

**MINUTES OF 63<sup>rd</sup> MEETING OF THE RESEARCH COUNCIL (RC) OF CTR&TI RANCHI  
HELD ON 21<sup>st</sup> NOVEMBER 2022**

The 63<sup>rd</sup> meeting of Research Council (RC) of Central Tasar Research and Training Institute was held on 21<sup>st</sup> November 2022 at the institute under the Chairmanship of Dr. K. Sathyanarayana, Director CTR&TI, Ranchi to evaluate the new project/pilot study proposals and review the ongoing & concluded projects, TOTs, CBT and ECP programmes. List of the participants is appended as Annexure-1.

Director welcome all the scientists and requested them to be crisp and to the point in their presentations. Later the meeting proceeded as per the agenda.

**Agenda No.1: Confirmation of the previous RC Meeting Minutes**

The Minutes of 62<sup>nd</sup> R.C. meeting were circulated to the scientists *vide* Email dated 11.05.2022. Since no comments / suggestions have been received from any scientist, the Minutes were confirmed.

**Agenda No. 2: Review of action taken of the recommendation / decisions of the previous RC meeting**

Follow up action taken on the decisions made during the previous RC & RAC meetings were reviewed by Director and following observations were made.

**Review of the Concluded Research Projects**

**[CFC 07006 MI]** Studies on tasar cocoon drying and cooking using CSTR I Conveyor Dryer and pressurized cooking technology. (March, 2018 to October, 2021)

CSTR I, Bengaluru to be communicated for date and venue regarding demonstration of new developed cooking along with wet reeling process for tasar cocoons under the project "CFC 07006MI Studies on tasar cocoon drying using CSTR I conveyor drier and pressurized cooking of tasar cocoons" at Champa, Chhattisgarh and/or Bhandara, Maharashtra with inclusion of stake holders and DOS of tasar producing states.

[Action: Mr. D. Chattopadhyay, Scientist-D & PI]

**Evaluation of New Research Proposals-5**

**1. Evaluation of technologies and machines developed in tasar post cocoon technology.**

Communications (reminder) to be sent to the referees for review of new project proposal "Evaluation of technologies and machines developed in tasar post cocoon technology", who have not submitted the report so far. Also, the same needs to be sent to another two referees for their comments, with timeline of one week.

[Action: Mr. D. Chattopadhyay, Scientist -D]

**2. Socio-economic impact assessment of tasar sericulture technologies and skill development in major tasar growing areas [PI: Dr. Vishal Mittal, Scientist-D]**

Committee suggested PI to workout the suitable Institute/Organization regarding collaboration of the proposed project and after incorporation of suggestions submit the project proposal in RMIS-01 for preliminary clearance from Central Office, Bengaluru.

[Action: Dr. Vishal Mittal, Scientist-D]

**Transfer of Technology (TOT)**

• **Validation and popularization of cooking package developed for three eco-races:**

Four demonstrations have to be conducted (two in the month of December, 2022 & two in the month of January, 2023) for new non- peroxide cooking and cocoonase process.

[Action: Dr.J. Binkadakatti, Scientist -C]

**Agenda No. 3: New concept notes for approval**

Total 04Project/ Pilot study proposals were evaluated and following decisions were made during the meeting:

**(A)New Concept notes for Projects:**

**1. Immunity development in tasar silkworm through zinc enrichment in its host plant leaf [PI: Dr. S. Giri, Scientist-D, RSRS, Dumka]**

The proposal was recommended with the suggestion to revise the title, methodology, budget and also include the standard parameters of immunity of silkworm.

**2. Standardization of fertilizer dose and pruning schedule for establishment and quality Leaf production of *Lagerstroemia speciosa* (Jarul) [PI: Ms. Susmita Das, Scientist-D]**

Proposal approved with modification of title "Development of Package for establishment and quality Leaf production of *Lagerstroemia speciosa* (Jarul)" and to include Dr. Harendra Yadav, Scientist – C as CI of the project. Experimental plants with age of food plants below 3 year, 03 - 10 year and above 10 year, to be chosen for the study with minimum spacing of 10' X 6' and above with increased provision for contingency.

