Minutes of the 66th Research Council meeting held on 29.7.2021 and 30.7.2021 at CSRTI-Mysuru through Webex platform

The 66th meeting of Research Council of CSRTI-Mysuru was held on 29th & 30th July 2021 through video conferencing mode on Webex platform to review the new concept notes, concluded research projects and progress of on-going projects, TOT, Extension and Capacity building programmes of the Institute and nested units. The list of the participants is appended at **Annexure - I.**

Dr. Babulal, Director and Chairperson of RC welcomed all the participants. All the divisional/sectional heads, scientists and JRFs, SRFs, RAs of the main Institute attended the meeting and heads of RSRSs and nested units got connected through Webex platform and attended the meeting virtually.

Director in his opening remarks advised all the PIs to present their progress of the work briefly, to the point. He advised the PIs to state the reason for delay of works/problems if any while presenting the progress and ATRs and to specifically inform whether the action taken is done fully or partially. With this remarks Director requested Scientist-D, PMCE to proceed as per the Agenda.

I. Confirmation of the minutes of the 65th meeting held on 22.3.2021 and 23.3.2021

The minutes of the 65th meeting of RC were circulated to all the members, as no comments were received from any of the member, the minutes were confirmed.

II. Review of follow up action taken on decisions of previous meeting

Decision	Follow up action	Final Decision
A. Decisions of previous RC meeting		
1.Studies on long term persistence of pesticides sprayed to pre-mulberry, its impacts on silkworm and development of bioremediation strategies ***Decision**:*As per CO suggestion, before under taking further studies, a pilot study should be conducted. The committee advised to submit a pilot study proposal. (Action: Dr. E. Bhuvane-swari, Sc-C,)	Pilot study proposal was made for the silkworm physiological part separately, entitled as 'A study on the Physio biochemical changes in the Silkworm *Bombyx mori*, showing non spinning syndrome'' Proposal under process.	As per previous RC decision Dr. Bhuvaneswari, E. Sci-C, Sw. Physiol. PI submitted the Pilot study proposal, the committee advised PMCE to provide necessary approval for initiation of the study. (Action: Sci-D, PMCE)
2. Design and Development of 3-D fabric based mount-ages suitable for silk worm rearing. ***Decision***: The committee advised that a pilot study proposal be prepared and submitted within a fortnight. (Action: S.M. Hukkeri Sci-	Pilot study proposal has to be submitted for approval	Pilot study proposal was submitted for approval. The committee advised PMCE to provide necessary approval for initiation of the study. (Action: Sci-D, PMCE)

D,SED)		
3. Studies on chemical-free and water-less disinfestation for room/equipments of CRC/Late age rearing for sustainable Sericulture ***Decision***: The committee suggested to submit the revised proposal for pilot study with revised budget within a fortnight for implementation. (Action: S.M. Hukkeri Sci-D, SED)	Pilot study proposal submitted for approval	Pilot study proposal was submitted for approval the committee advised PMCE to provide necessary approval for initiation of the study. (Action: Sci-D, PMCE)
4.Primary Yield Evaluation of short-listed hybrids for development of disease resistant productive genotypes with special reference to root diseases under assured water and input conditions. ***Decision***: The committee suggested PMCE to obtain the referee comments and send for CO approval. (Action: Sci-D, PMCE)	Awaiting for one more comment	Due to non receipt of one referee comment for the project, the committee advised PMCE to ascertain and obtain one more referee comments and send for CO approval. (Action: Sci-D, PMCE)
5.Identification and development of β-sheet rich bivoltine silkworm breeds/hybrids by inducers. ***Decision***: As per CO advice brainstorming session on silkworm breeding was to be organized at CSRTI Mysuru and on the basis of the outcome of brainstorming session, projects has to be formulated. However, brainstorming session is yet to be conducted. We may request C.O. Bengaluru to refix the date for organizing the said brain storming workshop. (Action: Dr. S.M. Moorthy, Sci-D, BBL)	As per CO request the details pertaining to Brainstorming session were submitted	As per CO advice brainstorming session on silkworm breeding was to be organized at CSRTI-Mysuru and on the basis of the outcome of brainstorming session, projects has to be formulated. The committee advised the PI to incorporate the outcome of the workshop and submit the proposal for CO clearance. (Action: Dr. Satish. L, Sci-C, SW Pathology)
6.Irrigation water requirement for mulberry crop to amend previous	As Dr. Rajaram, Sci-D incharge REC Samaynallur retired	The committee entrusted the study to Dr. R. Mahesh, Scientist-C, Agronomy

