Minutes of the 50thResearch Advisory Committee (RAC) Meeting of CSB-Central Sericultural Research & Training Institute (CSR&TI), Pampore held on 29th July, 2026 through Hybrid Mode.

The 50th Meeting of the Research Advisory Committee (RAC) of CSB–Central Sericultural Research & Training Institute (CSR&TI), Pampore was held on 29th July, 2026 in hybrid mode under the Chairmanship of Prof. (Dr.) Nazeer Ahmed, Former Vice-Chancellor, SKUAST-Kashmir and Chairman, RAC. The meeting was attended by the RAC Members; Head, RCS, CO-Bengaluru; Institute Nodal Officer, RCS, CO-Bengaluru; Dr. N. Sakthivel, Director, CSB–CSR&TI, Pampore and representatives from the concerned State Departments. Scientists from the Institute and its nested units, including the Regional Sericultural Research Stations (RSRSs) and Research Extension Centres (RECs), also participated in the meeting. The list of participants is placed at Annexure-I.

At the outset, Dr. N. Sakthivel, Director, CSB–CSR&TI, Pampore, welcomed the Chairman, RAC Members and all the participants to the 50thRAC Meeting.

Thereafter, Prof. (Dr.) Nazeer Ahmed, Chairman, RAC, delivered the opening remarks and welcomed the members. He emphasized the need to effectively utilize the expertise of the newly joined Scientists for strengthening research in North and North-West India, with greater focus on enhancing productivity, exploring the feasibility of increasing the number of silkworm rearing cycles, strengthening technology transfer and extension activities and exploring the potential of non-mulberry sericulture. He also stressed the need for closer and continued coordination with the State Departments for effective implementation of sericulture development programmes. The Chairman welcomed the newly joined Scientists and placed on record his appreciation for the contributions of Dr. Sardar Singh, Former Director, CSB–CSR&TI, Pampore.

Following the opening remarks of the Chairman, the agenda items were taken up for detailed discussion and deliberation.

Agenda Item no.1:Confirmation of last RAC meeting minutes

The minutes of the 49th RAC meeting held on 13thSept 2025, were circulated to all members, and as no comments were received, they were confirmed.

Agenda Item no.2: R&D highlights of the Institute.

Presentation by the Director, CSB-CSR&TI, Pampore

- ✓ The Director, CSB-CSR&TI, Pampore, presented an overview of the ongoing, concluded, and newly proposed projects of the institute. It was mentioned that the projects were aligned with the vision and mission of the institute, with due emphasis on undertaking need-based research projects addressing the emerging requirements of the sericulture sector.
- ✓ The Director highlighted the recent establishment of RSRS, Gonda, Uttar Pradesh, *w.e.f.* 13thApril 2026, and mentioned that the centre is predicted to serve as a model RSRS. The intensive sericulture activities being undertaken in the Punjab region and the planned expansion of sericulture into new areas of Rajasthan were also highlighted. The Director further informed about the plan to establish an SRC centre in collaboration with an NGO to facilitate the expansion of sericulture into new regions of northern India, particularly Rajasthan.
- ✓ The research and publication achievements of the Institute, including publications in NAAS-rated/Impact factor journals, conference proceedings and book chapters, were highlighted. The

release of the book *Climate-Resilient Sericulture* during the Soil Scientists Meet 2026 and various awards and recognitions received by the Scientists were also acknowledged.

The Chairman and RAC Members appreciated the progress achieved during the year in research, extension and training activities and provided suggestions for further strengthening the Institute's R&D programmes. The RAC emphasized the need to accord greater priority to silkworm breeding and genetics in future research programmes. The RAC also appreciated the modified rack system for silkworm rearing and acknowledged the establishment of the new RSRS at Gonda. Under the Seri-Tourism initiative at P4 Basic Seed Farm, Manasbal, it was suggested to create greater awareness among visitors about mulberry cultivation and silkworm rearing. Further, the RAC encouraged the horizontal expansion of sericulture in potential areas, particularly the Nubra Valley of Ladakh and suitable regions of Rajasthan.

Agenda Item no.3: Follow-up action on the General Recommendations/ Decisions of the Last RAC Meeting.

Dr. Aftab A. Shabnam, Scientist-D, PMCE Division, presented the follow-up action taken by the Institute on the General Recommendations/Decisions of the previous RAC Meeting. The RAC reviewed the action taken on each recommendation and expressed satisfaction over the follow-up made by the Institute.

