Minutes of the 57th Research Council (RC) Meeting of CSB–Central Sericultural Research & Training Institute (CSR&TI), Pampore held on 12th March, 2026.

The 57th Research Council (RC) meeting of Central Sericultural Research & Training Institute (CSR&TI), Pampore was held on 12th March 2026 through physical and hybrid mode under the Chairmanship of the Dr. Sakthivel N., Director, CSR&TI, Pampore.

The meeting was attended by the Scientists of the Institute, Research Extension Centres, and Regional Sericultural Research Stations under the jurisdiction of the Institute. The list of participants is placed at Annexure–I.

The Chairman welcomed all the members present in the meeting and emphasized the importance of periodic review of research programmes for strengthening sericulture development in temperate as well as sub-tropical regions. The Chairman highlighted the need for focused research on mulberry improvement, silkworm crop productivity, and technology dissemination to farmers.

Agenda Item No. 1: Confirmation of Minutes of the 56th RC Meeting

The minutes of the 56th Research Council meeting held on 04.12.2025 were circulated to all members, and as no comments were received, they were confirmed.

Agenda Item No. 2: Review of Action Taken on the Recommendations of the 56th RC Meeting

The Action Taken Report (ATR) on the recommendations of the 56th RC meeting was presented before the Council. After detailed discussion, the Council noted the progress made and advised the concerned Scientists to expedite the pending activities.

Agenda Item No. 3: Discussion on New Research Proposals

Following New research proposals submitted by Scientists were presented before the Council. After detailed deliberations, the Council recommended / suggested modifications / approved the proposals for further submission to the competent authority.

1. Exploration of gut symbionts from temperate and wild silkworm for pesticide tolerance

Suggestions:

- Concentrate on commonly available wild silkworm from Bombycidae family
- Specify regions from where silkworms will be collected
- Specify pesticides that will be used for screening bacterial symbionts
- Revise the title of the project.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

2. Value Addition of Mulberry Fruits through Development of Natural Lip Care Products

Presentation of the concept was appreciated and the concept note was approved as such. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Dr. Rajshree Verma, Scientist-B, CSB-CSR&TI, Pampore*

3. Cocoon Artistry as a Value Addition Strategy in Sericulture: Process Validation, Product Development, Design Innovation and Digital Marketing for Livelihood Enhancement.

Suggestions:

- The Scientist is advised to consult entrepreneurs and stakeholders engaged in cocoon crafts, particularly in South India, to explore successful product development, commercialization and digital marketing strategies for enhancing market reach and livelihood opportunities.

- Detailed economics of cocoon-based craft products, including cost of production, expected returns, profit margins, market potential and livelihood generation opportunities through value addition of defective cocoons, may be incorporated in the concept note to establish its economic feasibility and sustainability.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Dr. Rubia Bukhari, Scientist-B, CSB-RSRS, Jammu*

4. Genetic Evaluation of Mulberry Silkworm using Progeny Testing approach for Improving Cocoon Quality.

Suggestions:

- The PI is advised to utilize Jammu breeds (Jam lines) for the study instead of CSR breeds.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

5. Optimization of Ultrasound Assisted Anthocyanin Extraction from *Morus alba* Fruits and its Application as a Natural Food Colorant

Suggestions:

- Workout the contingency amount required for the utilizing the laboratory facilities of SKUAST and update the Budget accordingly.

- Change the *Morus alba* to mulberry fruit in the title.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Dr. Javid Ur Rahman, Scientist-B, CSB-RSRS, Jammu*

6. Development and Application of Genomic Selection Models for Improvement of Silkworm Seed Characters

Suggestions

- **Revision of Project Title:** It was recommended to modify the project title to better reflect the scope of economically relevant traits of silkworm.

- The Council suggested that the **number of genotypes** to be included in the study should be clearly defined.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Sh. Latief Bashir, Scientist-B, CSB-CSR&TI, Pampore*

7. Association of Morpho-physiological Traits in Sexual Variants of Mulberry in North-Western India

The concept note has already been approved during the 49th Research Council (RC) meeting. However, the project was considered for pilot study by RCS. Subsequently, following the resignation of the Principal Investigator (PI) from Board service, the proposal was kept in abeyance due to the lack of appropriate subject specialization.

The project was presented by Shri Vinodh Kumar P.N with modifications and with proper justification about the need of the project. RC recommended that Shri Vinodh Kumar P.N., Scientist-B, may resubmit the proposal in RMIS-02 format after incorporating the suggestions of the Research Coordination Section (RCS) and Research Advisory Committee (RAC). The revised proposal will thereafter be sent to RCS for reconsideration and allotment of project code.