**(B)New Concept notes for Pilot Studies:**

**3. Designing and Fabrication of automated LED light trap emitting light of all wavelength across UV-vis spectra in a single trap [PI: Dr. S. M. Mazumdar, Scientist – C, BSMTTC, Kathikund]**

Dr. S. M. Mazumdar, Scientist – C presented the proposal and committee recommended the concept note to be taken up as pilot study with a scientist from CTRTI.

**4. Designing Evaluation of the role of Ceratopogonids (Diptera), a neglected cluster to Tasar silkworms [PI: Dr. S. M. Mazumdar, Scientist – C, BSMTTC, Kathikund]**

Dr. S. M. Mazumdar, Scientist-C presented the proposal and committee recommended the concept note for pilot study, with a scientist from CTRTI for better coordination.

#### **Agenda No. 4: Review on concluded projects**

1. **[AIB 4717]**Improvements of tropical tasar silkworm *Antheraea mylitta* D for high silk yield through recurrent Selection(Sep 2020 - Aug 2022)

Dr. D.I.G. Prabhu, Scientist-C presented the concluded project. Director asked the PI to submit the final report in RMIS – 10 before RAC meeting to be held on 25-26 November 2022. Also suggested to use LCF project plantation as breeding plot for rearing of 1000 DFLs for mass level recurrent selection.

**Action:** Dr. D.I.G. Prabhu, Scientist-C& PI]

#### **Agenda No. 5: Progress of Ongoing projects**

1. **[PIB 04009 SI]** Evaluation of identified hybrids of *Terminalia arjuna* × *T. tomentosa* and drought tolerant *T. arjuna* for their suitability in different tropical tasar silkworm rearing regions. (October 2021 - September 2026)

PI presented the progress of project. The Chairperson expressed his dissatisfaction on the inordinate delay and Committee suggested to take up plantation immediately by providing lifesaving irrigation till monsoon and PI was advised to present statistically analysed data.

**Action:** Dr. S. Gandhi Doss, Scientist-D & PI]

2. **[PPA 04010 CN]** Region and season specific selection of pruning and brushing schedule for tasar food plants and silkworm protection. (February 2022- January 2025)

PI presented the progress of project. Committee suggested to PI that deviation from normal date of pruning date should be recorded and to present agro-climate zone wise data in one ppt instead of centre wise.

**Action:** Dr. Jitendra Singh, Scientist-C & PI]

3. **[ARP 04012 SI]** Developing ectomycorrhizal bio-inoculants for improving survival and leaf yield of *Terminalia arjuna* and *T. tomentosa*.(February 2022- January 2026)

P.I. presented the progress and committee took note the progress.

**Action:** Dr. Aparna K., Scientist-B & PI]

4. **[APS 04003 SI]**Studies on the reproductive potential of Tasar silkworm *Antheraea mylitta* D with special reference to nutritional and mechanical indices.(March, 2020- February 2023)

Dr. K. Jena Scientist-D presented the progress and committee suggested to PI to submit the re-appropriation budget and plan of action in the extended six month period.

**Action:** Dr. K. Jena, Scientist-D& PI]

5. **[AIE 04004 CN]** Study on existence of tropical tasar silkworm eco-races and their subsist places with the help of geospatial technology.(March, 2020- February 2023)

Dr. Prabhu, Scientist-C presented the progress. Competent authority suggested to modify the milestone according to the revised methodology and extended project duration. He also insisted PI to complete the project within the stipulated time period without any further extension.

[Action: Dr. D.I. G. Prabhu, Scientist-C & PI]

6. [ARE 04006 CN] Management of important pests of tasar silkworm *Antheraea mylitta* (D) through botanical repellents. (April, 2020- March 2023 Extended upto September 2023)

PI requested for re-appropriation of the budget as per the revised fellowship for the Project Assistant. Committee suggested to re-appropriate after utilizing the sanctioned budget under recurring head. In case still additional budget is required it may be proposed in next RC/RAC.

