केन्द्रीय रेशम जननद्रव्य संसाधन केन्द्र, केन्द्रीय रेशम बॉर्ड, होस्र - 635 109 Central Sericultural Germplasm Resources Centre Central Silk Board, Hosur – 635 109

PROCEEDINGS OF THE 66™ RESEARCH COUNCIL MEETING OF CSGRC HELD ON DECEMBER 9™, 2021

The 66th Research Council meeting of CSGRC, CSB, Hosur was convened on 9th December, 2021, chaired by Dr.B.T.Sreenivasa, Director, CSGRC. He initiated the meeting by welcoming all participants and advised all scientists to work on the progress of their projects as per the milestones. With this, item-wise discussion was taken up and the progress of research projects from July to November, 2021 was reviewed. List of participants is appended at Annexure 1.

ITEM NO. I: CONFIRMATION OF THE MINUTES OF THE 65™ RC MEETING HELD ON 18™ AUGUST, 2021

The minutes of the 65th RC meeting was confirmed since no comments were received.

ITEM NO. II: REVIEW OF FOLLOW-UP ACTION ON THE DECISIONS OF THE 65TH RC MEETING

Action taken on the decisions of the 65th RC meeting held on 18th August, 2021 was reviewed and following decisions were arrived at:

1. Plot boards/accession boards should be updated at the earliest.

[Action: All Scientists, Mulberry Division]

2. Condemnation of all unserviceable scientific equipments should be carried out at the earliest by obtaining unserviceable certificate for each article/quipment

[Action: Divisional Heads]

ITEM NO. III: FORMULATION OF NEW PROJECT CONCEPTS

1. Transcriptome analysis of promising fruit yielding mulberry genotypes

Dr. G. Ravikumar presented the concept note. He was suggested to include the recent references and the proposal in the prescribed format can be sent to CO for approval.

[Action: Dr. G. Ravikumar, Sc-D]

2. Screening of fruit yielding mulberry germplasm and development of package and practices for fruit tree plantation

Dr. G. Thanavendan, Sc-C informed the house that the concept note was submitted to Central Office and approval is awaited.

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

3. Standardization of protocol for cryopreservation of mulberry pollen and vegetative buds

Shri. Raju Mondal, Sc-B, informed that the request for collaboration was accepted by IIHR, Bangalore. The Committee advised the scientist to submit the same in MIS format to C.O. for clearance at the earliest.

[Action: Shri. Raju Mondal, Sc-B]

ITEM NO. IV: PROGRESS OF ONGOING RESEARCH PROJECTS (JUL-NOV, 2021)

1) PIE-06001 SI: Collection, characterization, evaluation, conservation and supply of mulberry genetic resources - Phase IX (Nov.18 – Nov.21)

The PI presented the progress of the project. PI was advised to complete the biochemical characterization for 75 accessions by utilizing the infrastructure at SBRL, Kodathi.

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

2) PIG-06004 SI: Studies on cytological status of mulberry genetic resources

The PI presented the progress of the project. PI was suggested to verify the chromosome type in *Morus alba*.

[Action: Shri. Raju Mondal, Sc-B]

3) PIG-06005 SI: Molecular characterization of mulberry genetic resources for the identification of duplicates and effective utilization

The PI presented the progress of the project. The committee suggested the PI to increase the concentration of agarose gel for more intense bands.

[Action: Dr. M.C. Thriveni, Sc-B]

4) PIB-3586: Development of superior mulberry varieties through controlled hybridization for North-West Indian states (Coll. project of CSRTI, Pampore with CSGRC, Hosur)

The Co-PI informed that there is no milestone was set during the period of review for CSGRC, Hosur under the project. The house took note of the same.

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

5) PIB-3629: Development of mulberry genotypes suitable for rainfed hill farming in North - West India (Coll. project of RSRS, Jammu with CSGRC, Hosur)

The Co-PI informed that there is no milestone was set during the period of review for CSGRC under the collaborative project. The house took note of the same.

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

6) PIC-01003CN: Genetic enhancement of mulberry by genomics approaches: A multi component network project: NW4b: Mimic alkaloids in mulberry and their role in modulating host plant – Insect interactions (Coll. project of CSR&TI, Mysore with UAS-GKVK, Bangalore, CSIR-NCL, Pune and CSGRC, Hosur)

The Co-PI informed that there is no milestone was set during the period of review for CSGRC under the collaborative project. The house took note of the same.

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

7) PIT-08004: Study on epigenetic and autophagy modifiers on induction of haploid microspore embryogenesis in mulberry (Coll. Project of SBRL, Kodathi with CSGRC, Hosur)

The CI presented the progress of the project. He was suggested to check the cell size of different varieties (S-13, V1 and K2) in 30 days old culture for more understanding on cell proliferation.

