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Editorial



CSRTI-Berhampore is consistently working for the development of sericulture industry in Eastern and North Eastern states, striving to solve issues related to farmers' ensuring sustainable silk production. Focus is laid for improved mulberry and cocoon productivity through introduction of high yielding mulberry varieties and thermo-tolerant silkworm hybrids, soil fertility, promotion of mechanization in farming and cost-effective sericulture technologies. During the period, SSR markers (MM17 & NGS 26311) for mulberry BLS resistance were identified and C-7 was identified as improved variety with 5-10% higher biomass and 61-72% improved resistance over C-2038. Eight high yielding mulberry progenies were identified with high nitrate reductase activity (>2.78 kg/plant) coupled with better leaf quality & propagation traits as compared to V1. 75% RDF (recommended dose of fertilizer) with fertigation system was found to increase leaf yield by ~30% t/ha, water use efficiency (~67%) & nutrient use efficiency (~66%) over control. Growing degree days (GDD) based leaf yield weather models for mulberry (S1635) were determined. Three multivoltine accessions (Acc. Nos. 80, 79 & 68) were identified superior to Nistari for Eastern region. 12Y x (BCon1.BCon4), the new M x Bi hybrid showed 20% higher cocoon yield over N x (SK6.SK7). Mass multiplication of bio-control agents (*Scymnus pallidicollis* & *Chrysoperla zastrowi*) was undertaken for supply to the farmers. A record quantity of 115.86MT bivoltine silk was produced through CPP clusters in E & NE India (16.78 lakh dfls; 48.54 kg/100 dfls). A total of 15678 soil health cards were distributed to the farmers. Suvarna (modified charka) & Souro-Neer (solar water heating system) were developed to reduce fuel & manpower costs.



Chief Editor: Dr. V. Sivaprasad, Director
Editor: Dr. Dipesh Pandit, Scientist-D
Associate Editor: Dr. Manjunatha G. R, Scientist-C
Assistance: Mr. Subrata Sarkar, Tech. Assistant
 Mrs. S. Karmakar, Tech. Assistant
 Ms. T. N.T. Sirisha, Steno Gr-II

A Bio-Control Agent for Thrips Management

Thrips is one of the most important pest causing serious damage to mulberry plantation. Thrips feed on sap of tender leaves scraping the palisade tissue on ventral side of leaf and causes reduction in nutritive value, which makes them unfit for silkworm rearing.

Chrysoperla Zastrowi sillemi, bio-control agent, successfully control thrips and forms an integral component of integrated pest management. *Chrysoperla* belongs to Family: Chrysopidae (Order: Insecta), which are broad-spectrum predators in many agricultural crop systems. CSRTI-Berhampore is introducing *Chrysoperla* for thrips management in Eastern & North Eastern states and already established BCA mass production system in the institute.

Adult *Chrysoperla* are green coloured, net-like wings, feed on nectar, pollen and other sugar sources. Adult female lays about 600 stalked eggs, which hatch in 3-4 days. The larvae feed voraciously on thrips for 8-10 days and undergoes pupation by forming cocoon. Around 1000 eggs/acre are recommended for effective thrips management (two times at weekly interval). Eggs are available in the form of egg cards, which could be stapled/tied to terminal leaves.

Do's: If thrips infestation is severe, spray Rogor (3ml/L) 21 days after pruning and then release *Chrysoperla* after closure of safety period (15 days).

Don't: Do not spray any pesticide after the release of *Chrysoperla*.



Director's visit to Sikkim

Dr. V Sivaprasad, Director, CSRTI-Berhampore made maiden visit to Sikkim during 19-23 May 2019. He was welcomed by DoS representative Shri. D.R. Sharma, Consultant-IBSDP-Sikkim. Visited to Kamrang cluster in South Sikkim and witnessed Spring-2019 crop rearing, mulberry gardens and infrastructure development under IBSDP at the farmers level including an interaction meet with the beneficiaries. Also attended meeting with DoS-Gangtok-Sikkim and discussed strategies for sericulture improvement in Sikkim.



