

**Minutes of the 70<sup>th</sup> meeting of Research Council held on 3<sup>rd</sup> & 11<sup>th</sup> February, 2025 at meeting room of CSB-CSR&TI, Berhampore**

The 70<sup>th</sup> meeting of Research Council was convened on 3<sup>rd</sup> & 11<sup>th</sup> of February, 2025, chaired by Dr. M. Maheswari, Director, CSB-CSR&TI, Berhampore. At the outset, Dr. K. Rahul, Scientist D and In-charge of PMCE, welcomed all the scientists to the session. Dr. M. Maheswari, the Director, initiated the meeting by expressing concern that no new projects have been initiated this year. She emphasized that scientists, especially those without active projects, must focus on developing proposals aligned with the thrust areas while invariably addressing farmers' needs of Eastern as well as North Eastern states of India. The agenda wise discussions were taken up during the meeting. The list of participants is appended in *Annexure-I*.

**Agenda No.1 Confirmation of 69<sup>th</sup> RC meeting minutes held on 18<sup>th</sup> & 19<sup>th</sup> Oct., 2024**

As no comments were received, the minutes of the 69<sup>th</sup> RC meeting were confirmed by the house.

**Agenda No.2 Follow up on the discussion of the 69<sup>th</sup> RC meeting held on 18<sup>th</sup> & 19<sup>th</sup> Oct., 2024**

Sl.no.	Decisions/Suggestions	Follow up action taken
1.	Regarding the new concept "Breeding mulberry for higher yield and resistance to <i>Myrothecium</i> leaf spot", RC recommended including a comprehensive review of MLS severity at the National and International level. The methodology for mapping genes or QTLs associated with MLS resistance in mulberry must be elaborately defined, along with detailed information on the parents and breeding program.	The detailed methodology was included in the concept note and the same was submitted to CO for perusal.
2.	Regarding the new concept "Development of Actinomycete based formulation for the management of fungal foliar diseases of mulberry", RC recommended strengthening the methodology by including specific criteria for selecting the best-performing actinomycete strains. Additionally, when evaluating combinations of actinomycete strains under glasshouse, it would be useful to specify how potential synergistic interactions will be identified. The detection of bioactive compounds produced by the actinomycete strains should also be incorporated in the work plan. The duration of the project may be increased to 3 years.	The necessary corrections were made to the concept note based on the suggestions from the RC meeting, and it was subsequently submitted to the CO for perusal.
3.	Regarding the new concept "Development of superior hybrid(s) suitable for West	The concept note was revised with the necessary corrections following

	Bengal”, PI was suggested to discontinue the aim on developing a multi x multi hybrid. Instead, the PI could obtain breeds from other breeding stations across India and utilize those breeds in the project, alongside the germplasm resources at CSRTI-Berhampore, to develop a superior crossbreed with improved survival and productivity traits. Additionally, the PI may add a newly joined scientist specialized in animal breeding and genetics to the investigation team.	the suggestions from the RC meeting, and it was submitted.
4	Regarding the concluded project “AIT02012CI: Characterization of mulberry silkworm, <i>Bombyx mori</i> L. mutants for tolerance to flacherie syndrome through genome editing tools (DST-JSPS project)” PI was recommended to include the sequencing data in the final report and update the IBSC and RCGM accordingly. The PI should follow RCGM guidelines when maintaining the developed mutants and submit the final report to DST and CO, CSB.	The sequencing data was included in the final report and submitted to the CO for perusal. The final report was also submitted to the DST. The developed mutants are being maintained according to RCGM guidelines.

### **Agenda No.3 Review of New Concepts**

A total of eleven new concepts were comprehensively deliberated during the meeting.

#### **New Concept 1: Development of superior triploid mulberry genotypes for enhanced yield and quality**

##### **Objectives**

- To develop triploid genotypes by crossing tetraploids and diploids
- To evaluate triploids for improved yield and quality

##### **Expected Outcome and Utilization**

- Development of mulberry genotypes with enhanced leaf yield and superior leaf quality
- The advanced generation material can be utilized for screening additional stress tolerance traits

**Investigators:** PI- Ms. Harshitha B S (Scientist-B, Mulberry Breeding & Genetics)

CI's- Dr. Yallappa H. (Scientist-C, Farm Management)

Dr. Pradeep SD (Scientist-B, Host Plant Physiology)

**Project Asst.:** 01

**Duration:** 4 years

**Proposed Budget:** 18 lakhs [Includes equipment: Digital compound microscope integrated with a cell imaging system, digital camera; Microwave oven]

#### **RC comments**

The concept was approved with minor modifications. The RC recommended and advised to include in the methodology i.e. the number of tetraploids to be selected from the available germplasm and also to mention the diploids to be used for the experiment. It was also advised to specify the checks/benchmarks for evaluating the new triploids.