Agenda Item no.4: Follow up action taken on the Project Specific Recommendations/Decisions of the last RAC Meeting

The follow-up action taken on the project-specific recommendations/decisions of the previous RAC Meeting was presented by the respective Principal Investigators (PIs) and reviewed by the RAC along with the progress of the concerned ongoing projects under Agenda Item No. 7.

Agenda Item No. 5: Discussion on New Research Proposals

Six new research proposals submitted by the Scientists which were approved by the RCS were presented before the RAC for consideration. After detailed deliberations on the objectives, methodology, experimental design, relevance and expected outcomes, the RAC recommended suitable modifications and provided specific suggestions for refinement of the proposals.

5.1 Exploration of Gut Symbionts from Temperate and Wild Silkworm (Lepidoptera: Bombycidae) for Pesticide Tolerance

Suggestions:

- The study should focus on domesticated and commercially important silkworm races, particularly Assam races and well-established temperate races, instead of wild silkworms.
- The study should specifically consider pesticides commonly used in apple orchards, including Quinalphos and Thiachloprid, along with other pesticides of regional relevance. The concerned Scientists were advised to consult the State Horticulture Department to identify the major pesticides currently used in apple orchards, their recommended doses and application schedules, so that the study may be planned under field-relevant exposure conditions.
- Instead of fungicide, concentrate more on insecticides for screening

- The objectives should be revised with greater emphasis on the isolation, characterization and utilization of pesticide-tolerant gut symbionts from commercially important silkworm races. The potential application of promising microbial isolates, including the feasibility of developing a microbial consortium, should be evaluated under commercial silkworm rearing conditions rather than restricting the study to laboratory-level characterization.
- The literature review should be strengthened while preparing the final project document. The concerned Scientists were advised to thoroughly review the Annual Reports and relevant publications of various CSB Institutes and other pertinent literature to identify earlier work carried out on similar aspects, avoid duplication, clearly establish the research gap and appropriately refine the objectives and methodology of the proposed project.
- The objectives, experimental programme and project duration should be revised in line with the above suggestions. Considering the focused scope of the proposed work and available previous research, the feasibility of reducing the project timeline should also be examined.

The ***RAC approved the Concept Note*** with the suggested modifications and advised the PI to incorporate the recommendations and submit the revised Concept Note in the prescribed RMIS-02 format for further necessary action.

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

5.2 Value Addition of Mulberry Fruits through Development of Natural Lip Care Products

Suggestions:

- The RAC appreciated the proposed utilization and value addition of mulberry fruits in the study and suggested incorporating a detailed cost-benefit analysis to assess the economic feasibility of the developed product.
- Considering the labour requirement for collection and processing of mulberry fruits, the manpower requirement should be realistically assessed and adequate budgetary provision incorporated in the project.
- The regulatory requirements for product testing, certification and marketing should be duly addressed. The concerned Scientists were advised to coordinate with the appropriate regulatory agencies for obtaining the required FSSAI certification/approval for the finalized product.

The ***RAC approved the Concept Note*** with the suggested modifications and advised the PI to incorporate the recommendations and submit the revised Concept Note in the prescribed RMIS-02 format for further necessary action.

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

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

Suggestions:

- The cost-benefit analysis should be incorporated as an integral component of the study to assess the economic feasibility and practical utility of the proposed treatments.

- The experimental plot size, number of plants per plot and total area required for conducting the experiment should be clearly worked out and incorporated in the project document.
- The experimental programme should adequately cover both bush and tree forms of mulberry, as relevant to the objectives of the study.
- For recording experimental observations, nine plants per treatment per replication should be maintained/selected to ensure adequate representation and reliability of the observations.
- The nutritional composition of the sericulture waste proposed for utilization should be systematically evaluated to assess its nutritional value and suitability for the intended end use.
- Considering the large number of treatments and complexity of the experimental design, it was suggested to include an Agronomist and/or a Statistician as Co-Investigators (CIs) in the project for appropriate experimental planning, statistical analysis and agronomic interpretation.
- The literature review should be strengthened while preparing the final project document. The concerned Investigator was advised to review the Annual Reports and relevant publications of various CSB Institutes to identify earlier work carried out on similar aspects, avoid duplication, establish the research gap and suitably refine the proposed study.
- The required raw materials should preferably be procured from North-West India, subject to their availability, to ensure regional relevance and suitability for the proposed study.