recommendation/Weather based crop coefficient approach: ***Decision*:** The committee observed that no action has been reported on the matter. Accordingly, concerned scientist is advised to take necessary action as per previous meeting decision. (Action: Dr. Rajaram, Sci-D incharge REC Samaynallur)		section (Action Dr. R. Mahesh, Scientist-C, Agronomy)
7. Identification of consistent poor sericulture performers *vis* a *vis* best performers to find out the reasons for failure and remedial measures to improve economy. ***Decision***: Head, SEEM Division was advised to submit a comprehensive proposal in RMIS-02 format to find out the reasons and suggestions for remedial measures. (Action: Sci-D and Head SEEM, Dr. T.V.S. Srinivasa Rao Sci-D, REC Eluru, Sci-D and Head RSRS, Kodathi and Mulugu)	Proposal will be submitted.	The committee suggested Head, SEEM Division to submit the concept note in RMIS-01 format to forward to CO for clearance. (Action: Sci-D, PMCE)
B. Decisions of previous RAC meeting		
1.PRE 01005 CN: Demonstration and popularization of pheromone trap against silkworm uzifly *Exorista bombycis* ***Decision***:Regarding Commercialization of the uzi lure the committee suggested to popularize the technology through DoS by circulating the pamphlets and publishing the article in popular journals. (Action: Dr.S. Mahiba Helen, Sci-D, PML)	Commercialized to two firms(through NBAIR, Banglore and Pamphlets have been published	As per previous meeting decision of publishing an article in popular journals is pending and the committee advised the PI to publish the article at the earliest. (Action: Dr. Mahiba Helen, Sci-D, PML)
AIT 3593: Transcriptome analysis of silkworm for	Manuscript was prepared and submitted to Institute	Dr. Kusuma,L. Scientist-C informed that the manuscript

identification of molecular markers for improvement of silk quality ***Decision*:** Dr. Kusuma, Scientist C informed that she will complete the work on preparation of manuscripts and will submit to peer reviewed journal during April 2021. (Action: Dr. Kusuma L, Sci-C, BBL)	publication committee for scrutinizing and awaiting approval for submission to Journal.	was submitted to the publication committee for clearance and approval and the same will be submitted for publishing in peer reviewed journal during August 2021. (Action: Dr. Kusuma L, Sci-C, PMCE)
C. Review of new concepts/projects proposals		
1. Amelioration of Chlorantraniliprole toxicity to silkworm, *Bombyx mori*. ***Decision***: After thorough discussions, the committee approved the concept note with a suggestion to include similar works done after reviewing the literature at National and International level. (Action: Dr.Satish. L, Sc-C, BBL)	Revised Concept note submitted to CO for approval	PI informed that as per CO suggestion the concept note was revised and submitted for approval. The committee advised PMCE to send reminder to CO in the matter. (Action: PMCE)
2. Improvement of silkworm growth through identification of novel *endophytes* against mulberry foliar diseases. ***Decision***: The committee approved the concept note with a suggestion to change the title as per objectives by removing the word novel and silkworm as the study focus on mulberry foliar diseases. (Action: Dr.Satish. L, Sci-C, BBL)	CO suggested to take it as pilot study	AS per CO suggestion the PI submitted the pilot study to PMCE and same was approved for initiation. The committee suggested PI to complete the work as per the proposed timeline. (Action: Dr.Satish. L, Sci-C, SWPath)
3. Android Based Classification of Cocoons & Quality Assessment using Machine Learning for Mobile Application ***Decision****:* The committee approved the concept note and asked the scientist to re-submit the concept by revising the methodology.	Modified proposal will be presenting in the RC meeting.	As per previous RC suggestion the PI was advised to re-submit the concept by revising the methodology in RIMS-01 format for submitting to CO clearance. (Action: Shri. M. N. Chandra Shekar, Sci-D, Reeling)