[Action: Ms. Harshitha B S, Sci-B]

#### **New Concept 2: Establishment and demonstration of Model Seri-farms (MS) in West Bengal**

##### **Objectives**

- To establish Model Seri-farms at selected villages in West Bengal
- To assess the impact of adopted technology

##### **Expected Outcome and Utilization**

- Establishment of successful Model Seri-farm for demonstration and proliferation of latest technologies
- Dissemination of new technologies and wider adoption

**Investigators:** PI- Ms. Harshitha B S (Scientist-B, Mulberry Breeding & Genetics)

CI- Dr. Suresh K. (Scientist-D, Mulberry Breeding & Genetics)

**Project Asst.:** 01

**Duration:** 3 years

**Proposed Budget:** 29 lakhs

#### **RC comments**

The RC acknowledged the concept of proposing model seri-farms for the percolation of advanced seri-technologies at the grassroot level as highly relevant. However, it was noted that the methodology should be strengthened by incorporating regions from Northeast India and collaborating with RSRs/RECs where necessary. It was advised that the proposal be discussed and revised in coordination with the SEEM division and also to outline the technologies the project aims to disseminate among farmers in different regions. The RC recommended revising the concept and presenting it again in the forthcoming RC meeting.

[Action: Ms. Harshitha B S, Sci-B]

#### **New Concept 3: Development of nano-bioconjugate for improvement of yield and systemic resistance against foliar diseases in mulberry**

##### **Objectives**

- To synthesize and characterize Chitosan-SA-Zn nano bioconjugate
- To evaluate the impact of nano-bioconjugate on foliage yield and systemic resistance against foliar diseases in mulberry

### **Expected Outcome and Utilization**

- Development of Chitosan-SA-Zn nano-bioconjugate and standardization of its optimal concentration for foliar application in mulberry
- Formulation of the nano-bioconjugate to enhance mulberry leaf quality, yield and systemic resistance against foliar diseases in mulberry

**Investigators:** PI- Dr. Pradeep SD (Scientist-B, Host Plant Physiology)

CI's- Dr. Sanghmitra Aditya (Scientist-B, Mulberry Pathology)

Dr. Y. Nagaraju (Scientist-B, Microbiology)

**Project Asst.:** 01

**Duration:** 3 years

**Proposed Budget:** 28.15 lakhs [Includes equipment: Ultrasonic probe sonicator and Microwave oven]

### **RC comments**

The RC approved the concept and advised to conduct a comprehensive biophysical characterization of the synthesized nano-bioconjugate at different levels and to evaluate its stability. It was recommended to use a susceptible mulberry genotype for *Myrothecium* leaf spot and powdery mildew diseases. It was suggested to include a silkworm bioassay in the project and to conduct studies on the uptake of the nano-bioconjugate in plants following foliar application. Additionally, it was suggested to remove existing equipment from the proposed equipment section of the project.

[Action: Dr. Pradeep SD, Sci-B]

### **New Concept 4: Identification and characterization of viral and viral-like pathogens infecting mulberry**

#### **Objectives**

- To assess viral disease incidence in mulberry fields in West Bengal region
- Morphological and molecular identification of mulberry associated viral and viral like pathogens
- Screening of mulberry varieties against the most prominent viral/viral-like disease

### **Expected Outcome and Utilization**

- Comprehensive documentation: Detailed documentation of viral and viral-like diseases affecting mulberry including symptoms, spread, and impact
- Identification of major viral pathogens: Identification of major viral pathogens responsible for yield losses in mulberry crops
- Screening for disease-resistant varieties: Screening and identification of mulberry varieties resistant to viral diseases
- Development of disease management strategies: Utilization of findings to develop effective disease management strategies for mulberry cultivation