The ***RAC approved the Concept Note*** with the suggested modifications and advised the PI to incorporate the recommendations and submit the revised Concept Note in the prescribed RMIS-02 format for further necessary action.

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

5.4 Development of nano-attractant based light trap Integrated with Parasitoid Release for Sustainable Management of *Glyphodes pyloalis* in mulberry

Suggestions:

- The concerned investigators were advised to thoroughly refer to the previous related projects undertaken by Dr. Rajesh Kumar and Dr. M. A. Khan and incorporate the relevant findings, methodologies and research gaps while refining the proposed project. Inputs from Dr. M. A. Khan may also be obtained during project formulation.
- Considering the seasonal nature of pest occurrence, the period and peak incidence of the target pest(s) should be taken into account while planning the experimental programme. Accordingly, a minimum of two years of field trials should be incorporated to ensure adequate evaluation under field conditions.
- The possibility of approaching NIT for outsourcing the development of nano-formulations required for the proposed study may be explored.
- The cost-benefit analysis should be incorporated as an integral component of the study to assess the economic feasibility and practical utility of the proposed treatments.
- The literature review should be strengthened while preparing the final project document. The concerned Investigator was advised to review the Annual Reports and relevant publications of

various CSB Institutes to identify earlier work carried out on similar aspects, avoid duplication, establish the research gap and suitably refine the proposed study.

The ***RAC approved the Concept Note*** with the suggested modifications and advised the PI to incorporate the recommendations and submit the revised Concept Note in the prescribed RMIS-02 format for further necessary action.

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

5.5 Stabilization of Quad-Crop Bivoltine Sericulture in the Doon Valley through an Integrative Agronomic Approach

Suggestions:

- The proposed study may initially be undertaken as a one-year pilot study to generate baseline information and assess the feasibility of quad-crop silkworm rearing before taking up the programme on a larger scale. Accordingly, the work schedule and experimental programme should be revised.
- For quad-crop rearing, it was suggested to maintain two separate sets of mulberry plantations rather than depending on a single plantation throughout the cropping schedule. Adequate number of plants should be established well in advance to ensure sufficient and quality leaf availability for all the crops. If quad-crop rearing is proposed using the same set of plantations, it should be supported with proper scientific justification and a clearly defined package of practices for plantation management.
- A Plant Scientist (Mulberry) may be included as Co-Investigator (CI) considering the importance of mulberry plantation management and continuous leaf availability in the proposed study.
- The study should initially be undertaken on a smaller and manageable scale rather than starting with 100 DFLs, and the scale may subsequently be enhanced based on the observations and experience generated during the pilot study.
- Theliterature review should be strengthened while preparing the final project document. The concerned Investigator was advised to review the Annual Reports and relevant publications of various CSB Institutes to identify earlier work carried out on similar aspects, avoid duplication, establish the research gap and suitably refine the proposed study.

The RAC recommended that the proposal be **revised as a one-year pilot study**, incorporating the above suggestions.

Action: *Dr. Sakshi Vaishav, Scientist-B, CSB-CSR&TI, Pampore*

5.6 Validation of different foliar spray to tree mulberry in Sub-tropical conditions of North-West India to optimize the leaf yield.

Suggestions:

- The title, objectives, treatments and methodology of the proposed study should be comprehensively revised as suggested by RCS.
- The study should specifically focus on the development of an Integrated Nutrient Management (INM) package suitable for North-West India, with emphasis on the utilization of locally available

nutrient sources/materials to enhance its regional relevance, feasibility and farmer-level adoptability.

- The experimental design, treatment combinations and methodology should be standardized appropriately to enable scientific evaluation and validation of the proposed INM package.
- Theliterature review should be strengthened while preparing the final project document. The concerned Investigator was advised to review the Annual Reports and relevant publications of various CSB Institutes to identify earlier work carried out on similar aspects, avoid duplication, establish the research gap and suitably refine the proposed study.

The ***RAC approved the Concept Note*** with the suggested modifications and advised the PI to incorporate the recommendations and submit the revised Concept Note in the prescribed RMIS-02 format for further necessary action.