[Action: Shri. Raju Mondal, Sc-B]

8) AIE-06002MI: Evaluation of bivoltine silkworm genetic resources for tolerance to abiotic stress in selected hotspots (Collaboration with SBRL, Kodathi, CSR&TI, Mysuru, Berhampore & Pampore)

The PI presented the progress of the project. The Committee suggested improving the presentation slides.

[Action: Dr. M.Maheswari, Sc-D]

9) AIE-06003-SI Evaluation of silkworm genetic resources of *Bombyx mori* L. with reference to inbreeding depression and their conservation

The PI presented the progress of the project. She was suggested to evaluate the inbreeding depression, if any, in consultation with statisticians from Central Office.

[Action: Dr. M.Maheswari, Sc-D]

10) AIT-06006MI Marker-assisted screening to identify silkworm genetic resources tolerant to BmNPV and BmBDV (Collaboration with SSTL, Kodathi)

The PI presented the progress of the project. The Committee advised the PI to review the SSR primers as provided by CSR&TI, Mysore followed by bioassay studies for validation of the markers for BmNPV tolerance.

[Action: Dr. Ritwika Sur Chaudhuri, Sc-C]

11) Molecular characterization and assessment of genetic diversity in silkworm *Bombyx mori* L (Collaboration with SBRL, Kodathi)

The PI presented the progress of the project. The Committee suggested to expedite the outsourcing work by following the guidelines of Central Office.

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

ITEM NO. VIII: DISCUSSION ON GENERAL COMMENTS/ SUGGESTION OF RC

➤ With regard to proposal for X phase of Collection, characterization, evaluation, conservation and supply of mulberry genetic resources, the scientist was suggested to separate the graphical representation for collection and supply of mulberry germplasm by institute wise. The pest monitoring should include all the major insect pests during the project period. The pruning of mulberry germplasm for regeneration of shoots can be done once in a year. Supporting photographs for old field gene bank can be included in the project proposal. The net house repair and maintenance work to be initiated in GeM portal under service option. Hiring of JCB service for uprooting old field gene bank and for making drainage channel to be taken up through GeM portal service option.

[Action: Dr. G. Thanavendan, Sc-C & Head, Mulberry Division]

Unserviceable articles can be grouped as per the dead stock list of 2020-21.

[Action: Equipment maintenance committee]

- > Constraints in registering the trait specific germplasm for fruit yielding accessions can be explored and the same may be conveyed to competent authority.
- > Articles can be prepared on vegetatively propagated mulberry accessions, and published in Indian Journal of Plant Genetic Resources.
- Exploration for collection of new mulberry accessions on the silk route should be taken up.

[Action: All Scientists, Mulberry Division]

- > Printing of catalogue of mulberry germplasm characterization and SOP of silkworm to be completed soon.
- > Success stories in the form of popular articles can be published from CSGRC and submitted to Indian Silk and put up on CSGRC website too.
- ➤ Labelling of trait-specific germplasm and organising awareness programme for stakeholders is encouraged.
- ➤ Brainstorming workshop of CSGRC needs to be conducted at the earliest. All scientists are advised to discuss with the undersigned regarding the convenient date and topic, including preparation of base paper from each division
- > Budget utilization of all the projects should be improved.
- > All scientists are advised to make at least one research publication in their work area before the next RAC meeting of the centre.
- > Divisional heads are advised to procure information of current total germplasm holdings of each institute and their nested units, including developed/evolved and collected from different countries/institutes.
- ➤ Annual work report of all scientists should be submitted latest by 15th January, 2022 with documentary proofs for publications/award, etc.

[Action: Scientists of Mulberry & Silkworm Division]

A letter may be sent to C.O. requesting to authorize JE (Electrical) for condemnation of electrical equipments/appliances instead of approaching authorized dealers/electricians for unserviceable certificate. In addition, AD (Comp) may be authorized for condemnation of e-wastes.

[Action: Shri. S.Sekar, AD (Comp) & Shri. M. Vijaykumar, JE (Elec)]

Maintenance Committee may approach CPWD to obtain estimates for renovation of office building, rearing and grainage buildings, staff quarters, guest house and security shed and submit the proposal to Central Office.

[Action: Maintenance Committee]

Chairman, Research Council

LIST OF PARTICIPANTS FOR THE 66™ RESEARCH COUNCIL MEETING OF CSGRC CONVENED ON 09/12/2021

- 1. Dr. B.T.Sreenivasa, Director & Chairman, Research Council, CSGRC, Hosur
- 2. Dr. M. Maheswari, Scientist -D & Head, Silkworm Division
- 3. Dr. G. Ravikumar, Scientist-D & Head, Mulberry Division
- 4. Smt. G. Punithavathy, Scientist D
- 5. Dr. G. Lokesh, Scientist-D
- 6. Dr. G. Thanavendan, Scientist C
- 7. Shri. Raju Mondal, Scientist B
- 8. Dr. M.C. Thriveni, Scientist-B