(Action: Shri. M.N.Chandra Shekar, Sci-D, Reeling)		
C. Review of ongoing projects		
1.PIC 3620:Engineering photosynthesis in mulberry for resilience to climate change: A C4 approach. ***Decision***: Dr.Tanmoy Sarkar presented the progress of the project and committee noted the progress and advised to submit proposal for extension and to complete the formalities of RCGM immediately. (Action: Dr.Tanmoy Sarkar, Sci-C, MBG)	Request letter for extension of the project for 6 months period has been submitted to C.O. for consideration. The process of IBSC reconstitution is under progress.	The PI informed the status of extension of the project to the committee and approval is awaited from CO. The committee advised the PI to complete the work within the extension period requested and also to complete the formalities of RCGM. (Action: Dr.Tanmoy Sarkar, Sci-C, MBG)
2. PIB 3633-Development of highly productive and widely adapted mulberry hybrids using exotic and wild germplasm ***Decision***: Dr. G. S. Arunakumar presented the progress of the project and committee noted the progress and advised to complete the work as per milestones. Also advised to follow up with stores section for the delay in purchase of green shade net. (Action:Dr. Arunakumar G.S., Sci-C, Mol. Boil)	Activities of the project have been undertaken as per the milestones. It was followed up regularly and given request letters three times for erection of green shade net.	The committee advised PI to follow up the matter with stores section on purchasing and installation of green shade net. (Action: Dr. Arunakumar ,G. S. Sci-C, Mol. Biol)
19.BPS 01013 CN: Utilization and diversification of silkworm pupae products for human & animal consumption and composting **Decision**: Dr.Y.Thirupathaiah presented the progress of the project and committee noted the progress and advised to complete the work as per milestones. Further, advised to find out the reasons for increase in inorganic elements in spent pupae compared to fresh pupae.	Suggestions were noted, regarding the reasons for increase in inorganic elements in spent pupae compared to fresh pupae was discussed with collaborators in the project, it was suggested that, some quantity of organic content in spent will be utilized by microorganisms and converted into CO2, however, inorganic elements may not be easily recycled.	The committee advised the PI to purchase the spent pupae through CSTRI, Bangalore only as suggested during review meeting held by Director(Tech)on 22&23 July 2021. (Action: Dr.Y.Thirupathaiah, Sci-D, SW. Physiology)

(Action: Dr.Y.Thirupathaiah, Sci-D, SW. Physiology)		
E.Trial of Technologies (OST/OFT)		
Trial of Technologies: The concerned Scientists (PI) presented the progress made for the OSTs(4) and OFTs(4) ***Decision***: The committee noted the progress presented by individual PIs and advised all PIs to continue the OFT/OST during 2021-2022 and also submit OSTs/OFTs in project format as per Action plan meeting held on 4th and 5th February 2021 at CO Bengaluru. (Action: All the concerned PIs)	Prepared the project in RMIS 02 format and will be submitted.	As per Action plan meeting held on 4th and 5th February 2021 at CO Bengaluru, it was advised to submit all the OST/OFTs of CSRTI-Mysuru as sub-components of a single project in RMIS-02 format. Accordingly the project in RMIS-02 format was made and ready for submission. The committee advised to submit the proposal to CO by 1st week of August 2021. (Action: All the concerned PIs, PMCE)
F. Review of progress of pilot studies & General		
The Scientists (PI) presented the progress made for the 5 pilot studies. ***Decision***: The committee noted the progress presented by individual PIs and advised all PIs to submit a detailed completion report highlighting the outcome of the pilot study and its utility report. Regarding extension for Phytol study, PI may submit the request letter indicating the reasons. (Action:All the concerned PIs)	1.Report of the pilot study submitted. Three models were developed for the horizontal ccoon harvesting.The model with three rods system of deflossing found to be superior. 2.Two models suitable for the laboratory conditions with trolley were developed.The model with two rods which can be operated in standing position is preferred. 3.For the study entitled "Studies on fecundity enhancement by application of natural stimulants during oviposition in silk moth *B. Mori* L" by Dr.R. Bhagya was provided 2 months extension. 4. PI has given justification and the study has been given two months extension.	As per previous meeting decision, Dr. Bhuvaneswari, E., Sci-C, PI has submitted extension for Phytol extraction study with proper justification and same has been approved. The committee advised to complete the study in time and submit the concluding report for up loading in Institutes website. (Action: Dr.E. Bhuvaneswari,Sci-C,SW Physiology)