Action: *Dr. Arasakumar E, Scientist-B, CSB-CSR&TI, Pampore*

Agenda Item No.6: Review on Concluded projects:

Two concluded research projects of the Institute were presented before the RAC for review. The major findings, achievements, technologies developed, outputs generated and follow-up actions of the respective projects were discussed. After detailed deliberations, the RAC provided project-specific observations and suggestions for effective utilization of the research outcomes and further necessary action.

6.1Evaluation of mulberry genotypes for improvement in productivity and quality under sub-tropical conditions of Jammu (PIE03009SI)

Suggestions:

- The RAC appreciated the work carried out under the project and acknowledged the outcomes achieved.
- The promising genotypes/materials-PPY-03 and PPY-06-identified under the project should be further evaluated at CSB-RSRS, Gonda, Uttar Pradesh, as well as under farmers' field conditions, particularly to validate their early-sprouting characteristics under different growing conditions.
- The shortlisted promising genotypes/varieties (PPY-03 and PPY-06) were recommended for inclusion in AICEM trials for further evaluation and consideration towards varietal release.

Action: *Incharge, CSB-RSRS,Jammu*

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

Suggestions:

- The House appreciated the efforts made towards generating and maintaining a broad range of genetic variability using the available resources.
- Further systematic screening and shortlisting of superior genotypes is advised for their inclusion in the Preliminary Yield Trials (PYT).

Action: *Incharge,CSB-RSRS, Jammu*

Agenda Item No.7: Review on ongoing projects

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

Suggestions:

- The RAC appreciated the satisfactory progress made under the project, particularly the successful import and maintenance of five silkworm races and four mulberry varieties. The identification of 30 promising segregating lines from the Uzbekistan-derived races was also appreciated by the Committee.
- The concerned Investigators were advised to exercise utmost care in the survival, proper maintenance and systematic multiplication of the imported mulberry genotypes, ensuring that no promising genetic material is lost and that adequate planting material is available for evaluation during the ensuing seasons.
- The selected genotypes should be regularly monitored for the incidence of pests and diseases during their maintenance and multiplication, and appropriate preventive and management measures should be undertaken as and when required.

Action: *Dr. Sakthivel N (PI); Dr. Aftab A. Shabnam (CI); Dr. Irfan Illahi(CI), CSB-CSR&TI, Pampore*

7.2 Impact Assessment of Storage Time, Climate on Mulberry Cocoon Quality & Raw Silk Recovery and Study on Cold Storage Preservation of Mulberry Green Cocoons (CYR03022SIC)

Suggestions:

- The progress made under the project was found to be satisfactory. The feasibility of establishing a mini cold-storage facility of the minimum required capacity under the project may be explored, and a separate budget proposal for its procurement may be submitted, if found feasible. The validated findings should subsequently be further evaluated under a large-scale cold-storage facility to assess their scalability and practical applicability.
- Based on the validated results, a comprehensive Standard Operating Procedure (SOP) for storage should be developed, clearly specifying the optimum storage conditions, including temperature, relative humidity and other relevant parameters, as well as the permissible storage duration, to ensure effective and standardized storage practices.

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

7.3 Development of ideal and affordable silkworm rearing houses (SPR03020MNC)

Suggestions:

- The progress made under the project was found to be satisfactory.
- It was suggested to also establish and evaluate a suitable prototype under temperate conditions at CSB-CSR&TI, Pampore.

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

7.4 Evolving superior mulberry varieties for temperate region through in vitro mutagenesis (PIC03014SI).

Suggestions:

- The progress made under the project was found to be unsatisfactory. The loss of plant materials during the acclimatization process was viewed seriously by the RAC, and the concerned scientist was advised to furnish a proper justification for the failure and loss of materials under the project.
- After detailed deliberations, the RAC recommended that the project be shifted to CSB-CSR&TI, Mysuru, and entrusted to the previous PI, Dr. Gulab Khan, considering his expertise and experience in tissue culture and in vitro mutagenesis.

Action: Dr. Pawan Saini, Scientist-D, CSB-RSRS, Sahaspur,
Sh. Syam S. Scientist-B, CSB-CSR&TI, Pampore and
PMCEDivision, CSB-CSR&TI, Pampore

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

Suggestions:

- The RAC observed that the budget utilization under the project was considerably low and advised the concerned Scientists to ensure effective and timely utilization of the allocated budget in accordance with the approved project activities and financial provisions.

