

## **Minutes of 63<sup>rd</sup> meeting of Research Council held on 14.02.2023 at CSR&TI Berhampore, West Bengal**

63<sup>rd</sup> Research Council meeting of CSRTI-Berhampore was held on 14.02.2023 under the Chairmanship of Dr. C. M. Kishor Kumar, Director, CSRTI-Berhampore with special emphasis on discussions of the new concepts while evaluating the ongoing and routine programme of the institutes.

At the outset, Dr. Parameswara Naik J, Scientist-C, Training Division welcomed Chairperson RC, Scientists and other participants and requested for presentation and healthy interaction. Director in his opening remark expressed satisfaction over the progress of the ongoing projects that all the projects are progressing as per milestones. He further expressed satisfaction on the efforts of the scientists for successful organization of recent Resham Krishi Mela of the institute. Later, agenda-wise items were discussed. List of participants is appended in Annexure - I. Since there were no comments received, minutes of the 62<sup>nd</sup> RC meeting were approved by the house and proceeding was taken forward further as per agenda.

### **Proposal of New Research project concept notes (1):**

1. Concept for a new project proposal **“Development of App based detection of mulberry diseases and treatment recommendation system using deep convolution neural network (DCNN)”** is proposed by Khasru Alam, Scientist-C, Mulberry Crop Protection, in collaboration with Dr. Jiaul H Paik, Assistant Professor, Center for Artificial Intelligence, IIT, Kharagpur. The proposal was discussed in length by the RC and it was approved by the RC with modifications:

#### **The approved objectives are:**

- To create detailed mulberry disease image data base
- To develop of an app-based tool/model using the image data of the disease symptoms along with treatment advisory
- To validate the model/app using images from the field

#### **Utility**

Real time detection of mulberry diseases to help sericulture farmers and extension functionaries for timely control of the diseases and advisory.

#### **Tentative Budget : Rs. 30 lakhs**

RC confirmed the requirement to include two Project Assistants (One each for CSR&TI, Berhampore and IIT, Kharagpur), as the project included real time collection of large quantum of data on mulberry diseases from the field and analysis. The budget of the project is tentatively kept as Rs. 30 lakhs including a server, highend camera and highend computer for image collection, storing and analysis. Further RC suggested to clearly mention the roles and responsibilities of the collaborative institutes while formulating concept note in the prescribed format.

**[Action: Khasru Alam., Sci-C, Mulberry Crop Protection]**

### **Proposal of New Research project concept notes (2):**

Concept for a new project proposal entitled “Vulnerability of Sericulture to Climate Change in East and North-Eastern states of India” was presented by Dr. Parameswara Naik J, Scientist-C. After detailed discussion, the committee approved the concept with the following suggestions;

- To include West Bengal in the study as it contribute mainly to mulberry sericulture and where the required seri-farmers are available. Hence, it was suggested to include West Bengal including all four primary silk producing districts i.e. Malda, Murshidabad, Nadia and Birbhum in the study.
- Accordingly, it was suggested to keep the sample size to 1000 farmers. and advised to propose two Project Assistants and one Junior Research Fellow.
- The title of the study is modified to “**Vulnerability of Sericulture to Climate Change in West Bengal and North-Eastern states of India**”
- **RC approved the concept with following objectives**
  1. To assess the seri-farmers vulnerability to climate change
  2. To find out the adaptation strategies followed to cope-up with climate change.
  3. To build the climate resilience among seri-farmers through Extension Programmes

### **Utility**

- The climate induced vulnerability of the sericulture farmers in eastern and north-eastern states will be documented which acts as a starting point to foresee the future of sericulture farming in West Bengal and NE region.
- The findings of the study will act as base material for building climate resilient sericulture farming practices.

**Tentative Budget:** Rs.27.64 Lakhs (including two Project Assistants and One Junior Research Fellow).

**[Action: Dr. Parameswara Naik J., Sci-C, Training Division]**

### **Proposal of New Research project concept notes (3):**

Concept note for a new project proposal entitled “**Host Plant influence on silkworm pathogen multiplication of Grasserie and Bacterial Flacherie**” was presented by Dr Mihir Rabha. After detailed discussion the RC approved the concept with following modifications

The title was modified to:

**Host Plant influence on multiplication of pathogen causing Grasserie, Bacterial Flacherie and Muscardine in *Bombyx mori* L**

### **Objectives approved:**

1. To evaluate the influence of mulberry host plant on grasserie, muscardinne and bacterial flacherie incidence
2. To analyse the effect of leaf moisture content of mulberry varieties on grasserie, muscardinne and bacterial flacherie

**Suggestions to be included:**

- Influence of host plant on the fungal diseases also to be included
- To include effects of variation in relative humidity on pathogen multiplication
- Suggested to focus on influence of leaf quality parameters including secondary metabolites and moisture content on multiplication of pathogens of silkworm diseases
- Plant Physiologist to be included as Co-PI of the project and to involve in formulating the proposal specially for assisting in analysis of pre- and post harvest leaf quality parameters
- Exhaustive literature survey is needed to avoid duplication of the project if any

**Utility**

- Identification of potential mulberry host plant varieties that influences the silkworm pathogen multiplication
- Development of effective package of practice for silkworm disease management in regards with host plant leaf moisture influence.
- The study will help in better understanding of host plant influence on silkworm pathogen multiplication and it will also help to set target in breeding programmes of mulberry host plant.

**Budget:** Rs.24.10 Lakhs

(including one JRF and instruments Autoclave, Electronic weighing balance and pH meter)

**[Action: Dr. Mihir Rabha., Sci-C, Silkworm pathology]**

Ongoing projects and programme of the institute and nested units were also discussed in the meeting and progress was found as per milestones.

The meeting ended with vote of thanks.

Approved

(Dr. Kishor Kumar C.M.)

Director & Chairperson

Research Council CSRTI-Berhampore

### ANNEXRE-I

List of Scientists/Participants in the 63<sup>rd</sup> Meeting of Research Council (RC) held on 05.12.2022 at CSRTI-Berhampore, West Bengal

#	Name	Designation
1	Dr. Kishor Kumar C.M.	Director
2	Dr. A.R. Pradeep	Scientist-D, Biotechnology & Silkworm Pathology
3	Dr.Satadal Chakrabarty	Scientist-D Farm Management
4	Dr. K. Suresh	Scientist-C, MBG
5	Dr. N. Chandrakanth	Scientist-C, SBG
6	Dr.ShafiAfroz	Scientist-C, SEEM
7	Dr. Deepika Kumar Umesh	Scientist-C, MBG
8	Dr.ThangjamRanjita Devi	Scientist-C, SBG
9	Dr. Mihir Rabha	Scientist-C, Silkworm Protection
10	Dr. Parameswara Naik 1.	Scientist-C, Training
11	Mr. KhasruAlam	Scientist-C, Mulberry Protection
12	Dr.Raviraj, V.S.	Scientist-C Biotech
13	Dr. S. Harish Babu	Scientist-C, RSRS-Kalimpong
14	Dr. Dip Kr. Gogoi	Scientist-D RSRS-Koraput
15	Dr. K Neog	Scientist-D, RSRS-Jorhat
16	Y.S. Devi	PA Biotech
17	Md. Shahin Hossain	JRF, Plant Protection
18	Susmita Devi	PA, Training
19	Anowar Hossain	PA, SBG
20	Shuvam Mandal	PA, Farm Section
21	Manjarul SK	PA, Mulberry Pathology
22	Lipika Mardi	PA, SEEM Division
23	MijanathiGoyari	PA, MBG