कार्यशाला की रिपोर्ट

केन्द्रीय रेशम उत्पादन अनुसंधान एवं प्रशिक्षण संस्थान, बहरमपुर [प.बं.] में दिनांक 17.06.2019 को "राजभाषा कार्यान्वयन के विविध आयाम के अनुप्रयोग" विषयक एक हिंदी कार्यशाला का आयोजन किया गया। कार्यशाला का प्रमुख ध्येय पदधारियों को राजभाषा हिंदी के प्रावधानों की सम्यक जानकारी देना तथा कार्यालयीन कार्यों में सम्मुखीन हो रहे समस्याओं का निदान करना था जिससे कि हिंदी के कार्यान्वयन में और भी गतिशीलता आने के साथ ही राजभाषा हिंदी के उत्तरोत्तर विकास हेतु अनुकूल माहौल की सृष्टि हो सके। इस अवसर पर संस्थान के कुल 18 पदधारियों को राजभाषा के नियमों व अधिनियमों और उसके सम्यक कार्यान्वयन आदि की विस्तृत जानकारी तथा इसके अनुप्रयोग से अवगत कराया गया।

कार्यशाला के प्रारंभ में, संस्थान के सहायक निदेशक [राभा], श्री आर. बी. चौधरी ने राजभाषा हिंदी के लिए भारत सरकार द्वारा निर्धारित नियमों, उपबंधों व इसके प्रचार-प्रसार हेतु केन्द्र सरकार द्वारा समय-समय पर उठाए जा रहे नित-नए प्रयासों से सभी अधिकारियों को अवगत कराने के साथ ही साथ कार्यालय में हिंदी के अनुपालन संबंधी कठिनाईयों को दूर करने के सरल और सहज उपायों पर विशद रूप से प्रकाश डाला गया। इसके अतिरिक्त, राजभाषा हिंदी से संबंधी अनुच्छेद 343 से 350 तक के अंतर्गत निहित नियमों तथा इसकी महत्ता व उपयोगिता पर विस्तार पूर्वक चर्चा की गई। इसके अलावे, उन्होंने राजभाषा प्रावधानों व नियमों अर्थात् धारा 3(3), राजभाषा नियम-5 व नियम-11 के संबंध में विस्तृत जानकारी देने के अलावे उन्हें तिमाही प्रगति रिपोर्ट को भरने और संसदीय समिति की अपेक्षिताओं की पूर्ति से संबंधित जानकारी दी।

कार्यशाला के समापन समारोह के दौरान संस्थान के निदेशक महोदय, डॉ. वी. शिवप्रसाद द्वारा अपने अध्यक्षीय अभिभाषण में उपस्थित सभी पदधारियों को संबोधित करते हुए यह कहा कि हिंदी कार्यशाला का मुख्य उद्देश्य है हमारे दैनिक कार्य-कलापों को हिंदी में निष्पादित करने में आ रही कठिनाई को दूर करना तथा अधिकाधिक सरकारी काम-काज हिंदी में करना है ताकि हम हिंदी के लिए राजभाषा विभाग द्वारा निर्धारित लक्ष्य को प्राप्त करने तथा पदधारीगण अपना अधिकाधिक कार्य हिंदी में करने के साथ ही संवैधानिक अपेक्षिताओं को भी पूरा करने में समर्थ हो सके। इसके अतिरिक्त, उन्होंने भविष्य में आयोजित होने वाले हिंदी कार्यशाला में पदधारियों को टिप्पण व आलेखन का अभ्यास करवाने पर बल दिए। तत्पश्चात, निदेशक महोदय द्वारा इस अवसर पर उपस्थित सभी प्रतिभागियों को सहभागिता प्रमाण-पत्र भी प्रदान किया गया। सर्वशेष में श्री आर. बी. चौधरी, सहायक निदेशक [राभा] के द्वारा धन्यवाद ज्ञापन के साथ इस कार्यक्रम की समाप्ति की घोषणा की गई।

मानव संसाधन विकास कार्यक्रम

संस्थान द्वारा जनवरी से जून, 2019 के दौरान आठ विशेष प्रशिक्षण कार्यक्रमों की आयोजन किया गया है:



दिनांक 02.01.2019 से 11.01.2019 तक, दश दिनों के लिए कृष्णनाथ महाविद्यालय के तेईश (23) छात्र-छात्राओं को शहतूत रेशम चाष के उपर गहन प्रशिक्षण दिया गया है।