	5.For the study entitled "Identification of candidate gene markers for the development of silkworm hybrid with longevity associated with stress tolerance and productive traits" by Dr.Ranjini M.S was extended for 3 months.	
General		
Director advised PMCE to speed up the publication of Annual Report 2019-20 as inordinate delay has been observed. (Action: Sci-D, PMCE)	Due to Covid-19 pandemic delay there wasa delay in the printing, it will be completed by 2nd week of August 2021.	The Committee noted the delay due to Covid-19 for printing of Annual Report 2019-20 and advised PMCE to complete the printing of Annual Report 2019-20 by August 2021. (Action: Sci-D, PMCE)
Setting up of Incubation centre to be initiated and required budget proposal may be included in the revised Action plan 2021-22. The chairman of the committee constituted for the purpose, Dr. S.M. Moorthy, Sci-D, BBL may initiate the action on the matter. (Action: SC-D, BBL)	Will be discussed in the meeting	Regarding setting up of Incubation centre at CSRTI-Mysuru Dr. S.M. Moorthy, Sci-D, BBL was entrusted for taking action. In place of Dr. S.M. Moorthy, Sci-D, BBL, the chairman of the committee nominated Dr. Madhusudhan K.N, Sci-D, BBL to take up the work and advised to initiate the action on the above matter. (Action: Dr.Madhusudhan K.N Sci-D, BBL)

G. Review of new concepts/projects proposals.

As per agenda, the review of concept notes was taken up. PIs presented the concept notes and the project wise decisions taken by the committee are as follows:

1.Physiological evaluation of mulberry germplasm for elevated CO_2 tolerance

Decision: The committee approved the proposal and requested to submit a revised proposal by incorporating the present status of the increase in CO2 and also to revise the title and methodology with intensive literature survey and proper scientific planning .

(Action:Dr. Divya Singh, Sci-B,Mul Physiology)

2.Physiological and biochemical basis of plant growth regulators induced moisture stress tolerance in mulberry

Decision: The committee approved the proposal with an advice to incorporate the previous works done at CSB Institutes on PGRs and submit the revised proposal. It was also opined that the outcome of the study should reflect the advantage of the proposal over the existing products.

(Action: Dr. Divya Singh, Sci-B,Mul Physiology)

3. Impact of Drip fertigation technology On mulberry productivity (as ToT approach)

Decision: The committee accepted the proposal with an advice to incorporate advanced approaches used in other crops to cater large scale cultivations in the proposal.

(Action: Dr. Mahesh R, , Sci-C, Agronomy)

4.Validation of silk fibroin regulators- ubiquitin and mannosidase among silkworm breeds

Decision: The committee approved the proposal as it is a follow up of the concluded project.

(Action: Kusuma L , Sci-C, PMCE)

5. Development of linkage map for important economic characters (high cocoon ability) of silkworm, Bombyx mori L.

Decision: The committee approved the proposal with an advice to refer the works done at other CSB Institutes to avoid duplication and also to include one CI from SBRL, Bangalore

(Action: Kusuma L , Sci-C, PMCE)

6. Identification and evaluation of major and minor effector genes controlling NPV and IFV disease resistance

Decision: The committee approved the proposal with an advice to refer the works done at other CSB Institutes to avoid duplication and also to include one CI from SBRL, Bangalore

(Action: Satish L , Sci-C, S.W Pathology)

7.Assessment of soil organic carbon pools in mulberry based land uses in southern India

Decision: The PI has been suggested to submit a concept note incorporating the suggestion of CO on the concluded project to test the soil samples in random manner since soil fertility status varies and needs to be tested once in three years.

(Action: Dr. V. Sobhana , Sci-C, SSC)

8.Evaluation of impact of chawki centres in improving cocoon yield and correlating with unit area of mulberry both at in house and farmers field.

Decision: The committee did not approve the concept note as the work could not be taken up at RSRS .

(Action: Satish.B.Kulkarni , Sci-D, RSRS,Kodathi)

9.Evaluation of agrochemicals spray drift effect on mulberry silkworm and determination of safety period

Decision: The committee approved the concept note with a revision in the title and methodology.

(Action: Satish.B.Kulkarni , Sci-D, RSRS,Kodathi)

10. Development of an All-in-One Mobile Application for Digitalizing Sericulture Practices

Decision: The committee approved the proposal and advised to collect details about the mobile app developed for seed sector "e-cocoon" of NSSO Bangalore . It was advised to engage some students for the development of the app.