Action: *Sh.Vinodh Kumar, P. N., Scientist-B, CSB-CSR&TI, Pampore*

8. Development of a Sericulture-based Integrated Farming System (IFS) Model for Climate-Resilient and Income-Enhancing Agro ecosystems.

Suggestions

- The PI was advised to visit the field and get the knowledge about the already integrated practices followed by the sericulture farmers in Northern states. The local adopted IFS models should be included as a treatment alongside the scientifically proven models.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Sh. Vipin Kumar, Scientist-B, CSB-CSR&TI, Pampore*

9. Development of Mineral Enriched Seri-Waste Compost (MESCO) for Improving Soil Fertility and Mulberry Productivity

Suggestions:

- The Council recommended that the Principal Investigator (PI) should carry out a systematic estimation of the quantity of seri-waste generated within the institute.
- **Baseline Soil Characterization:** It was recommended that a detailed baseline assessment of soil properties (like pH and others) be carried out prior to the initiation of experimental trials.
- **Inclusion of Micronutrient analysis:** The project should explicitly incorporate the estimation and monitoring of essential micronutrients.
- **Multi-location Field Trials**: It was advised to include multi-location field trials across representative sericulture regions of North India.
- Comparative Analysis of **Chemical Properties** (Control vs Treatments)

The concepts note is approved with suggested modifications. Further, the PI may discuss the concept with Dr. R. L. Ram, Scientist-D & Dr. Jitender Singh, Scientist-D, RSRS, Gonda for modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Sh. Jyotirmay Roy, Scientist-B, CSB-CSR&TI, Pampore*

10. Machine Learning-Based Forecasting and Web Decision Support System for Major Mulberry Pests and Diseases in North Indian Sericultural Regions.

The concept note was not approved, as a similar proposal had already been submitted by Dr. Jitender Singh, Scientist-D, RSRS, Gonda, during the 56th RC meeting and was duly approved.

The RC recommended that Sh. Karthik be included as a Co-Investigator (CI) in the approved project. It was further suggested that the additional components proposed by Sh. Karthik in his concept note may be suitably incorporated into the project submitted by Dr. Jitender Singh.

The Scientist has also been advised to submit a new need-based concept note in the forthcoming RC meeting.

Action: *Sh. Karthik V C: Scientist-B, CSB-CSR&TI, Pampore*

11. Large scale field trial of autumn specific silkworm hybrid (APS9 x BBE0198) in North & North West India.

The concepts note was not approved. The Scientist has been advised to submit a new need-based concept note in the forthcoming RC meeting.

Action: *Dr. Arasakumar, Scientist-B, CSB-RSRS, Sahaspur*

12. Foliar nutrition strategies for maximizing mulberry leaf in sub-tropical region.

Suggestions:

- **Revision of Project Title:** It was recommended to revise the project title to clearly reflect the validation component of the study rather than suggesting development of new strategies.
- **Incorporation of Foliar Spray Recommendations from RSRS, Sahaspur**
  The Council suggested incorporating the foliar spray formulations and recommendations developed by RSRS, Sahaspur, into the experimental plan.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Dr. Arasakumar, Scientist-B, CSB-RSRS, Sahaspur*

13. Combinational evaluation of bivoltine silkworm breeds and mulberry varieties for optimizing summer crop productivity in Doon valley

Suggestions

- **Review of Prior Research**: Thoroughly evaluate previous projects pertaining to the autumn crop at RSRS Sahaspur to ensure novelty and avoid any duplication of efforts.
- **Multi-Crop Approach:** Broaden the scope of the study to incorporate a multi-crop model, rather than focusing solely on the addition of a single crop.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Dr. Sakshi Vaishno, Scientist-B, CSB-RSRS, Sahaspur*

14. Development of nano attractant traps integrated with parasitoid release for sustainable management of *G. pyloalis* in mulberry.

Suggestions:

- **Inclusion of Mass Multiplication Technology**: It was recommended that the project should incorporate the development or standardization of mass multiplication protocols for the identified parasitoids.
- **Study on Seasonal Occurrence of Parasitoids**: The project should include a systematic study on the seasonal incidence and population dynamics of parasitoids.
- **Incorporation of Light Trap as a Management Component**: It was suggested to include light traps as an additional tool within the pest management framework.
- **Multi-location Field Trials**: It was advised to include multi-location field trials across representative sericulture regions of North India.

