MINUTES OF THE 44th RESEARCH COUNCIL MEETING HELD ON 13th APRIL, 2016 AT CSR&TI, BERHAMPORE, WEST BENGAL

The Special 44th Research Council (RC) meeting of CSR&TI, Berhampore was held on 13th April, 2016 under the chairpersonship of Dr. Kanika Trivedy, Director of the Institute to discuss the Concept Notes / new research project proposals submitted by the scientists of the Institute & its nested RSRSs.

Dr. S. RoyChowdhuri, Scientist-D (PMCE) welcomed Dr. Kanika Trivedy, Director and the Chairperson, RC, and all scientist participants' in the special 44th RC meeting. At the outset, he thanked the Director for constant inspiration and guidance to the scientists especially the newly joined Scientist-B for concept notes / formulation of new projects for the development of sericulture industry in the Eastern & North-Eastern regions. Thereafter, he requested the Chairperson to address the scientists and take up the agenda for discussion.

Dr. Kanika Trivedy, Director while welcoming all scientist participants informed that during 2016-17, Central Office, Bangalore has set the target of 10 new projects in the Results Framework Document (RFD) to initiate, expressed happiness for sincere efforts of the scientists maintaining the Institute as ISO standards on R & D, extension, technical, technological, human resource development and service support to the sericulture industry. She expressed that in view of Annual Action Plan (2016-17) target, especially the junior scientists should come-up with new line of research and focus on potential areas where the technologies can be percolated and adopted more easily by the stakeholders for better development of sericulture. She also advised all scientists for active interaction to come out with fruitful suggestions to make the RC meeting more meaningful.

The list of the participants is enclosed in **Annexure - I**.

Agenda-wise discussions were held as follows:

ITEM NO. 1 : CONSIDERATION OF NEW PROJECTS/ PROG. / PILOT STUDY:

The following 17 (Seventeen) project /Concept notes proposals were discussed and decisions were as follows:

MAIN INSTITUTE:

BIOTECHNOLOGY SECTION:

1. **Title:** Assessment of designed antimicrobial peptides for mulberry protection against brown leaf spot and root rot : a biotechnological approach. **-** Dr. R. Banerjee, Scientist-D, Biotechnology Section

   Duration: 3 years

   Observations/ Suggestions: It was observed that the Central office, Bangalore has suggested to prepare full-fledged project and place before the RAC along with the comments of the referees for evaluation and recommendation.

   Decision: Approved. The PI was advised to submit the project immediately for sending to the referees for comments and present in the RAC meeting.

   [Action: Dr. R. Banerjee, Scientist-D, Biotechnology Section]

2. **Title :** Characterization of silkworm germplasm from east and north east India using anti-oxidant genes associated with temperature stress. **-** Ms. Puja Makawana, Scientist-B, Biotechnology Section

   Duration: 3 years

   Observations / Suggestions: The work plan proposed was not clear, needs elaboration. It was suggested to screen the available temperature stress tolerant germplasm accessions and accordingly modify the project title as "**Characterization of silkworm germplasm using anti-oxidant genes associated with temperature stress**". While discussing the methodology, the chairperson suggested to screen the silkworm

germplasm accessions at 35°C temperature and the 5th instar larvae till spinning at high temperature and humidity (40°C; 90% RH). Based on survival, correlation with high temperature should be established.

Decision: Approved. The PI was advised to incorporate suggestions and submit the full-fledged project immediately for sending to CO, Bangalore for approval. Further, the work may be taken as a pilot study with 2-3 silkworm breeds, at first.

[Action: Ms. Puja Makawana, Scientist-B, Biotechnology Section**]**

SOIL SCIENCE & CHEMISTRY SECTION:

3. **Title:** Arsenic contamination in mulberry sericulture of Bengal plain and its alleviation through application of zinc in soil. - Dr. R. Kar, Scientist-D, Soil Science & Chemistry Section.

   Duration: 3 years

   Observations/Suggestions: Central office, Bangalore has suggested to prepare the full-fledged project and place before the RAC along with the comments of referees for review and recommendation.

   Decision: Approved. The PI was advised to submit the project immediately for sending to the referees for evaluation and place in the RAC meeting.

   [Action: Dr. R. Kar, Scientist-D, Soil Science & Chemistry Section]

AGRO- PHYSIO- FARM MANAGEMENT SECTION :

4. **Title:** Evaluation of low cost drip fertigation systems on yield and quality of mulberry leaves. - Shri. R. Mahesh, Scientist-B, Agro- Physio – Farm Management Division.