(Action: Dr. Arunakumar, Sci-C, Mol. biol)

11. Estimation cost of Bivoltine Mulberry silkworm cocoon production in Telangana with special reference to cluster and non- cluster areas.

Decision: The committee did not approve the proposal as the proposed work is included in the objectives of the ongoing project PPF:01017SI: Economics of mulberry sericulture in south India.

(Action: Dr. Vinod kumar yadav, Sci-C, RSRS, Mulugu)

12.Extraction and characterization of sodium copper chlorophyllin and pheophorbide in mulberry silkworm excrement for the biomedical applications

Decision: The committee approved the proposal . The objective on cell line studies was not approved hence it does not have any relevance as no novel molecules are targeted in the study.

(Action: Dr. E. Bhuvaneshwari, Sci-C, SW Physiology)

13. Development and Performance Evaluation of Value Added Secondary Sericulture Products of Commercial Significance

Decision: The committee vetted the idea with an advice to place it in the Sericulture by-product utilization committee meeting.

(Action: S. M. Hukkeri, Sci-D, SED)

14. Evaluation of new bivoltine double hybrid, BFC1xBFC10 (AIB 3537 outcome) at farmers level for authorization for commercial exploitation

Decision: The committee approved the proposal as it is a pre requisite for the hybrid authorization.

(Action: Dr. K.B. Chandrashekar, Sci-D, BBL)

15. A rotatory model of shoot rearing system - a new approach for better cocoon quality

Decision: The committee approved the proposal as a pilot study with an advice to incorporate the economic feasibility of the model.

(Action: Dr. K.B. Chandrashekar, Sci-D, BBL)

16. Valorization of mulberry biomass for enhancing the income of sericulture farmers

Decision: The committee approved the proposal. The PI was advised to incorporate the earlier works carried out in CSB.

(Action : Dr. Jhansilakshmi, Sci-D, REC,Krishnagiri)

17. To study the purity of Double Hybrids reared by the farmers in Tamil Nadu

Decision: The committee did not approve the concept note as the proposed work cannot be carried out in REC level.

(Action: Dr. E. Rajalakshmi, , Sci-D, REC Gobi)

18. Genetic characterization and SNP analysis of Tyrosine protein kinase genes to develop better silk yielding hybrids of Bombyx mori

Decision: The committee approved the proposal with a suggestion to mention the similar works carried out in other CSB Institutes.

(Action: Dr. Ranjini M.S. Sci-C, BBL)

19. Studies on economic threshold level of pathogens causing major diseases in mulberry cluster and non cluster area farmers of Telangana

Decision: The committee advised the PI to revise the concept note.

(Action: Dr. Vinod kumar yadav, Sci-C, RSRS,Mulugu)

H. Review of concluded projects

During the reporting period there were no projects concluded, However discussed the suggestions of CO letter No.31/2(MYS-PRO-FNL)2018-19/RCS, dated 2.3.2021 to take forward the outcome of Seven concluded projects. In this regard already ATR was submitted to CO and two project proposals were presented in the meeting as the follow up of the concluded projects.

I. Review of ongoing projects

1. PIC3620:Engineering photosynthesis in mulberry for resilience to climate change: A C4 approach

Decision: The committee noted the status of extension of the project period discussions held on 22nd and 23rd with Director(Tech) and RCS team and advised the PI to complete the work within the extended period.

(Action: Dr. Tanmoy Sarkar, Sci-C, MBG)

2. PIB3631 : Primary yield evaluation for identification of superior mulberry hybrids with drought adaptive traits under sub-optimal irrigated condition

Decision: The committee noted the progress presented. The PI requested for extension of the project for 6 months for achieving the milestones. The justification for the delay given by the PI was found to be satisfactory hence the committee advised him to submit the request for forwardal of the same to CO.

(Action: Dr. Tanmoy Sarkar, Sci-C, MBG)

3. PIB3632: Evaluation of superior triploid genotypes for yield and adaptability under varied agro-climatic conditions

Decision: The committee noted the progress presented by PI and observed that the progress at CSRTI-Mysore is as per the schedule, whereas RSRS, Kodathi and RSRS, Ananthapur is lagging behind in one crop data. RSRS, Salem could not take up the work due to water logging in their farm. The committee advised the PI to take necessary steps to achieve the objectives.