**Investigators:** PI- Dr. Sanghmitra Aditya (Scientist-B, Mulberry Pathology)  
CI's- Dr. Khasru Alam (Scientist-C, Mulberry Pathology)  
Dr. Pooja Makwana (Scientist-D, Biotechnology)

**Project Asst.:** 01

**Duration:** 1.5 years

**Proposed Budget:** 20.52 lakhs [Including glasshouse facilities and greenhouse with shade net]

**RC comments**

The RC recommended restricting the study area to the West Bengal region and including semi-skilled manpower for field experiments. It also advised taking complete precautions to prevent the unintentional spread of the virus, incinerating virus-infected plants after experiments, and adding a treatment to study whether the virus enters the silkworm system through infected leaves. Additionally, RC suggested including the protocol followed for virus maintenance in the methodology section. The concept was approved subject to including the aforesaid suggestions.

[Action: Dr. Sanghmitra Aditya, Sci-B]

**New Concept 5: Identification of valuable genes and QTLs in multivoltine silkworm through genotyping by sequencing approach**

**Objectives**

- Identification of QTLs for survival traits of multivoltine silkworm
- Genome wide association studies of survival traits of multivoltine silkworm

**Expected Outcome and Utilization**

- Identification of valuable genes/QTLs for survival of multivoltine silkworm in tropical climate
- The QTLs and genes will provide insights for improving survival of bivoltine silkworm in tropical climate

**Investigators:** PI- Dr. Javid Ur Rahman (Scientist-B, Silkworm Breeding and Genetics)  
CI's- Dr. Oshin (Scientist-B, Silkworm Breeding and Genetics)  
Dr. Pooja Makwana (Scientist-D, Biotechnology)

**JRF:** 01

**Duration:** 3 years

**Proposed Budget:** 22.55 lakhs

**RC comments**

The concept was approved with minor modifications. The RC advised modifying the title to include the identification of QTLs. A scientist from the CSB-Seribiotech Research Laboratory, Kodathi, with relevant knowledge of the proposed project, may be included as a CI to strengthen the investigating team, and a susceptible multivoltine breed may be included in the methodology for better inferences.

[Action: Dr. Javid Ur Rahman, Sci-B]

## **New Concept 6: Evaluation of economic traits in multivoltine silkworm eggs for efficient germplasm maintenance**

### **Objectives**

- To evaluate multivoltine silkworm eggs for all traits with respect to varied aged DFLs and environmental factors
- To curtail the number of rearing's per year for efficient maintenance of germplasm without inducing diapause

### **Expected Outcome and Utilization**

- The number of rearing's required for germplasm maintenance will be reduced
- The less number of rearing's will avoid the loss of germplasm during unfavorable seasons, labour and leaf shortage

**Investigators:** PI- Dr. Javid Ur Rahman (Scientist-B, Silkworm Breeding and Genetics)  
CI- Dr. Pooja Makwana (Scientist-D, Biotechnology)

**Project Asst.:** 01

**Duration:** 2 years

**Proposed Budget:** 9.38 lakhs

### **RC comments**

The RC acknowledged the importance of the concept. However, the RC advised referring to the research already conducted by the CSB-Silkworm Seed Technology Laboratory, Kodathi, and the CSB-Central Sericultural Germplasm Resources Centre, Hosur, identify the gaps, and proposing a plan for a networking-mode project with these institutes to achieve better research outcomes. The title and objectives may be modified to reflect the work proposed in the project.

**[Action: Dr. Javid Ur Rahman, Sci-B]**

## **New Concept 7: Authorization trials of bivoltine double hybrid (BHP3.BHP2) x (BHP8.BHP9) in Eastern and North Eastern India**

### **Objectives**

- To evaluate the bivoltine double hybrid (BHP3×2) × (BHP8×9) for generating data required for hybrid authorization with farmers in Eastern and North Eastern India

### **Expected Outcome and Utilization**

- Comprehensive evaluation of the bivoltine double hybrid (BHP3×2) × (BHP8×9) under field conditions in Eastern and North Eastern India facilitating assessment of the hybrid's adaptability, productivity, and economic viability in the target regions