[Action: Dr. H.S. Gadad, Scientist-C & PI]

7. [ARE 04011 MI] Diversity, yield loss and management of predatory wasps attacking *Antheraea mylitta* Drury [February 2022- January 2025)

It is requested to include In-charge of BSMTTC, Patelnagar as a Co-PI in place of In-charge of BSMTTC, Pali along with the sanctioned budget, as the target pest incidence is more in Patelnagar it will be useful for better implementation of the project. Competent authority has considered the request.

[Action: Dr. H. S. Gadad, Scientist-C& PI]

8. [CYR 04013 MI] Studies on storage practices of tropical tasar cocoons for better cooking efficiency, reeling parameters and yarn quality. (February 2022- January 2024)

P.I. presented the progress. Chairperson expressed displeasure on not following uniform treatment due to delay in procurement of cocoons. PI was advised to follow timelines with all seriousness.

[Action: Mr. D. Chattopadhyay, Scientist-D & PI]

9. [BPC 04005 SI]Tasar waste to wealth by Cordyceps.(March, 2020- February 2023)

PI requested six-month extension with re-appropriation of the budget, for which he was advised to conclude as per time line and take up the proposed work as part of OST with available funds. PI was suggested to submit interim MIS-10.

[Action: Mr. K.J ena, Scientist-D& PI]

10. [BPC 04008 EF] Mass level extraction of sericin from tasar cocoon cooking waste water for its prospective utilization [PI: Dr. K. Jena] (March 2021- February 2024) (DBT Funded)

Dr. K. Jena, Scientist-D presented the progress of project and committee took note the progress.

[Action: Dr. K. Jena, Scientist-D& PI]

11. [BPS 01013 CN]Utilization and diversification of silkworm pupae products for human & animal consumption and composting. (Oct, 2020 - Sept, 2022)

Dr. K. Jena, Scientist-D presented the progress of project. Committee found the progress satisfactory. Committee suggested to PI to submit the re-appropriation budget after proposed extension. PI was suggested to speed up patenting of fish feed besides proposing next phase with focus on utilisation of pupae oil and to pursue with CFTRI for timely completion of tasar component of the project.

[Action: Dr. K. Jena, Scientist-D& PI]

**12. [MOE 04007 EF]** Establishment of Biotech-KISAN Hub at Professional Assistance for Development Action (PRADAN), Deoghar, Jharkhand for three Aspirational Districts of Jharkhand (Godda, Dumka and Pakur) (March 2021- February 2024) Collaborative Project with PRADAN [Co-PI from CTR&TI, Ranchi:]. (DBT Funded)

Dr. J.P. Pandey Scientist-D presented the progress of project. Committee suggested to PI sending a request letter regarding extension of project period and also ensure utilization of fund.

[Action: Dr. J.P. Pandey Scientist-D& PI]

**13. [MOE 04014 MI]** Evaluation and popularization of improved technologies developed in the field of tasar sector for central and north India (On Station/Farmer Trials of CTRTI) [February 2022- January 2024]

Dr. Jagadajyoti Binkadakatti, Scientist-C presented the progress of project. Chairman appreciated to Dr. Jagadajyoti Binkadakatti, Scientist-C& PI of the project for coordination with CIs from Institute and Nested Units in generation of data, collection, compilation and presentation.

[Action: Dr. Jagadajyoti Binkadakatti, Scientist-C& PI]

**14. [AIT 08006 EF]** Development of lateral flow assay (LFA) kit for diagnosis of pebrine disease in silkworms. (March 2021- August 2022) [Co-PI: Dr. H. S. Gadad, Scientist-C] [DBT Funded SBRL, Bangalore project]

Dr. H.S. Gadad, Scientist-C presented the progress of project. Committee asked the PI to pursue the collaborating Institute for regular submission of progress reports and also send a letter regarding budget provision for CTRTI, Ranchi for validation of LFA kit.