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

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

Suggestions:

- The RAC emphasized the need to expedite the pending activities and complete the project within the stipulated duration.
- It was suggested to expedite the initiation of field activities in the Kandi Region and take up the proposed trials at the earliest. Necessary coordination for identification of suitable land area with the Sericulture Development Department (SDD), Jammu should be completed on priority to avoid any delay in implementation.

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

7.7 Development of Mulberry Sericulture in Ladakh (MOE03019SNC)

Suggestions:

- The RAC suggested expanding the project activities to the Nubra Valley, with primary emphasis on the establishment and strengthening of mulberry plantations in the region.
- Following the establishment of adequate mulberry leaf resources, silkworm rearing activities should be initiated in the Nubra Valley to assess the feasibility of expanding mulberry sericulture in the region.

Action: *Dr. Gulzar Ahmad Khan, Scientist-D, CSB-CSR&TI, Pampore*

7.8 Studies on Carbon Sequestration in Mulberry Cultivation Under Different Climatic Conditions (PIP03017MIC)

Suggestions:

- The project is progressing as per the prescribed milestones. The PI was advised to present the statistically analysed data along with the mid-term findings and recommendations emerging from the project, so as to facilitate a comprehensive assessment of the results and their practical implications.

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

7.9 Identification of Zinc and Sulphur solubilizing bacteria: A soil reclamation approach for sustainable sericulture in Kashmir region (PIN03018MIC)

Suggestions:

- The project is progressing as per the prescribed milestones. The PI was advised to deposit the identified novel strains with the Microbial Type Culture Collection and Gene Bank (MTCC) for their proper preservation, authentication and future utilization in research and sustainable sericulture applications.

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

7.10 Responsible Ethical Stunning for Humane Approach in Mulberry Sericulture (RESHAM) (SIB03021SIC)

Suggestions:

- The RAC appreciated the concept, relevance and potential significance of the newly initiated project. The investigators were advised to initiate the procurement process for the required equipment at the earliest, so as to ensure timely availability of the facilities and smooth and timely execution of the planned project activities.

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

Agenda Item No.8: Review on Projects with Institute as CI

8.1 Life cycle assessment of Mulberry Silk; A National Assessment (MTL01025MI)

Suggestions:

- As the project is at the concluding stage, the investigators were advised to share the required data with the PI at CSB-CSR&TI, Mysuru for its timely analysis, compilation and integration into the final assessment.
- The investigators were advised to discuss with the PI the feasibility of entrusting data collection from reelers and weavers in West Bengal to CSB-CSR&TI, Berhampur, considering that a substantial quantity of cocoons produced in J&K is reeled and woven in West Bengal. This approach would facilitate adequate geographical coverage and collection of representative data for the national-level life cycle assessment.

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

8.2 Utilization of Japanese Silkworm genetic resources for the development of productive Bivoltine hybrids (SIB01038MGC)

Suggestions:

- The Houseappreciated the progress of the project and observed that the activities were progressing satisfactorily as per the stipulated milestones.
- The RAC further acknowledged the successful isolation of a good number of promising segregants under the project and advised their systematic evaluation and maintenance for further utilization.

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

8.3 Vulnerability of Sericulture to Climate Change in India (MOE02022MIC)

Suggestions:

- As the project is at the concluding stage, the investigators were advised to share the required data with the PI at CSB-CSR&TI, Berhampur for its timely analysis, compilation and integration into the final assessment.

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

8.4Exploration of Mulberry Forage as Potential Alternative Feed Resources for Sustainable Small Ruminant (BPP01052MNC)

Suggestions:

- The Houseappreciated the progress of the project and observed that the activities were progressing satisfactorily as per the stipulated milestones.

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

8.5Popularisation of Mulberry Silkworm Bivoltine Double Hybrid (TT21 X TT56) and Cross breed (MV1 X S8) (SIE01049MIC)

Suggestions:

- The investigators were advised to coordinate and discuss the matter of supplying DFLs on a cost-free basis with the concerned PI and the Director and take necessary action for resumption of DFL distribution.

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

Agenda Item No.9: OFT/OST

Suggestions:

- The RAC expressed serious concern over the poor performance of the OFT/OST, particularly in the Himachal Pradesh, where the results were below expectations and were not commensurate with the performance observed under the respective research projects.
- The concerned Scientists were strictly instructed to strengthen monitoring and follow-up of the OFTs through frequent field visits, particularly during the silkworm rearing season. Appropriate selection of progressive and committed farmers and close monitoring of the distributed OFT materials should be ensured.
- The Scientists were further advised to critically assess the field-level constraints and factors responsible for poor performance and take timely corrective measures. Wherever the expected

results are not achieved, the specific limitations and scientifically justified reasons for the poor performance/failure of the OFT should be properly documented and reported.

