
केरेबो-केन्द्रीयरेशमजननद्रव्यसंसाधनकेन्द्र, केन्द्रीयरेशमबोर्ड, होसूर-635 109

**CSB - Central Sericultural Germplasm Resources Centre
Central Silk Board, Hosur – 635 109**

**MINUTES OF THE 47TH MEETING OF THE
RESEARCH ADVISORY COMMITTEE HELD ON 4TH DECEMBER 2024**

The 47th meeting of the Research Advisory Committee [RAC] of CSB-CSGRC, Hosur was convened on 4th December 2024 under the chairmanship of Dr. S. N. Sushil, Director, ICAR-National Bureau of Agricultural Insect Resources [ICAR-NBAIR], Bengaluru. At the outset, Dr. G. Lokesh, Scientist-D, CSB-CSGRC, Hosur extended a warm welcome to the Chairperson & members of the Research Advisory Committee (RAC) and participants to the 47th RAC meeting and requested Chairperson for his opening remarks.

Dr. S. N. Sushil, Chairperson, RAC welcomed all the participants to the meeting and congratulated Director and all scientists for significant progress and improvement in CSGRC activities. He expressed that germplasm maintenance, wherein live materials are being handled, is a challenging task, nevertheless it is a huge contribution towards the country's development. He opined that more research projects are needed to be approved for this centre. He also invited scientists for collaboration work with ICAR-NBAIR, Bengaluru. With this, the Chairperson advised the house to commence the meeting and requested for fruitful deliberations.

The Director presented an overview of CSB-CSGRC, outlining the mandate and key activities of the centre. The committee greatly appreciated the efforts of CSGRC team in maintaining the huge repository of Seri-genetic resources and carrying out the mandated activities and the following suggestions were made:

- a) Each scientist should have at least one project as PI and attempt for external funding for the projects. Scientist may discuss with the Director (Technical), CSB to propose new project proposal according to the mandate of the centre and thrust areas, and obtain guidelines for preparation of concept note for fast acceptance and to avoid delay.
- b) Each scientist may publish at least 2 research papers in a year in peer reviewed journal with IF >1 / NAAS rating >6. They may request funding assistance from headquarters for publication in such journals.
- c) If quarantine facility is available at the centre, CSGRC may develop a separate mechanism for germplasm import/export by writing to PPA requesting delegation of power to CSGRC for import/export of seri-germplasm. Director may discuss the same with Director (Technical), CO, separately.

d) CSGRC may focus on identifying biotic stress tolerant mulberry accessions.

[Action: Concerned scientists]

Subsequently, agenda-wise items were taken up for discussion.

ITEM NO. I: CONFIRMATION OF MINUTES OF THE 46TH MEETING OF RAC HELD ON 3RD JUNE, 2024

As no comments were received, the House confirmed the minutes of 46thRAC meeting.

ITEM NO. II: REVIEW OF FOLLOW-UP ACTION ON THE GENERAL & PROJECT-SPECIFIC DECISIONS OF THE RAC MEETING

Follow-up action on the decisions taken during 46thRAC meeting was presented and the following suggestions were made:

1. An annual calendar of activities can be prepared for survey of unexplored areas for mulberry germplasm. Survey and exploration may be jointly carried out as planned with other CSB institutes.
2. Automation by use of AI based tools/isothermal techniques can be explored in sericulture. Scientists may discuss the possibilities with Dr. Manjunath, ICAR-NBAIR.
3. A brain storming workshop or meet can be organized to bring awareness on promising mulberry and silkworm accessions identified for effective utilization in breeding programmes.

[Action: Concerned scientists]

ITEM NO. III: REVIEW ON THE PROGRESS OF THE ONGOING RESEARCH PROJECTS

The ongoing research projects were reviewed and the following decisions were taken:

1. **PIE-06008SI: Exploration, Collection, Characterization, Evaluation, Re-establishment, Conservation and Supply of Mulberry Genetic Resources (MGRs) (Phase-X)**

Budget utilization under the project may be improved. The shortlisted promising accessions identified under different phases may be evaluated for pre-breeding potentials through collaborative projects. The seasonal major pests may be observed and recorded.

[Action: Dr. G. Thanavendan, Sci-C]

2. **PIG06010SIC: Studies on cytological status of mulberry genetic resources**

The committee appreciated the information revealed from the work carried out under the project. Copy number variations and splice variant-associated issues need to be optimized for polyploids. Phenolics and alkaloids in polyploids may be estimated in collaboration with other institutes. Research papers may be published from the project outcome in peer reviewed journals.

[Action: Shri. Raju Mondal, Sci-C]

3. MTL01025MI: Life cycle assessment of mulberry silk-A National Assessment

The house took note of the progress made under the project.

[Action: Shri. Raju Mondal, Sci-C]

4. PIG06011MIC: Identification of promising mulberry fruit yielding accessions

The characterization & evaluation trials may be undertaken simultaneously at all the test centres. Chitin/ chitosan coating material developed by Dr. K.N. Madhusudan at CSRTI, Mysuru and sericin based edible coating material developed by Dr. Naveen V. Padaki, at CSTRI, Bengaluru can be collected to study their effect on improving the shelf life of Mulberry fruit. The Division of Post Harvest Technology & Agricultural Engineering, ICAR-IIHR may be contacted to discuss the techniques or methodology for improving the shelf life of mulberry fruits. The PI may explore the possibility of entering the elite mulberry fruit germplasm for multi-location testing (MLT) under All India Co-ordinated Research Project on Arid Zone Fruits at CIAH, Bikaner.

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

5. AIE06009MI: Collection, Characterization, Evaluation, Conservation and Utilization of Silkworm Genetic Resources (X phase)

The committee appreciated the digitization of database carried out under the project.