[Action: Dr. H. S. Gadad, Scientist-C & Co-PI]

## **AGENDA NO. 6: PROGRESS OF PILOT STUDIES/ PROGRAMME OF WORK**

Respective PIs presented the progress of pilot study and Programme of work. Committee took note of the progress.

### **A. Ongoing Pilot Studies**

**1. [CTR&TI/SP/PS-19]** Design & Development of Tasar Silkworm Pebrine Identification System using Image processing Technique (January - June 2022)

Director asked to consult BIT Mesra for completion of 3<sup>rd</sup> objective of the pilot study without further delay.

[PI: Ms. Susmita Das, Scientist-D] (In Collaboration with BIT, Mesra, Ranchi)

2. **[CTR&TI/SP/PS-20]** Voyage and Endeavour towards utilization of disease contaminated eggs of tasar silkworm *Antheraea mylitta* for rearing (January - June 2022)

PI requested to extension of project period. Committees not considered the request and suggested to finish the work and submit the report by 15.12.2022.

[PI: Dr. J.P. Pandey, Scientist-D]

3. **[CTR&TI/HI/PS-21]** Carbon dynamics and Carbon sequestration potential of tasar sericulture systems (January - June 2022)

PI presented the progress of pilot study. Committee took note of the progress.

[Dr. Aparna Kopparapu, Scientist-C]

4. **[CTR&TI/SI/PS-23]** Comparative study of heavy metal and pesticide content in tasar silkworm (*Antheraea mylitta*) pupae collected from different tasar growing areas (March-August 2022)

Committee suggested utilizing the budget for analysis and characterization of biomolecule present in pupae of different eco-races, complete the study and submit the report.

[PI: Dr. K. Jena, Scientist-D]

5. **[CTR&TI/SP/BSMTC- Kharswan - 24]** Study on natural enemies associated with Tasar Silkworm Pupal Parasitoid *Xanthopimpla pedator*(August 2022 - January 2023)

Dr. B. T. Reddy, Scientist-C, BSMTC, Kharswan presented the progress committee took note the progress.

[PI: Dr. B. T. Reddy, Scientist-C, BSMTC, Kharswan]

6. **[CTR&TI/SP/BT-25]** Intuitive gene annotation of *Antheraea mylitta* Denova whole genome using functional bioinformatics tools (July - December 2022)

Dr. J.P. Pandey, Scientist-D presented the progress committee took note the progress and advised PI to complete the study within the time line.

[PI: Dr. J.P. Pandey, Scientist-D]

7. **[CTR&TI/SI/PS-22]** Induction of parthenogenesis in tropical tasar silkworm, *Antheraea mylitta*.D (June –Nov 2022) [PI: Dr. I.G. Prabhu, Scientist-C]

Dr. I. G. Prabhu, Scientist – C presented the progress. Competent authority observed the induction of parthenogenesis in tropical tasar silkworm through high temperature. He suggested to enhance the parthenogenesis through optimizing the induction procedure as well as to study the mechanism behind the parthenogenesis.PI was advised to complete the study within the time line.

[Dr. I. G. Prabhu, Scientist – C]

8. [CTR&TI/SI/BT-26] Reveal Insights into the Biology, Genetics and Evaluation of *Antheraea mylitta* through its Whole Genome Sequence (June –Nov 2022) [PI: Dr. I.G. Prabhu, Scientist-C]

Dr. I. G. Prabhu, Scientist – C presented the progress. Competent authority suggested the PI to complete all the bioinformatic analysis using whole genome sequence within the project tenure.

[Dr. I. G. Prabhu, Scientist – C]

9. [CTR&TI/HPI/PS-27] Validation of package of application of SM5 on Tasar Host plant(August 2022 - January 2023) [PI: Ms. Susmita Das, Scientist-D]

Director asked the PI to present the Arjun and Asan data separately with statistical analysis.