Action: *SEEM Division, CSB-CSR&TI, Pampore and all concerned Scientists*

Agenda Item No.10: ECP and Other programmes

Suggestions:

- The RAC reviewed the progress of Extension Communication Programmes (ECPs) undertaken by the Institute during 2025–26 and appreciated the Institute for achieving more than 100% physical target.
- The Committee emphasized the need for effective coordination and systematic implementation of the ECPs during the current year, in close collaboration with the concerned State Departments, to ensure wider outreach and effective delivery of extension activities.

Action: *SEEM Division, CSB-CSR&TI, Pampore and all concerned Scientists*

Agenda Item No.11: CBT and other Training Programmes

Suggestions:

- The RAC reviewed the progress of Capacity Building & Training (CBT) programmes undertaken by the Institute during 2025–26 and appreciated the Institute for achieving 100% of the prescribed target.
- The Committee emphasized the need to organize need-based training programmes for farmers and staff, aligned with their specific requirements and emerging needs.
- The Committee further advised the Institute to organize business entrepreneurship development workshops/training programmes, preferably in collaboration with universities and colleges, to promote entrepreneurship and facilitate wider outreach.

Action: *Training Division, CSB-CSR&TI, Pampore*

Agenda Item No.12: General Discussions

The representative from the State Sericulture Department, J&K highlighted field-level constraints affecting silkworm crop performance, particularly the non-availability of quality mulberry leaf and proper mountages, resulting in the formation of deformed cocoons. Incidence of Flacherie disease was also reported to cause considerable crop loss among farmers. Further, in the hilly regions, fluctuations in climatic conditions, particularly the decline in night temperature to around 6–7°C during the rearing period, were reported to adversely affect silkworm crops and result in crop losses in several areas.

Agenda Item No.13: Concluding Remarks from the chair and RAC members

The RAC Chairman and Members appreciated the recent initiatives undertaken by CSB-CSR&TI, Pampore, for the development and promotion of the sericulture sector in North and Northwest India. The concerns and issues raised by participating stakeholders were deliberated upon in detail. The Committee emphasized the need to establish effective collaborative mechanisms among the concerned stakeholders to ensure timely communication, prompt resolution of field-level issues, and coordinated efforts towards the sustainable development of the sericulture sector in the region.

General Suggestions:

- The RAC Chairperson emphasized giving priority to the development of climate-resilient silkworm breeds/hybrids capable of withstanding emerging climatic stresses. In this regard, promising Japanese and Uzbekistan silkworm races should be systematically evaluated and utilized in suitable breeding programmes.
- Efforts should be made to enhance bivoltine silk productivity, targeting improved cocoon yield and exploring the feasibility of 3 – 4 rearing cycles per year in Uttarakhand.
- The Committee emphasized that OFTs/OSTs should be accorded high priority and monitored rigorously by the concerned Scientists. Scientists involved in the development of hybrids and technologies should actively participate in their field evaluation, closely monitor their performance under farmers' field conditions, and ensure their effectiveness and suitability for wider adoption.
- Special efforts should be made to expand sericulture into new and promising regions, particularly Nubra Valley, Rajasthan, and other suitable areas. Provide technical support to farmers in these areas, and ensure effective implementation of sericulture development programmes.
- The Chairman emphasized the scope for silk diversification through non-mulberry silks in the northern and north-western regions, particularly Eri and Oak Tasar, which could provide additional income opportunities for marginal farmers.
- Promising research materials generated under earlier projects should be systematically evaluated and carried forward for further utilization.
- Collaborative projects should be strengthened through better coordination, clearly defined responsibilities and adherence to approved milestones and timelines.
- The RAC suggested conducting biannual meetings with the concerned State Departments to identify field-level problems and farmers' needs, and to formulate need-based research interventions for minimizing crop losses and improving sericulture productivity
- To expand and strengthen sericulture activities in Uttar Pradesh by developing region-specific interventions suited to the diverse agro-climatic conditions of the State.
- To develop and standardize a comprehensive Package of Practices (PoP) for different agro-climatic regions of Uttar Pradesh and promote sericulture among rural youth as a viable livelihood and self-employment opportunity.
- To expand sericulture activities in the Gurez Valley with the support of Krishi Vigyan Kendra (KVK) and encourage farmers to establish mulberry gardens as a foundation for sustainable sericulture development in the region.
- Residual pesticide effects on silkworms pose a significant threat to sericulture, particularly in major apple-growing belts of Shopian, Kulgam and Baramulla districts. It was suggested that a joint study by CSB-CSR&TI, Pampore, SKUAST-K and the Sericulture Development Department (SDD), J&K be undertaken to assess the impact of pesticide residues on spring commercial silkworm rearing. The study may also explore the feasibility of modifying/advancing the brushing schedules to avoid periods of peak pesticide contamination and minimize the risk associated with pesticide exposure.