   Duration: 3 years

   Observations/Suggestions: The concept note was in the 43rd RC meeting and modification / suggestions of Central Office, Bangalore was incorporated.

   Decision: The PI was advised to submit the project immediately for sending to referees for comments and presentation in the RAC meeting.

   [Action: Shri. R. Mahesh, Scientist-B, Agronomy Section]

5. **Title :** Improvement of leaf quality and productivity through external application of sea weed extracts in mulberry (*Morus alba* L.) - Shri Anil Pappachan, Scientist-B, Mul. Physiology Section.

   Duration: 3 years

   Observations/Suggestions: The project proposal was discussed at length and the PI was advised to study the quality of leaf along with disease and pest incidences, besides, bio-assay with silkworm.

   Decision: Approved. The PI was advised to incorporate the suggestions and submit the project proposal immediately for sending to Central Office, Bangalore for approval. Thereafter, based on suggestions of CO, Bangalore, prepare the project, send to referees for comments and place in the RAC meeting.

   [Action: Shri Anil Pappachan, Scientist-B, Mul. Physiology Section]

6. **Title :** Application of GDD as a Model driver in fore casting mulberry yield. - Dr. M. Chaudhuri, Scientist-D, Agro-Physio-Farm Management Division.

   Duration: 3 years

Observations/Suggestions: It was observed that application of GDD as a model driver in mulberry is a new approach. The PI was advised to correlate the mulberry leaf yield with disease and pest incidences.

Decision: Approved. The PI was advised to submit the project immediately for sending to Central Office, Bangalore for approval. Thereafter, based on suggestions of CO, Bangalore, prepare the project, send to referees for comments and place in the RAC meeting.

[Action: Dr. M. Chaudhuri, Scientist-D, Agro-Physio-Farm Management Division]

SILKWORM BREEDING AND GENETICS SECTION:

7. **Title:** Molecular and phenotypic screening of bivoltine silkworm germplasm of CSR&TI, Berhampore for thermo-tolerance. - Sri M. Chandrakanth, Scientist-B, SBG Section.

   Duration: 2 years

   Observations/ Suggestions: It was observed that the PI has modified the project as suggested by CO, Bangalore. Regarding use of primers, the Chairperson advised the PI to collect the primers form SBRL, Bangalore and use.

   Decision: Approved. The PI was advised to submit the project immediately for sending to referees for comments followed by presenting in the RAC meeting.

   [Action: Sri M. Chandrakanth, Scientist-B, SBG Section**]**

BIVOLTINE SECTION:

8. **Title:** S**tudy of mulberry silk production in West Bengal - A statistical approach -** Shri G.R. Manjunatha, Scientist-B, Bivoltine Cell.

   Duration: 2 years

   Observations/Suggestions: It was observed that the PI has modified the project proposal as per suggestions of CO, Bangalore.

   Decision: Approved. The PI was advised to submit the project immediately for sending to referees for comments followed by presenting in the RAC meeting.

   [Action: Shri G. R. Manjunatha, Scientist-B, Bivoltine Cell]

SILKWORM PATHOLOGY SECTION:

9. **Title:** Study on the efficacy of probiotics and fortified food as dietary source for management of diseases in silkworm, *Bombyx mori* L. through metabolomic approach. **-** Shri K. Rahul, Scientist-B, Silkworm Pathology Section.

   Duration: 3 years

   Observations/Suggestions: The PI was advised to modify the project title as "**Study the efficacy of food as dietary source for management of diseases in silkworm, *Bombyx mori* L. through metabolomic approach**" and suggested to restrict the study in bacterial fortified food only.

   Decision: Approved. The PI was advised to submit the project proposal immediately for sending to the Central Office, Bangalore for approval. Thereafter, based on suggestions of CO, Bangalore, prepare the project, send to referees for comments and place in the RAC meeting.

   [Action: Shri K.Rahul, Scientist-B, Silkworm Pathology Section**]**

ENTOMOLOGY SECTION:

10. **Title:** Organic pest management in mulberry cultivation with special reference to sucking pests in Eastern parts of India. **–** Shri Raghavendra, K. V, Scientist-B, Entomology Section.

    Duration: 2 years

Observations / Suggestions: The PI was advised to modify the project title as "**Organic pest management in mulberry cultivation with special reference to sucking pests in West Bengal**". The project proposal was discussed at length and concerned PI was advised to spell out the methodology clearly and finalize the experiment site in consultation with the In-chrages of Agro-Physio-Farm Management and MBG section.