[PI: Ms. Susmita Das, Scientist-D]

#### **B. Ongoing Programme Of Work(of continuous nature)**

Respective PIs presented the progress of Programme of Work.

1. [CTR&TI/HPP/POW-02] Farm Management & Developmental works [PI: Dr. H. Yadav Scientist-C]
2. [CTR&TI/SWPT/POW-09] Laboratory production and supply of LSM [PI: J. P. Pandey, Scientist-D]

#### **AGENDA NO. 7: TRIAL OF TECHNOLOGIES (OSTs/ OFTs)**

Dr. Jagadajyoti Binkadakatti, Scientist-C presented the progress of TOTs. Committee took note the progress.

[Action: Dr. Jagadajyoti Binkadakatti, Scientist-C]

#### **AGENDA NO. 8: EXTENSION (ECP) AND OTHER PROGRAMMES**

Dr. Vishal Mittal, Scientist-D presented the progress of ECPs. Process document to be prepared and circulated to all the units

[Action: Dr. Jagadajyoti Binkadakatti, Scientist-C]

#### **AGENDA NO. 9: TRAINING (CBT) AND OTHER PROGRAMMES**

Dr. Vishal Mittal, Scientist-D presented the progress of CBT. Process document to be prepared and circulated to all the units. New SRC to be established.

[Action: Dr. Vishal Mittal, Scientist-D& PI]

#### **AGENDA NO. 10: DISCUSSION ON GENERAL COMMENTS / SUGGESTIONS OF RC/ RAC**

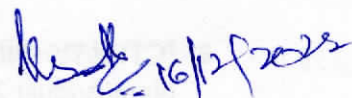
General comments and suggestions of 62<sup>nd</sup>RC and 50<sup>th</sup> RAC were discussed along with their compliance status and the status of fund utilization of R&D projects was reviewed.

**AGENDA NO. 11: ANY OTHER POINT WITH PERMISSION OF THE CHAIR**

- Director asked Dr. J.P. Pandey, Scientist-D to finalise the printing of CRP certificate.
- Up gradation of labs to be proposed by 20<sup>th</sup> December, 2022

The meeting ended with a vote of thanks to the chair.

Place: Ranchi  
Date: 16.12.2022



Dr. K. Sathyanarayana  
DIRECTOR

**Annexure-I**

**LIST OF PARTICIPANTS ATTENDED 63<sup>rd</sup> MEETING OF THE RESEARCH COUNCIL (RC)  
OF CTR&TI RANCHI HELD ON 21<sup>st</sup> NOVEMBER 2022**

1. Dr. K. Sathyanarayana, Director, CTR&TI, Ranchi
2. Dr. S. Gandhi Doss, Scientist-D, CTR&TI, Ranchi
3. Dr. S. Giri, Scientist – D, RSRS, Dumka
4. Ms. Susmita Das, Scientist-D, CTR&TI, Ranchi
5. Dr. J. P. Pandey, Scientist-D, CTR&TI, Ranchi
6. Dr. K. Jena, Scientist-D, CTR&TI, Ranchi
7. Dr. Vishal Mittal, Scientist-D, CTR&TI, Ranchi
8. Mr. Debasish Chattopadhyay, Scientist-D, CTR&TI, Ranchi
9. Dr. Jagadajyoti Binkadakatti, Scientist-C, CTR&TI, Ranchi
10. Dr. D.I.G. Prabhu, Scientist-C, CTR&TI, Ranchi
11. Dr. Jitendra Singh, Scientist - C, CTR&TI, Ranchi
12. Dr. Harendra Yadav, Scientist-C, CTR&TI, Ranchi
13. Dr. H.S. Gadad, Scientist-C, CTR&TI, Ranchi
14. Dr. Aparna K., Scientist-C, CTR&TI, Ranchi
15. Dr. B. Thirupam Reddy, Scientist-C, BSM&TC, Kharsawan
16. Dr. S. M. Majumdar, Scientist-C, BSM&TC, Kathikund