- Region-specific comprehensive Packages of Practices (PoPs) should be developed and effectively disseminated through multilingual extension materials, including short films and other suitable communication tools.
- Promising technologies developed by the Institute, particularly the Ergo Duster and affordable silkworm rearing house, should be explored for patenting and appropriate IPR protection.
- In case of change of Project Investigators, proper and smooth handing/taking over of project responsibilities, records and research materials should be ensured. Newly assigned Investigators should take responsibility for timely completion of the projects as per the approved milestones, with necessary access to previous project records being facilitated wherever required.
- Newly recruited Scientists shall strictly adhere to the recommendations of the Research Advisory Committee (RAC) and ensure systematic implementation of the assigned research activities in accordance with the approved project milestones, timelines, and deliverables, with particular emphasis on timely execution and achievement of the prescribed physical and scientific targets.
- While formulating research projects, Investigators/Co-Investigators should be included based on actual requirement, relevant expertise and capability, with clearly defined responsibilities and proper justification.

Meeting ended with vote of thanks to the chair and all the distinguished RAC members.

Sd/

(**Prof. Nazeer Ahmad**)
Ex- Vice Chancellor (SKUAST-K) &
Chairman RAC,
CSB-CSR&TI, Pampore

Annexure-I.

List of participants during 50th Research Advisory Committee (RAC) Meeting of CSB-CSR&TI, Pampore held on 29-07-2026

PHYSICAL MODE

1. Dr. Abu Manzar, Professor-cum-Chief Scientist SKUAST (K) Member RAC
2. Dr. Inayat Saleem Fazli, Represented Director, SDD, J&K Member RAC
3. Mr. Bashir Ahmad Matoo,Silkworm Rearer,Anantnag,Member RAC
4. Dr. Sakthivel N. Director, CSB-CSR&TI, Pampore
5. Dr. Irfan Illahi Scientist-D, CSB-CSR&TI, Pampore
6. Dr. Aftab Ahmad Shabnam Scientist-D, CSB-CSR&TI, Pampore
7. Dr. Rajesh Kumar Scientist-D, CSB-P4, BSF, Manasbal
8. Sh. Gulzar Ahmad Khan Scientist-D, CSB-CSRTI, Pampore
9. Sh. S. Syam Scientist-B CSB-CSRTI, Pampore
10. Sh. Jagdesh Verma, Scientist-B, CSB-CSRTI, Pampore
11. Dr.Jarpla Mounika, Scientist-B, CSB-CSRTI, Pampore
12. Sh. Latief Bashir, Scientist-B, CSB-CSRTI, Pampore
13. Dr. Rajshree Verma, Scientist-B, CSB-CSRTI, Pampore
14. Sh. Karthik V.C, Scientist-B, CSB-CSRTI, Pampore
15. Sh. Jyotirmay Roy, Scientist-B, CSB-CSRTI, Pampore
16. Sh. Vipin Kumar, Scientist-B, CSB-CSRTI, Pampore
17. Sh. Vinodh Kumar P N, Scientist-B, CSB-CSRTI, Pampore
18. Sh. Mohd Shafi Mir, Sr. Technical Assistant, CSB-CSRTI, Pampore
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29. Director, Department of Sericulture, Uttarakhand
30. Representative from Directorate of Horticulture, Punjab
31. Representative from Directorate of Industries, Himachal Pradesh
32. Dr. C. M. Babu, Scientist-D & Head, RCS, CSB, Bangalore
33. Sh. Nazeer Ahmad Saheb, Scientist-D, RCS, CSB, Bangalore.
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