Minutes of the 65th Research Council meeting held on 23rd September 2023 at meeting room of CSR&TI, Berhampore

At the outset, Dr. Dipesh Pandit, Sci-D, PMCE welcomed all the Scientists for participation in 65th Research Council meeting. He further welcomed newly appointed Director, Dr. Jula S. Nair to her first Research Council meeting as Chairperson. Dr. Nair, in her brief introductory speech stressed on the importance of the RC meeting and to discuss the new concepts in detail so that they can be further shaped into relevant original proposals and placed before RAC and RCC for approval and coding. She requested all the scientists to present the new concepts and progress of ongoing and concluding projects. She advised the scientists to develop new concepts in accordance with the CSB and industry requirements in order to solve constraints of sericultural farmers.

New Concept 1:

Dr. Mihir Rabha, Scientist C, Silkworm Pathology Section presented and explained a new concept note on "**Development of anti-microbial silkworm rearing sheet for mulberry sericulture**" with the following objectives:

- ❑ To develop a low-cost antimicrobial silkworm rearing sheet
- ❑ To evaluate the efficacy of the antimicrobial rearing sheet

The investigators are:

Dr. Mihir Rabha (PI), Dr. K. Rahul (CI) and Dr. S. Chakraborty (CI), Silkworm Pathology Section, CSR&TI-Berhampore

Budget: Rs.19.75L (including ONE JRF)

Duration: 3 years

Expected outcome: Development of antimicrobial silkworm rearing sheet for effective silkworm disease management in East and Northeast India

Following suggestions were made by RC to modify the concept:

1. To revise the title by removing the terms "bed sheet" and "low cost"
2. To work out the economics and cost of new technology in comparison to existing technology
3. Find out the present level of pathogens and its multiplication in paraffin sheets
4. Include the technology to be used to impregnate the antimicrobial disinfectants in paraffin sheets/any other similar material
5. To include advantages over the existing technology
6. Include the latest references on the present developments related to the proposed field of study

Research Council approved the concept and advised to include all suggestions before submitting to RCS-CSB for approval of concept note.

Action: Dr Mihir Rabha, Sci. C

New Concept 2:

Mr. Arun Kumar, Scientist B, Reeling & Spinning Section, presented and explained a new concept note on "**Weaving and knitting performance of mulberry silk from West Bengal& North-Eastern states and Comfort value of its fabric**" with the following objectives:

1. To analyse the season-wise quality parameters of raw silk and aesthetic properties in woven and knitted fabric made of different reeling techniques available in West Bengal & NE states
2. To identify the best performing process and best product available from mulberry silk from West Bengal & North-East states
3. To improve quality parameters of silk yarn with regard to fabric and process (utilizing output from Obj 1 & 2)

The investigators are:

Principal Investigator: Mr.Arun Kumar, Scientist-B, CSRTI Berhampore

Co-Investigators proposed:

Mr. Satish Kumar, Scientist-B, CSTRI, Bengaluru (to obtain approval from CSTRI)

Mr. Nishant Singhal, Scientist-B, RSTRS, Guwahati (to obtain approval from CSTRI)

Ms. Suparna Saha, Scientist B, RSTRS, Malda (to obtain approval from CSTRI)

Budget: Approximate Rs.22.80 lakhs (including ONE Project Assistant)

Duration: 3 years

Expected outcome:

1. Products with better aesthetic value from MV/CB yarn
2. Utilization of quality parameters of reeled and spun yarn from West Bengal& NE regions for new product development
3. Best possible combination of yarn parameter (Katghai) and fabric weave for improved fabric aesthetics
4. Identify possible development in the fabric by applying textile finishes to improve the aesthetic value

Following suggestions were made by RC to modify the concept:

1. Survey the available materials, technology and processes in West Bengal and NE region and include in concept accordingly
2. Send the concept note to CSTRI, Bangalore for comments and discuss in detail with collaborators
3. The PI was advised to request CSTRI for nomination of collaborators from CSTRI units under study or approval of suggested collaborators
4. Include existing technology and propose advantages over the existing technology
5. Include Scientist-B from RSTRS- Malda / Guwahati/ CSTRI, Bengaluru after obtaining approval from CSTRI

Research Council approved the concept and advised to include all suggestions and for detailed discussion with CSTRI, Bangalore before submitting to CSB for approval.

Action: Mr. Arun Kumar, Sci. B (R&S)

Review of Ongoing projects

PIB02010SI: Final yield trial of promising high yielding mulberry genotypes for Eastern and North-Eastern India.

Dr. Suresh K. presented the progress of the project. The progress is as per milestone.

PIE13001MI: All India Co-ordinated Experimental Trial for Mulberry Varieties (Phase –IV)

Dr. Suresh K. presented the progress of the project. Committee queried on the performance variation in important traits of test varieties at different centers. Total Budget is Rs.30.78L and Expenditure is

Rs.16.47L. The Committee suggested to include expenditure of different units involved in the total project fund utilized. PI informed that utilization of budget is nearly 88% at CSRTI, Berhampore and ~33% at other centers.