The concepts note is approved with suggested modifications. The PI is advised to submit the Concept note in RMIS-01 format within 15 days.

Action: *Dr. Jarpla Mounika, Scientist-B, CSB-CSR&TI, Pampore*

15. Evaluation of buniyad/sonalika reeling machine for mulberry silk reeling

Suggestions:

- Assessment of **Constraints in Multiend Reeling Machines** in Jammu & Kashmir.
- **Popularization in Ladakh and Kargil Regions**: It was suggested to include an extension-oriented component aimed at promoting Buniyad/Sonalika reeling machines in Ladakh and Kargil regions.

The concepts note is approved as Pilot study with suggested modifications. The PI is advised to submit the Concept note within 15 days for allotment of Pilot code.

Action: *Sh. Jagdish Verma, Scientist-B, CSB-CSR&TI, Pampore*

Agenda Item No.4: REVIEW ON CONCLUDED PROJECTS

Dr. Santosh Kumar, Scientist-D & PI presented the final progress of concluded project **"PIE03009SI: Evaluation of mulberry genotypes forimprovement in productivity and quality under sub-tropical conditions of Jammu".**

Suggestions:

- **Refinement of Budget Utilization**: The Council suggested that the budget details presented in the final report should be further refined for clarity and transparency.
- **Inclusion of Percentage Representation in Results**: It was recommended to enhance the presentation of results by incorporating percentage-based representations.

House recommended to submit the final report in RMIS-10 format with suggested corrections for submission to RCS, Bangalore at an earliest and the outcome of the project be verified under OFT.

Agenda Item No.5: PROGRESS OF ON-GOING PROJECTS

1) **AIB03006CI: Indo-Uzbekistan Collaborative Research Project on Improvement of Mulberry and Silkworm Breeding in Temperate Regions of India and Uzbekistan.**

Suggestions:

- The house was informed that the materials imported from Uzbekistan during August 2025 did not survive due to multiple factors, including untimely plantation and poor adaptability. However, the rooted materials of five mulberry varieties imported during October–November 2025 are presently under maintenance and are expected to establish successfully.

- The Council advised that utmost care be taken to ensure the survival of these saplings. It was further recommended that advance planning be undertaken for the rearing of the imported silkworm hybrids during the forthcoming spring season.

Action: *Dr. Pawan Saini, Scientist-B, CSB-CSR&TI, Pampore*

2) **PIC03014SI: Evolving superior mulberry varieties for temperate region through in vitro mutagenesis.**

Suggestions:

- The house was informed that the 22 mutant plantlets raised under the project could not survive during hardening and acclimatization stage. The cultures available also got contaminated.

- The project progress was reviewed by the 2 member internal committee and the said committee has recommended reinitiating the project activities with revised milestones.

- The PI was advised to reinitiate the project as suggested by the internal committee and submit the revised milestones for the project. Also, he was advised to take guidance from the earlier PI (Dr. Gulab Khan R.) and the newly added CI of the project (Dr. Aftab A. Shabnam).

Action: *Dr. Pawan Saini, Scientist-B, CSB-CSR&TI, Pampore*

3) **PIE03016SIC: Primary Yield Trial (PYT) of newly evolved mulberry hybrids under temperate conditions of Kashmir Valley.**

Suggestions:

- The PI was advised to maintain the plantation by following recommended package of practices. Record sprouting and frost damage data during March and record the data on morpho-metric during May-June 2026.

Action: *Dr. Pawan Saini, Scientist-B, CSB-CSR&TI, Pampore*

4) **PIP03017MIC: Studies on Carbon Sequestration in Mulberry cultivation under different climatic conditions**

Suggestions:

- The Council recommended organizing an online meeting involving the Principal Investigator (PI) and Co-Investigators (CIs) to review the current status of the project.

- The meeting should specifically address issues related to the delay in revival of the project.

- Constraints, gaps, and operational challenges should be identified and discussed in detail.

- Possible improvements, revised strategies, and a clear roadmap for effective implementation should be formulated.

- Necessary communication may be made with IARI, New Delhi to seek the results of samples sent for analysis during 2025.

Action: *Sh. S. Syam, Scientist-B, CSB-CSR&TI, Pampore*

5) PIN03018MIC: Identification of Zn and Sulphur Solubilising Bacteria: A Soil Reclamation Approach for Sustainable Sericulture in Kashmir Region

Suggestions:

- The progress under the project was found satisfactory. The PI is advised to follow-up with stores for outsourcing the samples for Sanger sequencing target gene (16S rRNA) of 12 bacterial isolates.