- Generation of necessary data to support the approval process for commercial release and contribution to enhancing bivoltine silk production in the Eastern and North Eastern region through the adoption of a high-yielding and robust hybrid

**Investigators:** PI- Dr. Pooja Makwana (Scientist-D, Biotechnology)

CI's-Dr. Raviraj VS (Scientist-C, Biotechnology/Silkworm Breeding & Genetics)

NSSO & SSPC: To be nominated

**Project Asst.:** 01

**Duration:** 2 years

**Proposed Budget:** 45 lakhs

#### **RC comments**

The RC emphasized the need for bivoltine double hybrid authorization in the Eastern and North Eastern region and recommended conducting the authorization program in collaboration with CSB- National Silkworm Seed Organization (NSSO). Since the program would be challenging without NSSO's support, it was advised to request Director, NSSO to nominate CIs for the project and submit the proposal accordingly.

[Action: Dr. Pooja Makwana, Sci-D/Dr. Raviraj VS, Sci-C]

**New Concept 8: Screening of synthetic compounds for management of grasserie disease in *Bombyx mori* L.**

#### **Objectives**

- To screen potential synthetic molecules/compounds against BmNPV for effective management of grasserie disease
- To evaluate the efficacy of molecules/compounds against the BmNPV based on survival rate through experimental rearing across different rearing seasons

#### **Expected Outcome and Utilization**

- Identification of effective synthetic compound that can reduce the mortality rate in silkworms due to grasserie disease
- The outcome will also help in developing a new formulation for the effective management of the disease

**Investigators:** PI- Dr. M. Rabha (Scientist-C, Silkworm Pathology)

CI- Dr. Rahul K (Scientist-D, Silkworm Pathology)

**Duration:** 2 years

**Proposed Budget:** 9.30 lakhs

#### **RC comments**

The concept was approved with minor modifications. The RC advised to analyze the techno-economic feasibility and cost of the new technology in comparison to the existing preventive measures. Additionally, the solubility of the selected compounds across different solvents should be examined. Relevant references related to the current status of the identified problems should be included in the concept note. In view of the staff shortage in the section, budget for semi-skilled manpower may be included in the proposal.

[Action: Dr. M. Rabha, Sci-C]

**New Concept 9: Development and evaluation of antimicrobial mulberry sheet for rearing of silkworm *Bombyx mori* L.**

**Objectives**

- To develop an antimicrobial sheet for the rearing of mulberry silkworms using the bark of harvested mulberry twigs
- To evaluate the efficacy of the antimicrobial paper sheets through On Station Trials at CSB nested units of East and Northeast regions

**Expected Outcome and Utilization**

- Development of an affordable antimicrobial sheet for rearing mulberry silkworms
- Utilization of sericulture byproducts, such as harvested mulberry twigs, to create an effective antimicrobial rearing sheet

**Investigators:** PI- Dr. M. Rabha (Scientist-C, Silkworm Pathology)  
CI- Dr. Rahul K (Scientist-D, Silkworm Pathology)

**Project Asst.:** 01

**Duration:** 2 years

**Proposed Budget:** 10.05 lakhs (Including instruments Grinder/pulp making machine and Accessories/minor equipments like tank for making slurry of pulp, sieve to mesh out the slurry, plain card board for pressing and drying)

**RC comments**

The PI presented the outcome of the pilot study titled "CSB-BER-RCN-250: Development of antimicrobial sheet for use in mulberry silkworm rearing," in which paper sheets were successfully developed from the bark of harvested mulberry twigs and impregnated with antimicrobial compounds. The PI proposed a concept to build upon these findings, which was approved with minor modifications. The study should include the optimization of methods for the mass production of mulberry paper sheets. Additionally, an economic analysis comparing the cost of production for antimicrobial mulberry paper sheets with existing technology should be conducted. Furthermore, the outcome of the pilot study should be incorporated as preliminary work to support the findings in the proposed concept.