(Action: Dr. M.K. Raghunath, Sci-D, MBG)

4. PIC 01003 CN Genetic enhancement of mulberry by genomic approaches: A Multi-Component Networking project

1. *NW2a: Validation of a high-density SNP genotyping array for QTL discovery by association mapping and bi-parental analysis in mulberry.*
2. *NW2b: Discovery of QTL to drought adaptive traits by association mapping in Mulberry*
3. *NW2C:Identification of QTLs for yield associated traits in mulberry*
4. *NW2d: Sub project: Identification of QTLs for nutrient use efficiency*
5. *NW2e:Sustaining Mulberry Yield: Identification of QTLs Conferring Resistance to Root Rot Disease by Linkage Mapping and Trait Introgression*
6. *NW3b:Development of new generation transgenic mulberry for drought stress tolerance and characterization of existing transgenic mulberry for confined field trials*
7. *NW4a: Comparative quantitative and qualitative analysis of secondary metabolites for identification of biomarkers responsible for feed quality in mulberry*

Decision: The progress of the multi Institutional net working project was done in the meeting conducted by Director (Tech) and team on 23rd July, 2021. The investigators presented the present status. Dr. Gayathri T., Sci-C presented the compiled data under the component NW2b and Dr. G.S. Arunakumar presented the varieties selected under component NW2e.The committee suggested the team to carry forward the work elements as per proposed milestones.

(Action: Dr. G.S. Aruna Kumar , Sci-C, Mul. Pathology)

5. AICEM Phase-IV: All India Coordinated Experimental Trial in Mulberry Phase-IV

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. The Chairman opined that after the compilation of the data from the seven stations a separate meeting has to be conducted to review the project implementation.

(Action: Dr. M.K. Raghunath, Sci-D, MBG)

6. PIN 3563: Evaluation of improved mulberry genotypes for yield potential, nutrient uptake and nitrogen use efficiency under varied cultivation practices

Decision: The progress of the project is as per the schedule and advised the PI to complete the work as per milestones.

(Action: Dr. Dhaneshwar Padhan, Sci-B, Agronomy)

7. PPA 01016SI: Development of an agronomical package for tree mulberry cultivation for wide acceptance among the seri-farmers of Southern India

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. Dhaneshwar Padhan, Sci-B, Agronomy)

8. PIC 01007 SI: Development of protocol for production of medically fit silk (cocoon, sericin, fibroin) for clinical purposes

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. Ravindra, Sci-C, SSC)

9. PRP-01015 SI ; Identification, evaluation and inclusion of potential antagonistic microbes in Integrated Root Rot Disease Management in Mulberry

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. G. S. Arunakumar, Sci-C, Mol. Biology)

10. PIB-3633: Development of highly productive and widely adapted mulberry using exotics and wild germplasm

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. G. S. Arunakumar, Sci-C, Mol Biol)

11. PIE-01014SI- Development of Distinctiveness, Uniformity and Stability (DUS) Descriptors for Mulberry (Morus spp) and their Validation - Phase III

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. Bhavya, M.R, Sci-B, Mol Biol)

12. PIC-3615:Mapping QTLs for alkalinity tolerance in Mulberry (Morus spp.)

Decision: The committee noted the progress presented by PI and advised the PI to complete works as per the proposed milestones.

(Action: Dr. Bhavya, M.R., Sci-B, Mol Biol)

13. AIB -01004 MI: Development of multivoltine breeds with improved silk quality utilizing indigenous and exotic bivoltine breeds

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. K.B. Chandrashekar, Sci-D, Breeding Lab)

14. AIB:01011 SI – Development of Multivoltine Foundation Crosses for Productivity and high silk percentage

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. K.B. Chandrashekar, Sci-D, Breeding Lab)

15. AIB 01 009 MI: Evaluation of new bivoltine silkworm double hybrid TT21 X TT56 at farmers level for authorization and commercial exploitation

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. K. N. Madhusudhan, Sci-D, Breeding Lab)

16. PIC 01008 SI. Isolation, characterization of chitin/chitosan from silkworm pupal exuviae/spent pupae and its commercial exploitation

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. K. N. Madhusudhan, Sci-D, Breeding Lab)