Action: *Sh. S. Syam, Scientist-B, CSB-CSR&TI, Pampore*

6) MOE03019SNC: Development of Mulberry Sericulture in Ladakh.

Suggestions:

- The progress under the project was found satisfactory. The PI is advised to timely supply the mulberry saplings for raising plantations at identified farmers field in consultation with LAHDC, Kargil. Further, he is advised to identify the land for raining of mulberry nursery in Kargil.
- Make advance planning for Intensive bivoltine training proposed during July 2026.

Action: *Sh. Gulzar A. Khan, Scientist-D, CSB-CSR&TI, Pampore*

7) PIB03013SI: Development of high yielding quality mulberry (*Morus spp.*) genotypes under sub-tropical conditions of Northern India.

Suggestions:

- It was recommended to update and clearly document the list of superior mulberry genotypes identified so far.
- The Council suggested reducing the population size under Primary Yield Trials (PYT) to ensure better management and more precise evaluation.
- It was advised to prioritize genotype selection based on traits that are most relevant to the sub-tropical conditions of Northern India.
- The PI is advised to conclude the project timely without seeking any extension.

Action: *Dr. Santoshkumar M., Scientist-D, CSB-RSRS, Jammu*

8) PIE03015SIC: Evaluation of drought tolerant mulberry genotypes through preliminary yield trial for rainfed sericulture in Jammu region

Suggestions:

- The PI was advised to carryout experiments for drought tolerance under water stress conditions as suggested by the RAC.

Action: *Dr. Santoshkumar M., Scientist-D, CSB-RSRS, Jammu*

9) **SIB03021SIC: Responsible ethical stunning for humane approach in Mulberry sericulture (RESHAM)**

Suggestions:

- It was recommended to include a detailed study on the impact of the proposed stunning gas on both naked pupae and intact cocoons.
- The project should incorporate experiments to determine the threshold concentration of gas that kills the pupae.

Action: *Dr. Shivam Bharadwaj, Scientist-B, CSB-CSR&TI, Pampore*

10) **CYR03022SIC: Impact assessment of Storage Time, Climate on Mulberry Cocoon Quality and Raw Silk Recovery and Study on Cold storage Preservation of Mulberry Green Cocoon**

Suggestions:

- The Council recommended broadening the scope of the study to include both biotic and abiotic stress factors in addition to climatic variables.

Action: *Dr. Jagdish Verma, Scientist-B, CSB-CSR&TI, Pampore*

11) **SPR-03020MNC: Development of ideal and affordable silkworm rearing houses.**

Suggestions:

- The council suggested to work in close coordination with the Co-PI at IIT Roorkie.
- Complete all the preparations for holding the consultative workshop at IIT Roorkee during March 2026. Invite all the stakeholders of the project for the workshop and gathering the information on various types of Silkworm Rearing Houses in India presently under use.

Action: *Dr. Irfan Illahi, Scientist-D, CSB-CSR&TI, Pampore*

Agenda Item No. 6: Review of Extension and Training Activities

The Council reviewed the extension and training programmes conducted by the Institute and its Research Extension Centres. The Director congratulated the Head of the Training and SEEM Division for the successful completion of the extension programmes. The In-charge, REC Lambheri, was also appreciated for his efforts in organizing the additional training programme at Lambheri. It was further emphasized that more farmer-oriented training programmes and demonstrations should be conducted to ensure effective technology transfer.

Agenda Item No. 7: Any Other Item with Permission of the Chair

With the permission of the Chair, the following issues were discussed:

- Strengthening of sericulture development programmes in hill and remote areas.
- Need for improved mulberry sapling supply to farmers.
- Collaboration with State Sericulture Departments for wider dissemination of technologies.

General Suggestions:

- **Preparation of Institute Profile**: The Director suggested that a comprehensive document titled "CSR&TI, Pampore at a Glance" should be prepared at the earliest for institutional visibility and outreach.

  ***Action**: PMCE Division of CSB-CSR&TI, Pampore*

- Scientists were encouraged to publish research and review papers in reputed journals such as **Indian Silk and Indian Journal of Sericulture**. Newly recruited scientists were specifically advised to contribute regularly to scientific publications.