[Action: Dr. M. Rabha, Sci-C]

**New Concept 10: Scaling out of improved sericulture technologies among marginal sericultural farmers in West Bengal: A novel seri-school approach**

**Objectives**

- To build the capacity of marginal sericulture farmers through the novel seri-school approach
- To support farmers in transitioning from traditional practices to commercial sericulture



- To assess the socio-economic impact of the beneficiaries in the study area

#### **Expected Outcome and Utilization**

- Enhanced knowledge and capacity: Improved technical skills and knowledge of farmers in sericulture practices
- Increased technology adoption: Higher adoption rates of improved technologies due to motivation and reward-based dissemination
- Improved productivity and quality: Increased mulberry yield, improved cocoon production, and better silk quality
- Demonstration effect: Non-beneficiary farmers may also be encouraged to adopt similar technologies, creating a ripple effect in the community
- Socio-economic upliftment: Long-term improvements in income, livelihood stability, and socio-economic resilience of beneficiary farmers

**Investigators:** PI- Dr. Y. Nagaraju (Scientist-B, Microbiology)

CI's- Dr. Harshitha (Scientist-B, Mulberry Breeding and Genetics)

Dr. Parameshwara Naik (Scientist-C, SEEM)

**Project Asst.:** 01

**Duration:** 2 years

**Proposed Budget:** 27.95 lakhs

#### **RC comments**

The CI briefed the concept, which was approved. It was advised to frame a similar concept for potential Northeastern regions also involving RSRs/RECs.

[Action: Dr. Y. Nagaraju, Sci-B]

#### **New Concept 11: Development and characterization of unreelable cocoons and silk waste as eco-friendly textile fillers**

##### **Objectives**

- To develop products using unreelable cocoons and silk waste as eco-friendly textile fillers
- To characterize and evaluate the performance of the developed product
- To assess the commercial viability of the product/s

#### **Expected Outcome and Utilization**

- Technical and commercial viability of silk waste as textile fillers for bedding textiles and winter wear
- Standard manufacturing procedure for aforesaid products
- Technical characteristics of the above products

**Investigators:** PI- Mr. Arun Kumar (Scientist-B, Reeling & Spinning)

CI's- Dr. Debasis Chattopadhyay (Scientist-D, RSTRS-Malda)

Ms. Suparna Saha (Scientist-B, RSTRS-Malda)

**Project Asst.: 01**

**Duration: 2 years**

**Proposed Budget: 14 lakhs**

**RC comments**

The concept was approved with minor modifications. The concept note must include a detailed methodology based on a thorough literature review. Scientists from RSTRS-Malda may be included as co-investigators, as they will play a key role in the procurement, testing, and processing of raw materials. Additionally, a Project Assistant may be included instead of a JRF, and the budget should be revised accordingly.

**[Action: Mr. Arun Kumar, Sci-B]**

**Agenda No.4 Review of Concluded Projects**

1. **PIE02013SI:** Final yield trial (FYT) of newly identified mulberry genotypes for leaf productivity and quality

The PI presented the final outcome of the project, indicating that three test genotypes (E-13, C-252, and C-174) recorded over 10% higher leaf yield compared to C-2038, along with a lower incidence of pest diseases and improved leaf quality, specifically in terms of total soluble sugar and protein content. The RC advised presenting the data in the forthcoming RAC with a clear plan of action on how to take the results forward. The outcome may preferably be published in in-house journals of CSB. Further, it is advised to submit the completed project report in the specified format and upload the same in e-Submis portal.

**[Action: Dr. Yallappa H, Sci-C]**

2. **PIB02010SI:** Evaluation of promising high yielding mulberry genotypes for E&NE India

The PI presented the final outcome of the project, indicating that seven test genotypes and two checks were evaluated for leaf productivity and nutritional quality across different seasons under irrigated and rainfed zones. It was found that four genotypes outperformed C-2038 in terms of leaf yield while also exhibiting the desired quality in the irrigated zone. The RC recommended presenting the data in the upcoming RAC with a well-defined plan for utilizing the results effectively. It was also suggested that the findings be published, preferably in CSB's in-house journals. Additionally, the final project report should be prepared in the prescribed format and uploaded in the e-Submis portal.

**[Action: Dr. Suresh K, Sci-D]**

3. **AIE02018SI:** Identification of superior bivoltine foundation cross as a male component to improve cross breed productivity in E & NE India

The CI presented the results indicating that the bivoltine male component / parent (18M x 12M / 12M x 18M) is suitable with any of the female component / parent (Nistari / M6DPC / 12Y) for preparation of cross-breed dfls based on OST/OFT study. However, there are ambiguities regarding the data presented, and the data was not statistically analyzed. The CI is advised to review the same.