Action: Dr K. Suresh, Sci. C

PIB02007 SI: Improvement of mulberry leaf longevity in Eastern and North Eastern states of India

Dr. Deepika K presented progress of the project. The progress was as per milestone. Trial at farmers field will be conducted at Kalimpong, Malda, Murshidabad and Birbhum. PI informed utilization of 80% of budget allotted.

RC found that objectives spell out vaguely. Hence, it is advised to reframe the objectives so as to make it clear to represent the activities as per the approved work plan. The change may be intimated to RCS for information.

Action: Dr. Deepika K, Sci. C

PIE 02013SI: Final yield trial (FYT) of newly identified mulberry genotypes for leaf productivity and quality

Dr. Yallappa presented progress of the project. The progress is as per schedule. RC advised to find the leaf yield: cocoon ratio

PPA 02005SI: Optimization of spacing and nutrient dose for newly developed high yielding mulberry variety C 2038 under irrigated condition

Dr. Yallappa presented progress of the project. The progress is as per schedule. Total Budget is Rs. 9.95L whereas utilization is Rs.5.60 L

PIB 03013SI: Development of high yielding quality mulberry (*Morus* spp.) genotypes under sub-tropical conditions of Northern India (Coll. With RSRS-Jammu)

Dr. Yallappa presented progress of the project. The progress is as per schedule. The Budget is 1L and utilization is 0.54L

Action: Dr. Yallappa, Sci. C

APS 02020MI: Improvement of seed crop productivity in West Bengal

Dr. Satadal Chakraborty presented the progress of the project. The research and training progress is as per milestone. Total budget is Rs.98.43L. The utilization is Rs.7.6L.

Action: Dr. Satadal Chakraborty, Sci. D

MOE02014SI: Popularization of improved technologies developed in the field of mulberry sector for Eastern & North-Eastern India

Component I: Popularization of new mulberry varieties (C-2038, Tr-23/BC259 & C-2028)

Dr. Suresh presented progress of the project. The progress is as per schedule.

Action: Dr. K Suresh, Sci C

Component II: Popularization of Bio-control agents for the management of mulberry pests

Mr. Khasru Alam, Sci. C presented progress of the project. Total Budget is Rs.1.18L and the utilization is Rs.0.80L.

Action: Mr. Khasru Alam, Sci C

Component III: Popularization of eco-friendly disinfectant, NIRMOOL

Component IV: Popularization of chawki rearing & shoot feeding (shelf rearing) with collapsible plastic mountages

Dr. Shafi, Sci. C & PI presented progress of the project and is as per schedule.

Action: Dr. Shafi Afroz, Sci C

Component V: Popularization of Sampoorna

Dr. Mihir Rabha, Sci C presented progress of the components III and V. The progress is as per schedule. The disinfectants and sampoorna are distributed in time to different units.

Action: Dr. Mihir Rabha, Sci C

MOE02015MI: Evaluation of improved technologies developed in the field of mulberry sector for Eastern & North Eastern India

Component I: Evaluation of high yielding &bacterial leaf spot resistant mulberry variety C-2070

Component II: Evaluation of high yielding and low temperature stress tolerant varieties C-2060 & C-2065

Component III: Low cost drip fertigation system for mulberry

Component IV: Evaluation of Eco-friendly Silkworm Rearing Bed Disinfectant Seri-Win

Dr. Deepika K, Sci C presented progress under component I. The progress is as per schedule. The proposed budget is Rs.1.80L and the amount utilized was Rs.0.95L.

Action: Dr. Deepika Sci C (Component I)

Dr. Suresh, Sci C presented progress under component II and the progress was as per schedule. The budget is Rs.1.99L and the expenditure is Rs.1.05L

Action: Dr. Suresh K Sci C (Component II)

Dr. Yallappa Harijan, Sci-C presented the progress of Component III. Results showed 38% increase in leaf production over the control

Action: Dr. Yallappa, Sci C (Component III)

Dr. Mihir Rabha, Sci C presented progress under the component IV and the progress was as per schedule.

Action: Dr. M. Rabha, Sci C (Component IV)

ARE010028MI: Recommendation of novel fungicidal and insecticidal application for mulberry

Mr. Khasru Alam, Sci. C presented progress of the project. Total budget for CSRTI-Ber is Rs.21.11L and the expenditure is Rs.5.11L.

MTL 01025MI: Life cycle assessment of mulberry silk: A National Assessment

Mr. Khasru Alam, Co-PI briefed the progress of the project. The total budget is Rs.27L and the utilization is Rs.1.15L.

Action: Mr. Khasru Alam, Sci. C

AIB 02006MI: Improvement of Nistari lines for survival and silk productivity

Dr. Thangjam Ranjita Devi, Sci C presented progress of the project. The progress is as per schedule. However, the analysis on improvement of different traits of Nistari lines is under progress.

