nadia, Birbhum and Murshidabad districts and officials of DoS, WB were participated.

On **04.02.2017**, a **mini RKM** was organized at Pasighat, Arunachal Pradesh under the leadership of RSRs, Jorhat and 101 farmers participated. The Hon'ble local MLA, Shri Kento Rina and Shri Tahang Taggu (IAS) Commissioner of Textiles & Handicraft, Arunachal Pradesh were the chief guest and the guest of honour

On **06.02.2017**, a **mini RKM** was also organized at REC Shillong at State Sericulture Farm, Laban of Meghalaya and participated 100 farmers. Shri Ricky Shullai, MDE, was the Chief Guest and Shri S.K. Bagchung, Director and Smt. A. Dakhar, Joint Director, DOS, Meghalaya were the Guest of Honour.

Mini RKMs were organized at REC-Imphal (08.02.17), REC-Aizwal (12.02.17) & REC-Mongoldai (13.02.17) with a participants of 90, 95 & 120, respectively.

On **04.03.2017**, a seminar on "**Problems and Prospects of Mulberry Sericulture in Kalimpong Hills**" was organized by RSRs, Kalimpong for benefit of the seri-farmers of the region. Shri S. T. Lepcha delivered speech on the topic "**Scenario of mulberry cultivation in Kalimpong hills with problems and prospects**" and the Chief Guest, Smt. Rejina Bhutia, Sci-D, P-3, BSF, Ambari Falakata of the occasion has taken up the proceedings and delivered her speech on "**Bivoltine rearing – a breakthrough in sericulture**". Shri Sanjay Sarkar, Branch Manager, Central Bank of India, Kalimpong delivered a speech on **UPI (Unified Payment Interface)/ cashless transaction**.



MAJOR EVENTS

For the purpose eminent research personalities are invited to provide lecture and develop appropriate research strategies needed for the country.

On **09.01.2017**, a guest lecture on "**Agriculture Extension**" was delivered by Dr. R. N. Mishra, Former Joint Director, West Bengal on the various aspects related to mulberry sericulture. He also discussed about application of bio fertilizer to enhance the yield of mulberry seedlings and various diseases of mulberry and its preventive measures. A total of 77 officers and officials participated and interacted with Dr. Mishra.

Director, CSR&TI, Berhampore inaugurated CSB sponsored three (3) **Seri Resource Centres (SRCs)** at Malda (on 18.2.2017), Murshidabad (on 21.2.2017) and Nadia (on 23.2.2017) with the objectives of imparting training to the sericulture farmers' time-to-time for updating their knowledge and skills on improved technologies.

CSR&TI, Berhampore has organized a **five (5) days training** on "**Faculty development programme**" from 14th to 18th February, 2017 at this institute with active support of CBT, CSB, Bengaluru and a total of 25 scientists of this institute participated actively in the programme. During the programme few eminent resource persons were invited to impart the training. The basic objective of organizing such programme was to develop the faculty for structured and non-structured courses conducted by this institute

On 22.2.2017, a **guest lecture** on "**Ideal Indian Women from the 19th to 21st century and Gender violence**" was delivered by Dr. Diviani Chaudhuri, Instructor cum scholar, State University New York, Binghamton University, America.

On April, 2017, a guest lecture on "**Sucking Pest of Mulberry: Identifying challenges and research needs**" delivered by Dr. Shantanu Jha, Professor & Head, Dept. of Agriculture Entomology, BCKV, Mohanpur.

On May, 2017, a guest lecture on "**Mechanization in crop cultivation**" delivered by Dr. J. P. Gupta, Professor & Dean Faculty of Agriculture Engineering, BCKV, Mohanpur visited this institute and interacted with the scientists of this institute.

A seminar on "**Implementation of Goods & Services Taxes (GST)**" was organized on 15.06.2017 at this institute. Mr. Goutam Das Gupta, Asst. Director, NACEN, Kolkata was the chief guest was delivered a lecture on this matter.

On June, 2017, a guest lecture on "**Silk based materials for biomedical appliance**" delivered by, Dr. Sayam Sen Gupta, Associate Professor, Dept. of Chemical Sciences, IISER, Kolkata and interacted with the institutes' scientists.

CSR&TI, Berhampore has organised awareness programmes on **Unified Payment Interface (UPI)** at 17 different locations of Eastern & NE region [CSRTI, Berhampore on 1.2.17, Toilpara (Birbhum) & Sille-Pasighat (Arunachal Pradesh) on 4.2.17; Pipulkhola (Nadia), Bhikari-Hajitola (Malda) & REC Shillong on 6.2.17; Mallickpur (Murshidabad) on 7.2.17; Mallickpur (Murshidabad), Ramchandrapur (Kolitha) & REC Imphal on 8.2.17; Dira (Murshidabad), REC Aizwal & REC Mongoldoi on 9.2.17; Mallickpur (Murshidabad) on 10.2.17; Dira (Murshidabad) on 13.2.17; Kanpur (Birbhum) on 15.2.17 and Debagram (Birbhum) on 17.2.17] and covered of **1532 stakeholders** of silk industry to adopt cashless transaction.



R&D REVIEW MEETING CONDUCTED

- ❑ **Extension Officer and Bv-CPP** held on 17th January, 2017.
- ❑ **45th Research Advisory Committee** meeting was conducted on 18th & 19th January, 2017.
- ❑ **46th Research Council** meeting was conducted on 12th & 13th June, 2017.
- ❑ **23rd Regional Research Advisory Committee (RRAC)** of RSRs, Jorhat conducted on 20th June, 2017
- ❑ **22nd Regional Research Advisory Committee (RRAC)** of RSRs Koraput conducted on 24th June, 2017.

ARTICLES FOR News & Views

Director, CSR&TI, Berhampore determined to publish this half yearly news bulletin regularly on promising research findings, ToT, Field Trials, Demonstrations, Farmers' Day, Training Programme and other important events. Officers and Staff members working at this Institute, RSRs, RECs and Sub-RECs of Eastern and North Eastern states are requested to send their articles in favour of Director, CSR&TI, Berhampore, West Bengal for the said publication. Communication may also be made by E-mail to csrtiber.csb@nic.in / csrtiber@gmail.com



Published by: **Dr. Kanika Trivedi, Director**

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