[Action: Dr.G. Punithavathy, Sci-D]

ITEM NO. IV: REVIEW OF CONCLUDED RESEARCH PROJECT

6. AIG06007MI: Molecular characterization and assessment of genetic diversity in silkworm (*Bombyx mori*L.) germplasm

The committee suggested to take up further functional annotations of the Whole genome re-sequence data and genome assembly. The total number of SNPs correlating with phenotypic characters needs to be narrowed down through further analysis. Complete the additional RNA sequencing work, compile the data and submit the final report at the earliest. Furthermore, efforts may be taken to mine and validate the genes responsible for different traits in silkworm. Barcoding/ genetic coding of silkworm germplasm may be explored and whole genome sequencing of KS-10, 31D and other elite & unique silkworm genetic resources to understand the genetic mechanism and to generate genomic information. A separate meeting may be organised including silkworm breeders & experts to review the duplicate silkworm accessions identified under the project for further decision.

[Action: Dr. G. Lokesh, Sci-D]

ITEM NO. V: ANY OTHER POINTS WITH THE PERMISSION OF THE CHAIR

1. Different set of analysis are required to be carried out to evaluate the potential of silkworm genotypes and may be carried out in discussion with Director (Technical).
2. RAC members may be contacted for guidance and collaboration.

[Action: Concerned scientists]

Dr. N. Sureshkumar appreciated the efforts of scientists and advised the scientists to discuss project proposals with Approving authority before actual submission. The scientists may attempt for externally funded projects.

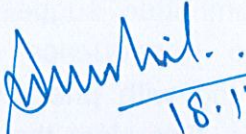
Dr. T. Mogili, RAC member, opined that the scientists need to go through the shortlisted germplasm and outcome of pervious projects thoroughly before proposing new projects.

Dr. M. Sankaran, RAC member expressed that scientists may approach ICAR-NBPGR, ICAR-NBAIR and ICAR-CIAH for research collaboration.

Dr. S. Manthira Moorthy, Director (Technical) encouraged scientists to focus on characterization of germplasm for better utilization. Scientists were advised to explore the possibility of developing byproducts for marketing. CSGRC may be made the nodal centre for export and import of seri-germplasm. Further scientists may focus on infrastructure development of the centre.

The Chairperson, Dr. S.N.Sushil,complimented all the scientists for their presentations and requested Director (Technical) that each scientist be given atleast 1 project as PI. He encouraged the scientists to develop patentable technologies in the process of seri-germplasm conservation. He thanked RAC membersfor their effective discussions and constructive suggestions made during the meeting.

The meeting ended with a vote of thanks by Dr.Ritwika Sur Chaudhuri, Scientist-C.


18.12.24

Dr.S. N. Sushil

Chairperson, RAC

निदेशक / Director

राष्ट्रीय कृषि कीट संसाधन ब्यूरो

ICAR-National Bureau of Agricultural Insect Resources

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**List of participants for the 47thMeeting of the Research Advisory Committee
Of CSB-CSGRC, Hosurheld on 04/12/2024**

1. Dr. S. N. Sushil, Director, ICAR-NBAIR, Bengaluru, Chairperson, RAC
2. Dr. Suresh Kumar, Scientist-D (Retd.), Central Silk Board, Member RAC
3. Dr. T. Mogili, Scientist-D (Retd.), Central Silk Board, Member RAC
4. Dr. M. Sankaran, Head & Principal Scientist, ICAR-IIHR, Bangalore, Member RAC
5. Dr.K.P. Mohapatra, Principal Scientist, ICAR-NBPGR, New Delhi, Member RAC (virtual)
6. Dr. T. Venkatesan, Principal Scientist& Head, Division of Genomic Resources, ICAR-NBAIR, Bangalore, Member RAC (virtual)
7. Dr. S. Manthira Moorthy, Director (Technical), Member, RAC
8. Dr. V. Nishitha Naik, Director, CSB-CSGRC, Hosur, Member Convener, RAC
9. Dr.S. Nazeer Ahmed Sahab, Scientist-D, RCS Section, Central Silk Board, Member RAC
10. Dr. N. Sakthivel, Scientist-D & Head, Mulberry Division, CSB-CSGRC, Hosur
11. Dr. G. Punithavathy, Scientist-D& Head, Silkworm Division,CSB-CSGRC, Hosur
12. Dr. G. Lokesh, Scientist-D, CSB-CSGRC, Hosur
13. Dr.Ritwika Sur Chaudhuri, Scientist-C, CSB-CSGRC, Hosur
14. Dr. G. Thanavendan, Scientist-C, CSB-CSGRC, Hosur
15. Dr. M.C. Thriveni, Scientist-C& Head, PMEC Division, CSB-CSGRC, Hosur
16. Shri. RajuMondal, Scientist-C, CSB-CSGRC, Hosur
17. Dr. M. Nandan, Scientist-B, CSB-CSGRC, Hosur
18. Shri. S. Sekar,D.D. (Comp), CSB-CSR&TI, Mysore
19. Dr. K.M.Ponnuvel, Scientist-D, CSB-SSPC, Mysore
20. Dr.HimanshuDubey, Scientist-C, CSB-SBRL, Kodathi
21. Ms. Tanya Ahmed, JRF, CSB-CSGRC, Hosur
22. Smt. S. Chandini, Project Assistant, CSB-CSGRC, Hosur
23. Shri. K. Ayyanar, Project Assistant, CSB-CSGRC, Hosur
24. Shri. A. Thirupathi, Project Assistant, CSB-CSGRC, Hosur
25. Shri. R. Gokulraj, Project Assistant, CSB-CSGRC, Hosur
26. Shri. Pavan K.R., Project Assistant, CSB-CSGRC, Hosur