- **Focus on Need-Based Technologies**: Emphasis should be placed on the development of need-based and field-oriented technologies addressing the practical challenges faced by sericulture farmers. In connection to this newly appointed scientist were advised to undertake regular field visits to gain practical exposure and to design research projects aligned with ground realities.

  ***Action**: All Scientists*

- It was recommended to include a **compiled list of publications** in the agenda of subsequent Research Council meetings for review and record.

  ***Action**: PMCE Division of CSB-CSR&TI, Pampore*

- **Preparation of Technical Bulletin**: A comprehensive technical bulletin in the local language should be prepared and released at the earliest to facilitate better understanding and adoption by farmers.

  ***Action**: SEEM Division of CSB-CSR&TI, Pampore*

- **Digital Outreach to Farmers**: Creation of a dedicated WhatsApp group for farmers was suggested to enable timely dissemination of technologies, advisories, and feedback.

  ***Action**: SEEM Division and all nested units of CSB-CSR&TI, Pampore*

- **Maintenance of Records and Registers**: Proper maintenance of registers for stock, research activities, and other institutional records was emphasized to ensure systematic documentation. Accurate and up-to-date maintenance of expenditure details for all projects was also advised.

  ***Action**: All Divisions and nested units of CSB-CSR&TI, Pampore*

- **Accreditation of Soil Science Laboratory**: Greater focus should be given towards achieving accreditation of the Soil Science laboratory to enhance its credibility and service capacity.

  ***Action**: Host Plant Division of CSB-CSR&TI, Pampore*

- **Monthly Review Meetings**: It was emphasized to hold regular monthly review meetings to monitor and evaluate the progress of scientists.

  ***Action**: PMCE Division of CSB-CSR&TI, Pampore*

The Chairman appreciated the efforts of all Scientists and staff for their contributions to research and extension activities. The meeting ended with a **vote of thanks to the Chair**.

Dr. Sakthivel N.,
Chairman RC,
CSB–CSR&TI, Pampore

Date: 12.03.2026

List of participants:

A) Physical Mode:

1) Dr. Sakthivel N Director, CSR&TI, Pampore
2) Dr. Irfan Illahi, Scientist-D, CSR&TI, Pampore
3) Dr. Aftab Ahmad Shabnam , Scientist-D, CSR&TI, Pampore
4) Dr. Rajesh Kumar, Scientist-D, P4, BSF, Manasbal
5) Sh. P Kumaresan, Scientist-D, CSR&TI, Pampore
6) Dr. Shivam Bhardwaj, Scientist-B, CSR&TI, Pampore
7) Sh. S Syam, Scientist-B, CSR&TI, Pampore
8) Sh. Jagdish Verma, Scientist-B, CSR&TI, Pampore
9) Dr. Latief Bashir, Scientist-B, CSR&TI, Pampore
10) Dr. Rajshree Verma, Scientist-B, CSR&TI, Pampore
11) Dr. Vinodh Kumar, P.N. Scientist-B, CSR&TI, Pampore
12) Shri Karthik V.C. Scientist-B, CSR&TI, Pampore
13) Dr. Vipin Kumar, Scientist-B, CSR&TI, Pampore
14) Dr. Jyotirmay Roy, Scientist-B, CSR&TI, Pampore
15) Shri Mohd Shafi Mir, Sr. Technical Assistant, CSR&TI, Pampore
16) Nida Mushtaq, Field Assistant, CSR&TI, Pampore
17) Jameela Akther, Field Assistant, CSR&TI, Pampore

B. Hybrid Mode:

1) Dr. Ram Lakhan Ram, Scientist-D, REC, Basti
2) Dr. Jitendra Singh, Scientist-D, REC, Basti
3) Dr. SantoshkumarMagadom, Scientist-D, RSRS, Jammu
4) Dr. Gulzar Ahmad, Scientist-D, CSR&TI, Pampore
5) Shri Chhattarpal, Scientist-D, RSRS, Sahaspur
6) Dr. Rita Singh, Scientist-B, REC, Ghumarwin
7) Dr. Arasakumar, Scientist-B, RSRS, Sahaspur
8) Dr. Sakshi Vaishnav, Scientist-B, RSRS, Sahaspur
9) Dr. Javeed-ul Rehman, Scientist-B, RSRS, Jammu
10) Dr. Rubia Bukhari, Scientist-B, RSRS, Jammu
11) Shri Vignesh Kurkoti, Scientist-B, REC, Lamberi
12) Dr. Sheetal Rani, Scientist-B, P4, BSF, Manasbal