राष्ट्रीय रेशमकीट बीज संगठन के अधिकारियों के सहयोग से दो दिवसीय 21-22.01.2019 एवं 24-25.01.2019 को रेशमकीट बीज गतिविधि के कार्यान्वयन पर दो खंडों में केंद्रीय रेशमबीज समिति द्वारा अधिसूचित विभिन्न राज्य सरकारों तथा केंद्रीय रेशम बोर्ड के कुल चुयाल्लीश (44) अधिकारियों को प्रशिक्षित किया गया है।



दिनांक 04.02.2019 से 18.02.2019 तक नागालैंड के ग्रामीण इलाकों से आगत आठारो (18) रेशम चाषीयों को शहतूत रेशमचाष के लिए गहन प्रशिक्षण दिया गया था।

दिनांक 21.02.2019 से 16.03.2019 तक सात (07) वैज्ञानिक-बी/सी को शहतूत रेशमचाष में गहन प्रशिक्षण दिया गया था।



दिनांक 05.03.2019 से 07.03.2019 तक केंद्रीय तसर अनुसंधान व प्रशिक्षण संस्थान, रांची के पन्द्रह (15) पिजीडीएस छात्र-छात्राओं ने विस्तार दौरा के तहत तीन दिनों की प्रशिक्षण लिया था।

दिनांक 11.03.2019 से 20.03.2019 तक दस दिनों के लिए पश्चिम बंगाल के आठारों रेशम चाषीयों ने परिणत पलुपालन पर प्रशिक्षण लिया था।



दिनांक 27.05.2019 से 10.05.2019 तक पंद्रह दिनों के लिए रायगंज विश्व-विद्यालय के विश (20) छात्र-छात्राओं को शहतूत रेशमचाष पर गहन प्रशिक्षण दिया गया था।

दिनांक 11.06.2019 और 12.06.2019 को GEM और PFMS पर केंद्रीय रेशम बोर्ड के कर्मचारी व अधिकारियों के लिए आयोजन किया गया था जिसमें विश (20) कर्मचारीयों ने भाग लिया था।



Resham Krishi Mela

Resham Krishi Mela was organized by CSRTI-Berhampore at Rabindra Sadan, Berhampore on 29th Jan 2019 under the **Chairmanship of Shri K. M. Hanumantharayappa, Chairman-CSB-Bangalore**. Various stakeholders of sericulture from various districts of West Bengal (Murshidabad, Nadia & Birbhum) actively participated in the mela. The programme includes with the technical sessions, exhibition stall, demonstrations and interaction with farmers on recently developed technologies. On this occasion, thirteen best farmers from different districts of West Bengal were awarded for outstanding performance in cocoon production during last year.



REC, Mothabari organized **Resham Krishi Mela** on 8th Jan 2019. The mela was presided over by Shri T. R. Biswas, Sabhapati-Mothabari and Shri S. Mallik, W.B.C.S.(Exe), Jt. BDO-Mothabari & Shri B. Das, I/c, Mothabari-PS participated as Guest of honour. 167 farmers attended the mela and twenty successful farmers awarded prizes for promotion of sericulture.



RSRS, Kalimpong organized a **Resham Krishi Mela** on 21st Jan 2019 at Worship Centre, Kalimpong. An exhibition on mulberry and muga pre-cocoon activities was also organized on the occasion displaying different aspects of host plant cultivation and silkworm rearing. Purpose of the mela was to create awareness among the sericulture farmers about the technological interventions developed by Central Silk Board for boosting production of mulberry cocoons in the region. 116 sericulture farmers of the region attended the programme.



Important Events

"Surging Silk" - A Mega Silk Event was organized by Ministry of Textiles, Govt. of India through VC at CSRTI-Berhampore on distribution of **"Buniyad Reeling Machines"** to Sericulture beneficiaries (9th Feb 2019) along with main event attended by Honble Minister of Textiles, Smt. Smriti Irani & other dignitaries at Vigyan Bhavan, New Delhi.



Field day was organized at Bandhkhala Village of Birbhum district (WB) 15th Feb 2019. Dr. T. D. Biswas & Shri D. Chakrabarti (Sci-D) attended the meet. Late age rearing package was elaborately discussed emphasizing the importance of spacing in bamboo rearing trays, moulting care, regular bed cleaning and maintenance of ideal environmental conditions.



RKM cum Exhibition at Tushen Baptist Church hall, Tushen, Ukhrul, Imphal on 23rd Feb 2019.