**[Action: Dr. Th. Ranjita Devi, Sci-C]**

**4. MOE02014SI:** Popularization of improved technologies developed in the field of mulberry sector for E and NE India

C-I: Popularization of new mulberry varieties (C-2038, Tr-23, C776 & C-2028)

C-II: Popularization of bio-control agents for the management of mulberry pests

C-IV: A. Popularization of chawki rearing

B. Popularization of shoot/ shelf rearing & plastic collapsible mountages

C-V: Popularization of sampoorana

The concerned investigators presented the outcomes of the respective components. The RC advised compiling and statistically analyzing the data before presenting it in the forthcoming RAC meeting.

**[Action: Dr. Suresh K, Sci-D/Dr. K. Alam, Sci-C/ Dr. P. Naik, Sci-C/ Dr. M. Rabha, Sci-C]**

**5. MOE02015MI:** Evaluation of improved technologies developed in the field of mulberry sector for E & NE India

C-I: Evaluation of promising BLS resistant variety C-2070

C-II: Evaluation of promising high yielding and low temperature stress tolerant genotypes C-2060 & C-2065 in subtropical condition

C-III: Low cost drip fertigation system for mulberry in Eastern and North Eastern India

C-IV: Evaluation of eco-friendly silkworm rearing bed disinfectant Seri-Win

The RC advised the investigators to propose the technologies that need to be evaluated at the OFT level and include them in the action plan for the next year.

**[Action: Dr. Deepika KU, Sci-C/ Dr. Suresh K, Sci-D/ Dr. Yallappa H, Sci-C/ Dr. M. Rabha, Sci-C]**

**Agenda No.5 Review of the Ongoing Projects/Programmes**

**PIE020021SIC:** Identification and assessment of superior hybrids of polycross population for leaf yield and quality traits in mulberry

**PIB03013SI:** Development of high yielding quality mulberry (*Morus* spp.) genotypes under sub-tropical conditions of Northern India [in collaboration with RSRS, Jammu]

The progress of the projects are in accordance with the set milestones.

**[Action: Dr. Yallappa H, Sci-C]**

**PIE13001MI:** All India Co-ordinated Experimental Trial for Mulberry Varieties (AICEM): Phase IV

The RC advised coordinating with the units where the bioassay is planned and taking all necessary measures to conduct the silkworm bioassay properly while ensuring recording of accurate results. Additionally, it was recommended to consider the RAC suggestions while conducting the bioassay.

**[Action: Dr. Suresh K, Sci-D]**

**MTL01025MI:** Life cycle assessment of mulberry silk: A National assessment [in collaboration with CSRTI-Mysore]

**ARE01028MI:** Recommendation of novel fungicidal and insecticidal application for mulberry [in collaboration with CSRTI-Mysore]

The projects are progressing as planned, in line with the set milestones.

**APS02020MI:** Improvement of seed crop productivity in West Bengal

The PI is advised to take all necessary measures to ensure that the inputs are supplied to the farmers under the study before the start of the crop. Additionally, it is recommended to consider and adhere to the RAC suggestions in the previous meeting.

[Action: Dr. K. Alam, Sci-C]

**BPP02024SIC:** In vitro evaluation of potential health benefits of different botanical parts of mulberry

The progress of the project is as per the milestone.

[Action: Dr. K. Rahul, Sci-D]

**Routine Programme:** Silkworm disease monitoring of seed and commercial crop rearing of Eastern & North Eastern states

The RC advised that, since there is a sporadic incidence of pebrine, the disease survey and surveillance program should be made more vigilant in coordination with DoS and NSSO units. Additionally, it must be streamlined at the institute level.

[Action: Dr. K. Rahul, Sci-D/Dr. M. Rabha, Sci-C]

**CSB-BER-RCN-250 (Pilot Study):** Development of anti-microbial sheet for use in mulberry silkworm rearing

The outcome of the project seems encouraging, and the PI is recommended to utilize the findings to formulate a study for further detailed analysis and standardization in the preparation of an antimicrobial rearing sheet.