Decision: Approved. The PI was advised to submit the project immediately for sending to the Central Office, Bangalore for approval. Thereafter, based on suggestions of CO, Bangalore, prepare the project, send to referees for comments and place in the RAC meeting.

[Action: Shri Raghavendra, K. V, Scientist-B, Entomology Section**]**

11. **Title:** Development of weather based forecasting models for mulberry pests. **-** Shri D. Das, Scientist-D, Entomology Section.

Duration: 3 years

Observations / Suggestions : The project proposal was discussed elaborately and as per CO., Bangalore suggestion, recording of data and monitoring of pest incidences in all states under Eastern & North-Eastern should be taken as routine programme. The PI to was advised to submit the new programme, accordingly, cover all states and include all in-charges of the RSRS/RECs under CSR&TI, Berhampore, as Co-Investigators.

Decision: Approved. The PI was advised to submit the programme immediately, obtain Institute programme code and initiate the work immediately.

[Action: Shri. D. Das, Scientist-D, Entomology Section**]**

RSRS, Kalimpong, West Bengal:

12. **Title :** Isolation, screening and characterization of plant growth promoting microorganisms (PGPM) to study their effects on nutrient uptake for sustaining organic mulberry farming in Sikkim. **-** Dr. R. L. Ram, Scientist-C, RSRS, Kalimpong.

Duration: 3 years

Observations/Suggestions: The project proposal was discussed at length and it was observed that the study will be conducted at RSRS, Kalimpong campus although the project has been proposed for Sikkim state. The PI was advised to involve the REC, Rangpo and DoS, Sikkim and conduct the experiment in DoS, Sikkim farm/ farmers field for authentication of experimental data. After in depth discussion, it was suggested to conduct the study in collaboration with NBU, Siliguri and submit the project proposal to DBT for funding.

Decision: Approved. The PI was advised to modify the project as suggested and submit to Institute before sending to the DBT for funding with a copy to CO., Bangalore.

[Action: Dr. R. L. Ram,Scientist-C, RSRS, Kalimpong]

13. **Title :** Diagnosis of nutrient constrains and its management in mulberry field of Kalimpong hills and Trai region of North Bengal. **-** Dr. R. L. Ram, Scientist-C, RSRS, Kalimpong.

Duration: 2 years

Observations/Suggestions: The PI was advised to analyse the soil samples, select the doses of inputs. At least 20 farmers from tarai region of North Bengal should be covered for digitalization of soil health and validate the results obtained at Kalimpong hills.

Decision: Approved. PI was advised to modify as suggested and submit the modified project immediately for approval from Central Office, Bangalore.

[Action: Dr. R. L. Ram, Scientist-C, RSRS, Kalimpong]

RSRS, Ranchi, Jharkhand:

14. **Title : Evaluation** Skill gap Analysis and capacity development of sericulture extension workers **-** Md. Shafi Afroz, Sci-B, REC, Gumla.

Duration: 2 years

Observations / Suggestions: The project was discussed on the methodology, sample size and locations. It was suggested to conduct the study covering the sericulture areas of Mahespur Raj, Netharhat, Lohardaga and Gumla under Jharkhand state. The PI should modify the experimental sites and incorporate in the project.

Decision: Approved. The PI was advised to modify the project proposal as suggested and submit immediately for sending to Central Office, Bangalore for approval.

[Action: Md. Shafi Afroz, Scientist-B, REC, Gumla.]

RSRS, Koraput:

15. **Title : Evaluation of New mulberry genotypes for improvement in productivity and quality. -** Dr. M. K. Ghosh, Scientist-D, RSRS, Koraput.

Duration: 3 years

Observations / Suggestions: It was observed that the mulberry progenies proposed in the project have been developed at the Institute. The concerned scientist informed that the RSRS and RECs will be involved for the study. Accordingly, the concerned scientists of the RSRS/RECs should be included as CI of the project.

Decision: Approved. The concerned scientist was advised to submit the project immediately for approval from CO., Bangalore.

[Action: Dr. M. K. Ghosh, Scientist-D, RSRS, Koraput**]**

16. **Title : Development of productive bivoltine breeds/ hybrids of silkworm suitable for the Koraput region of Odisha -** Dr. M. K. Ghosh, Scientist-D, RSRS, Koraput.

Duration: 3 years

Observations / Suggestions: It was informed that the breeding methodology will be followed in consultation with the scientists of Silkworm Breeding & Genetics section of the Institute.