Multi x Bi Crop Harvest in Tripura

- ✓ N x (SK6.SK7) and M6DPC x (SK6.SK7) was reared successfully in Tripura in July for the first time at 95-96% Relative Humidity and 30°C- 33°C temperature.
- ✓ 35kg/100 dfles average cocoon yield was recorded with 21 days larval duration.



Success story of a Seri-Farmer



Mrs. Bhanita Choudhury
Village: Haldha, PO: Haldha
Darrang district, Assam

Age	34 Years
Wife of	Mr. Reban Choudhury
No. of family members	Four
Education Qualification	HSLC
Contact No.	9101191802

Mrs. Bhanita Choudhury is practicing mulberry sericulture with S-1635 mulberry high yielding variety since 2014-15 under the guidance of REC-Mangaldoi and Assam State Sericulture Department. She rears around 300 dfls per year @100 dfls per crop. Her income from sericulture is nearly Rs 60,000 - 70,000 per annum. She received assistance from IBSDP under NERTPS during the year 2015-16. Her financial and social status has improved a lot; constructed a pucca house, where the silkworm rearing is conducted by the earnings from sericulture. She is leading a happy life through adoption of improved sericulture practices. It has also helped her to provide good education to the children. She has been awarded as Best Seri-farmer during Resham Krishi Mela (2017) organized by REC-Mongaldoi, Assam.

Year	No. of crops taken	No. of dfls reared /crop	Total cocoon harvested (kg /No.)	Total income (Rs.)	Net Income (Rs.)
2015-16	2	100	100	50,000.00	47,504.00
2016-17	3	100	144	72,000.00	68,256.00
2017-18	3	100	145	72,500.00	67,700.00



ARTICLES FOR News & Views

Director, CSRTI-Berhampore publishes half yearly News Bulletin regularly on promising research findings, ToT, Field Trials, Demonstrations, Farmers' Day, Training Programmes and other important events. Officers and Staff working at main Institute, RSRs and RECs of Eastern & North Eastern states are requested to communicate articles to Director, CSRTI-Berhampore, West Bengal for publication. Communication may also be made by E-mail to csrtiber.csb@nic.in /csrtiber@gmail.com

Guest Lectures

- ❖ Shri. Saibal Ghosh, Sr. Manager, Axis Bank-Berhampore: "Production Presentation" (5th Feb 2019)
- ❖ Dr. Anindya Ghosh, Associate Professor, Govt. College of Engg. & Textiles, Berhampore: "Effluent Treatment in Textile Industry" (18th June 2019)
- ❖ Dr. Pradip Krumar Sahu, Prof. & Head, Dept. of Agril. Statistics, Bidhan Chandra Krishi Viswavidyalaya, West Bengal: "Research Methodology in Biological Science" (27th April 2019)

R&D Review Meetings

- ❖ 49th RAC meeting was organized to review the research activities (15.01.2019)
- ❖ 9th Zonal Bv-CPP Review Committee meeting was organised to review the progress of 15 bivoltine clusters (16.01.2019)
- ❖ Extension Officers' meeting was organised to review the extension activities of RSRs/RECs (17.01.2019)
- ❖ Orientation Programme on Seed Act Implementation for Seed Analysts & Seed Officers of Eastern zone was organized in coordination with NSSO-Bangalore (21-22 & 24-25 Jan 2019)
- ❖ Special Research Council meeting was organised to review and initiate new research projects (18.03.2019)
- ❖ 50th RC meeting was organised to review the progress of R&D progress, new research project proposals (26.04.2019)
- ❖ A brainstorming session on **Application of Artificial Intelligence in Biological Research** (18th June 2019): Dr. Suresh, K, Sci-B and Dr. V. Sivaprasad, Director delivered lectures on the above topic and all the participating Scientists interacted.
- ❖ Participated in the **Video Conference** held by Member Secretary, CSB-Bangalore along with RSTRS-Guwahati & DoS-Kohima-Nagaland (26.06.2019) to review the status of NERTPS projects implemented in Nagaland.



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Central Sericultural Research & Training Institute

CENTRAL SILK BOARD, Ministry of Textiles,
Govt. of India, Berhampore-742101, Murshidabad,
West Bengal, India

03482-224713, FAX: +91 3482 224714 EPBAX: 224716/ 17 / 18
csrtiber.csb@nic.in / csrtiber@gmail.com ; www.csrtiber.res.in