17. AlP01006SI: Identification of probiotic consortium to improve the productivity in mulberry silkworm, Bombyx mori

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. Y.Thirupathaiah, Sci-D, SW Physiology)

18. BPS-01013-CN: Utilization and diversification of silkworm pupae products for human & animal consumption and composting

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones

(Action: Dr. Y.Thirupathaiah, Sci-D, SW Physiology)

19. MFM 01020 CN: Development of artificial intelligence empowered multisensory approach for gender classification and separation of silkworm cocoons

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones

(Action: Dr. S. M. Hukkeri, Sci-D, SED)

20. ARP-01012SI:Development of a knowledge base on the silkworm diseases and pests and their management

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. A. V. Mary Josepha, Sci-D, SW Pathology)

21. AIT-01019-SI: Screening of drugs/Inhibitors to inhibit the PI3K-Akt pathway in Bombyx mori for controlling Nuclear Polyhedrosis Virus infection.

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. Mallikarjuna G, Sci-C, SW Pathology)

22. PRE 01010SI : Development of Integrated Pest Management (IPM) module for leaf roller Diaphania pulverulentalis (Lepidoptera: Pyralidae) in mulberry

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. S. Mahiba Helen, Sci-D, PML)

23. PPF01017SI : Economics of Mulberry Sericulture in South India

Decision: The committee noted the progress presented by PI and observed that the progress is as per the proposed milestones. Advised the PI to complete works as per the proposed milestones.

(Action: Dr. Amit Saha, Sci-B, SEEM)

24. PIN 01018 SI : Effect of potassium mobilising bacteria Frateuria aurentia on growth and development of mulberry

Decision: As the PI was having meeting with Department of Sericulture as she informed the house noted the progress of the project which is as per milestones.

(Action: Dr. N.Dhahira Beevi, Sci-D, RSRS,Salem)

J.PILOT STUDIES: The individual PIs presented the following progress

1.Development of Project Management Database of CSRTI, Mysuru – Dr. Amit Saha, SEEM

2.Identification of candidate gene markers for the development of silkworm hybrid with longevity associated with stress tolerance and productive traits.- Dr. Ranjini M.S, BBL

3.Studies on fecundity enhancement by application of natural stimulants during oviposition in silk moth B. Mori L- Dr. R. Bhagya

4.Standardization of extraction and characterization of Phytol, a bioactive compound in the excrement and quantification of phytol from different silkworm breeds/ hybrids of Bombyx mori .L for the possible exploitation in biomedical application- Dr. E. Bhuvaneswari, Sci-C, SW. Physiol.

Decision: The committee noted the progress presented by individual PIs and advised to submit the completed report for uploading in institutes website.

(Action: All the concerned PIs)

K. Trial of Technologies (OSTs/ OFTs)

The PIs presented the progress made under their respective OSTs and OFTs

OSTs

1.Validation of M-LAMP technology- Dr. Mallikarjun G., Sw. Path.
2.Evaluation of newly developed silkworm double hybrids-Dr. R.Meenal, BBL

OFTs

1. *Evaluation of improved PM - 4 in the seed area farms of Department of Sericulture Govt of Karnataka and its cross breed (PM x CSR2) with the farmers- Dr. K.B. Chandrashekar, SW breeding*
2. *AIB 01001 M1-Evaluation of Cauvery Gold (MV1 x S8): An improved cross breed for cocoon productivity and silk quality.- Dr. K.B. Chandrashekar SW breeding*
3. *Evaluation of Chawki Feed Supplement Formulation in Commercial chawki rearing centers - Dr. E.Bhuvaneswari* SW. Physiol.
4. *Popularization of double hybrid - G11 x G19 –Dr.Madhsudhan.K.N BBL*

Decision: The committee noted the progress presented by individual PIs and advised to implement the same as per TOT project sub-components submitted to CO.

(Action: All the concerned PIs)

L. Extension (ECP) and Training (CBT) other programmes

Decision: Director noted the progress of Ist quarter for ECPs and CBT programmes and advised to complete targets proposed for 2021-22 within the 3rd quarter itself.

M. General comments

- During the second day of RC meeting the committee invited Prof.S.R.Niranjana, Ex RAC Chairman of this institute and felicitated him on the occasion of his retirement for his able guidance to the R&D developments of this institute.