Action: Dr. Thangjam Ranjita Devi, Sci. C

AIE 02018SI: Identification of superior Bivoltine foundation cross as a male component to improve cross breed productivity in E & NE India

Dr. Satadal Chakraborty, Sci. D presented progress of the project. The progress is as per schedule.

Action: Dr. Satadal Chakraborty, Sci. D

MOE 02011EF: Development of Seri-Entrepreneurship in chawki Rearing [NABARD funded project]

Dr. Shafi, Sci. C & PI presented progress of the project and is as per schedule. Total budget is Rs.20.89L and the expenditure is Rs.17L. The house enquired on the impact of withdrawal of technologies/ support. The CRC owners decided to increase the selling rate from Rs.1100/- to 1500/- per 100dfls-chawki worms. Moreover impact assessment will be analysed under second objective of the project.

MTS 13002 MI: Impact assessment of mulberry sericulture technologies in India

Dr. Shafi, Sci. C & Co-PI presented progress of the project. RC suggested to analyse the cost involved in leaf production. Total budget is Rs.32L and the expenditure is Rs.2.2L

Dr. Shafi briefed on the extension programs conducted by Institute as well as different nested units.

Action: Dr Shafi Afroz, Sci. C

AIT 02012CI: Characterization of mulberry silkworm, *Bombyx mori* L. mutants for tolerance to flacherie syndrome through genome editing tools (DST-JSPS project)

Dr. Pooja Makwana, Sci. C presented progress of the project. Rearing, egg laying, guide RNA / construct synthesis and microinjection are under progress. PI informed the house that a request letter has been communicated to CO, Bangalore for extension of the project for one year as per RC and RAC recommendations.

Action: Dr. Pooja Makwana, Sci. C

AIB 01009MI: Evaluation of new bivoltine double hybrid, TT21 X TT56 at farmers level for authorization for commercial exploitation (Collaboration of CSRTI - Mysore)

Dr. Ravi Raj, Sci. C submitted progress of the project and the progress is as per schedule.

AIT 02008 SI: Identification of high humidity tolerant silkworm breeds/hybrids for Eastern & North-Eastern India

Dr. Ravi Raj, Sci. C submitted progress of the project. The progress is as per schedule.

AIB 02019MI: Development of bivoltine double hybrids suitable for different regions of India (Collaboration of CSRTI – Mysore, Pampore, Manipur and Berhampore)

Dr. Ravi Raj, Sci. C submitted progress of the project. The progress is as per schedule. Rearing in other centers of South India is progressing. Cocoon selection will be held at RSRS Kalimpong soon.

Action: Dr Ravi Raj, Sci. C

MOT 02016EF: Seri-Entrepreneurship development in aspirational districts of North-Eastern India (DBT funded)

In the absence of Dr. Parameshwara Naik, Sci C & PI, the Co-PI, Dr. Shafi presented progress of the project.

The progress was as per schedule. No specific queries were made.

Dr. Srinivasa G presented about the activities of the Training division.

Action: Dr. G. Srinivasa, Sci D/ Dr. Parameshwara Naik, Sci C

MTL 02017CN: Study on sericulture-based IFS in hilly region of West Bengal

Dr Harish Babu, Sci C, RSRS Kalimpong & PI attempted to present the project through online mode but was not able to present the progress due to internet issue from Kalimpong area. He presented the same during Extension Officers meeting conducted on 26-9-2023. The house advised him to analyze the collected data immediately with inputs from Co-I, Mr. Khasru Alam and Dr. P. Naik. House observed that his expenditure against budget was very poor and advised him take all the expenditure in connection with project and submit revised expenditure.

Action: Dr. Harish Babu, Sci C

Minutes approved

16.10.23

(Dr. Jula S. Nair)
Director

Annexre-I

List of Scientists/Participants in the 65th Meeting of Research Council (RC) held on 23.09.2023 at CSRTI-Berhampore, West Bengal

#	Name	Designation
1	Dr. Jula S. Nair	Director
2	Dr. G. Srinivas	Scientist-D, SEEM
3	Dr. A.R. Pradeep	Scientist-D, Biotechnology & Silkworm Pathology
4	Dr. D. Pandit	Scientist-D, PMCE
5	Dr.Satadal Chakrabarty	Scientist-D, Farm Management & RST
6	Dr. K. Suresh	Scientist-C, MBG
7	Dr. Pooja Makwana	Scientist-C, Biotechnology
8	Dr. K. Rahul	Scientist-C, Silkworm Protection
9	Dr. Shafi Afroz	Scientist-C, SEEM
10	Dr. Deepika Kumar Umesh	Scientist-C, MBG
11	Dr. Thangjam Ranjita Devi	Scientist-C, SBG
12	Dr. Mihir Rabha	Scientist-C, Silkworm Protection
13	Dr. Yallappa Harijan	Scientist-C, MBG
14	Mr. Khasru Alam	Scientist-C, Mulberry Protection
15	Shri Arun Kumar	Scientist-B, Reeling & Spinning