Decision: Approved. The concerned scientist was advised to submit the project proposal immediately for sending to CO., Bangalore for approval. Thereafter, based on suggestions of CO, Bangalore, prepare the project, send to referees for comments and place in the RAC meeting.

[Action: Dr. M. K. Ghosh, Scientist-D, RSRS, Koraput**]**

17. **Title : Yield gap analysis of mulberry sericulture in respect of potential yield on field performance -** presented by Dr. M. K. Ghosh, Scientist-D, RSRS, Koraput.

Duration: 3 years

Observations / Suggestions: The concerned scientist was advised to clearly mention the areas, number of villages and farmers to be covered and methodology to be followed. It was informed that the study will be conducted in consultation with Agriculture Extension experts.

Decision: Approved. The concerned scientist was advised to submit the project proposal immediately for sending to CO., Bangalore for approval. Thereafter, based on suggestions of CO, Bangalore, prepare the project, send to referees for comments and place in the RAC meeting.

[Action: Dr. M. K. Ghosh, Scientist-D, RSRS, Koraput**]**

At the end, the Chairman expressed her satisfaction on the R&D progress made and advised the scientists of main Institute and RSRSs to take need based projects/ prog and identify the new potential areas for the benefit of the sericulture industry in the Eastern & North-Eastern regions.

Meeting ended with a vote of thanks to the Chair.

(Dr. K. Trivedy)
Director & Chairman,
Research Council
CSR&TI, Berhampore

Annexure-I

List of the participants attended the Special Research Council meeting held on 13th April, 2016 at CSR&TI, Berhampore

1. Dr. K. Trivedy, Director, CSR&TI, Berhampore – **Chairman, Research Council**
2. Shri M. K. Majumdar, Scientist-E, CSR&TI, Berhampore
3. Dr. S. Roy Chowdhuri, Scientist-D, CSR&TI, Berhampore
4. Dr. N. Suresh Kumar, Scientist-D, CSR&TI, Berhampore
5. Dr. U. K. Bandyopadhyay, Scientist-D, CSR&TI, Berhampore
6. Dr. P.Ghosh, Scientist-D, CSR&TI, Berhampore
7. Dr. (Mrs.) Rita Banerjee, Scientist-D, CSR&TI, Berhampore
8. Dr. Jalaja S.Kumar, Scientist-D, CSR&TI, Berhampore
9. Dr. S. K. Dutta, Scientist-D, CSR&TI, Berhampore
10. Dr. S. Chattopadhyay, Scientist-D, CSR&TI, Berhampore
11. Dr. S. Chanda, Scientist-D, CSR&TI, Berhampore
12. Dr. M. Choudhuri, Scientist-D, CSR&TI, Berhampore
13. Dr. A. K. Verma, Scientist-D, CSR&TI, Berhampore
14. Dr. R. Kar, Scientist-D, CSR&TI, Berhampore
15. Shri N. B. Kar, Scientist-D, CSR&TI, Berhampore
16. Dr. M. K. Ghosh, Scientist-D, RSRS, Koaraput
17. Dr. R.L.Ram, Scientist-C, RSRS, Kalimpong
18. Dr. S. Chakraborty, Scientist- C, CSR&TI, Berhampore
19. Shri D. Chakravarty, Scientist-D, CSR&TI, Berhampore
20. Shri Zakir Hossain, Scientist-D,CSR&TI, Berhampore
21. Shri D. Das, Scientist-D, CSR&TI, Berhampore
22. Dr. J. Sarkar, Scientist-D, CSR&TI, Berhampore
23. Shri Gopal Chandra Das, Scientist-C. CSR&TI, Berhampore
24. Dr. V. Vijay, Scientist-B, CSR&TI, Berhampore
25. Ms. Pooja Makawana, Scientist-B, CSR&TI, Berhampore
26. Shri Suresh,K, Scientist-B, CSR&TI, Berhampore
27. Sri, R. Mahesh, Scientist-B, CSR&TI, Berhampore
28. Shri Shafi Safroj, Scientist-B, REC,Gumla
29. Shri Raghavendra, K.V., Scientist-B, CSR&TI, Berhampore
30. Dr Manjunatha G.R., Scientist-B, CSR&TI, Berhampore
31. Shri N.Chadrakanth, Scientist-B, CSR&TI, Berhampore
32. Shri, K.Rahul, Scientist-B, CSR&TI, Berhampore
33. Shro Anil Pappachan, Scientist-B, CSR&TI, Berhampore