- The Committee advised PMCE to follow a general 15 days time schedule for sending reminders to the non compliers or CO for non receipt of reply.

(Action: Sci-D, PMCE)

The meeting ended with vote of thanks to chair by Dr. Mary Josepha Shery A.V, Scientist-D,PMCE.

Chairman RC

10/8/21

Annexure-I

List of participants attended the Research Council meeting held on 29th and 30th July 2021 at CSRTI Mysore

#	**Name & Designation**	#	**Name & Designation of Scientists** linked with Webex from nested units
1	Babulal Director and Chairman, RC	48	Kulkarni,S.B. Scientist-D RSRS Kodathi
2	Dr. Mary Josepha A.V, Scientist-D CSRTI, Mysore	49	N. Dhahira Beevi Scientist-D RSRS Salem
3	K. B. Chandrashekar Sci-D CSRTI, Mysore	50	K.P. Kiran kumar Scientist-D RSRS Ananthapur
4	N. G. Selvaraju Scientist-D CSRTI, Mysore	51	K Praveen Kumar Scientist-D RSRS, Mulugu
5	Raghunath M.K. Sci-D CSRTI, Mysore	52	V.K.Yadav Scientist-C RSRS, Mulugu
6	C.M.Babu Sci -D CSRTI, Mysore	53	Jhansilakshmi, Sci-D, REC,Krishnagiri
7	Kusuma L. Scientist-C CSRTI, Mysore	54	E. Rajalakshmi, , Sci-D, REC Gobi
8	Bhuvaneshwar , E. Sci-C CSRTI, Mysore		
9	Sobhana V Scientist-C CSRTI, Mysore		
10	S. Mahiba Helen Scientist-D CSRTI Mysore		
11	Divya Singh Scientist B CSRTI, Mysore		
12	Gayatri .T, Sci-C CSRTI Mysore		
13	Santha P. C. Scientist-D CSRTI, Mysore		
14	Ranjini M.S Sci-C CSRTI Mysore		
15	Rekha M DD(Stats) CSRTI Mysore		
16	Balasaraswathi Scientist-D CSRTI, Mysore		
17	Bhavya M. R. Scientist B CSRTI, Mysore		
18	M.N. Chandrashekar Sci - D, CSRTI Mysore		
19	Mahesh Sci -C CSRTI, Mysore		
20	Tanmoy Sarkar. Sci-C CSRTI, Mysore		
21	Dhaneswer Padhan Scientist B CSRTI, Mysore		
22	Amit Saha Scientist B CSRTI, Mysore		
23	Thirupathaiah Y. Sci-C CSRTI, Mysore		
24	Ravindra Scientist-C CSRTI, Mysore		
25	Mallikarjuna G. Sci-C CSRTI, Mysore		
26	Satish L Scientist-C CSRTI, Mysore		
27	Arunakumar G. S. Sci-C CSRTI, Mysore		
28	K.N. Madhusudhan Sci -D CSRTI, Mysore		
29	R. Meenal Scientist-D CSRTI, Mysore		
30	Anuradha H.J, Scientist-D CSRTI, Mysore		
31	H.M.Munikrishnappa AD,CSRTI, Mysore		
32	R.Bhagya, Sci-D CSRTI Mysore		
33	Purushotham S. Sci-D CSRTI, Mysore		
34	Shivakumar Hukkeri Sci-D CSRTI, Mysore		
	JRF/SRFs		
35	Gnanesh B. N. Ramjn. Fellow CSRTI, Mysore		
36	Shruthi R. JRF CSRTI, Mysore		
37	Chandini S. JRF CSRTI, Mysore		
38	Harihitha C. Project Asst. CSRTI, Mysore		
39	Harshitha M.M. Project Asst. CSRTI, Mysore		
40	P.Sowbhagya SFA CSRTI, Mysore		
41	Abilash H.K. SRF CSRTI, Mysore		
42	Bharath gowda R.M. SRF CSRTI, Mysore		
43	Shwetha Sharma JRF CSRTI, Mysore		
44	Chandana R. Project Asst. CSRTI, Mysore		
45	Lalitha kumara. F. Project Asst. CSRTI, Mysore		
46	Susmitha B.V. Project Asst. CSRTI, Mysore		
47	Nisarga Pushpa Mayavathi NR. JRF CSRTI, Mysore		