[Dr. M. Rabha, Sci-C]

**AIB02019MI:** Development of bivoltine double hybrids suitable for different regions of India

**SIB01038MGC:** Utilization of Japanese silkworm genetic resources for the development of productive bivoltine hybrids (in collaboration with CSRTI-Mysore)

**AIE08011MI:** Evaluation of NPV tolerant bivoltine hybrids and cross breeds at farmers level (in collaboration with SBRL, Kodathi)

The progress of the projects are in accordance with the set milestones.

[Dr. Pooja Makwana, Sci-D/ Dr. Raviraj V S, Sci-C]

**AIB02006MI:** Improvement of Nistari lines for survival and silk productivity

The PI has not presented the follow-up action with supporting relevant data. The molecular analysis, as suggested by the 59<sup>th</sup> RAC, has not been undertaken to date, which was viewed seriously by the house. The PI was advised to act upon the same immediately.

**[Dr. Th. Ranjita Devi, Sci-C]**

**MOE02025SIC:** Identification of seri-based IFS model for enhancing productivity and income at farmers level in West Bengal, Assam and Manipur

The PI is advised to complete the data collection process at the earliest. It is also recommended to seek assistance from the CSB units in Manipur, if possible, depending on the situation, to facilitate data collection.

**MOE02022MIC:** Vulnerability of sericulture to climate change in India

The PI is advised to plan the study in accordance with the suggestions outlined during the VC meeting with the subject expert and RAC Member, Dr. Siddhartha Deb Mukhopadhyay.

**MTS13002MI:** Impact assessment of mulberry sericulture technologies in India [in collaboration with RCS-Bangalore]

The CI is advised to complete the data collection process at the earliest and submit it to the concerned PI on time.

**Extension activities:** The In-charge of the SEEM Division is advised to accomplish the set targets as per the Annual Action Plan.

**[Dr. P. Naik, Sci-C]**

**CFW02023MIC:** Study the weaving and knitting performance of WB & NE mulberry silk yarn & comfort value of its fabric

The progress of the project is as per the milestone.

**[Mr. Arun Kumar, Sci-B]**

**CBT activities:** The In-charge of the Training Division is advised to expedite the process of entering into a MoU/A for establishing SRCs.

**[Dr. Raviraj V S, Sci-C]**

**Agenda No.6 Discussion on general suggestions/comments of RC/RAC**

The new concept notes approved in the RC meeting must be submitted immediately for onward transmission to the CO, after incorporating the suggestions.

The PIs of the projects concluded in the current year are advised to submit the final reports of these projects without any delay and also upload the same in the eSubmis portal.

The research data should be analysed statistically and presented.

The scientists were advised to publish research papers in the in-house journals of CSB and high impact factor journals.

The procurement process of the equipment under the ongoing research projects is to be taken care of in coordination with the store section.

**[Action: All the Scientists]**

The meeting ended with a vote of thanks.

Date: 3/3/2025

Mahwari  
3/3/2025  
(Dr. M. Maheswari)  
Director

**Annexure-I**

**List of participants in the 70<sup>th</sup> Meeting of Research Council (RC)**

#	Name	Designation
1	Dr. M. Maheswari	Director
2	Dr. K. Suresh	Scientist-D, Host Plant Division
3	Dr. Pooja Makwana	Scientist-D, Biotechnology Division
4	Dr. K. Rahul	Scientist-D, PMCE & Silkworm Protection
5	Dr. Parameshwara Naik J.	Scientist-C, SEEM
6	Dr. Yallappa Harijan	Scientist-C, Farm Management
7	Dr. Deepika Kumar Umesh	Scientist-C, Host Plant Physiology
8	Dr. Thangjam Ranjita Devi	Scientist-C, SBG
9	Dr. Mihir Rabha	Scientist-C, Silkworm Protection
10	Dr. Raviraj V.S.	Scientist-C, Training & Biotechnology
11	Dr. Khasru Alam	Scientist-C, Mulberry Pathology
12	Mr. Arun Kumar	Scientist-B, Reeling & Spinning
13	Dr. Y. Nagaraju	Scientist-B, Microbiology
14	Ms. Harshitha BS	Scientist-B, MBG
15	Dr. Pradeep S.D.	Scientist-B, Host Plant Physiology
16	Ms. Sanghmitra Aditya	Scientist-B, Mulberry Pathology
17	Dr. Javid Ur Rahman	Scientist-B, SBG