

**Minutes of the 35<sup>th</sup> meeting of Research Advisory Committee held on  
22<sup>nd</sup> & 23<sup>rd</sup> December, 2011 at CSR&TI, Berhampore, West Bengal**

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The 35<sup>th</sup> meeting of Research Advisory Committee of CSR&TI, Berhampore was held on 22<sup>nd</sup> & 23<sup>rd</sup> December, 2011 at this Institute, in order to review the progress of various ongoing and concluded research projects/ programmes, besides consideration of new research project/ programme proposals as well, pertaining to the main Institute and its nested RSRs. The meeting was chaired by Prof. M. Muniyamma, former Vice Chancellor, Gulbarga University, Karnataka and the Chairperson, RAC of this institute. List of participants is appended in **Annexure-I**.

Dr. B. B. Bindroo, Member-Convenor, RAC & Director, CSR&TI, Berhampore welcomed Prof. M. Muniyamma, former Vice Chancellor, Gulbarga University, Karnataka and Chairperson of RAC and all distinguished members who in spite of their busy schedule took pains to attend the 35<sup>th</sup> RAC meeting. He also welcomed the invitees from DoT (Seri.), West Bengal, ZSSO, Malda and scientists of the main Institute and its nested RSRs.

While addressing the house, Prof. M. Muniyamma, Chairperson of RAC conveyed thanks to Dr. B. B. Bindroo, Director of the Institute, distinguished members of RAC, invitees, scientists, participants and staff members of the Institute. She also expressed her regret for not being able to attend the 1<sup>st</sup> meeting of reconstituted RAC i.e. 34<sup>th</sup> meeting owing to her sudden illness. She, further expressed her happiness to chair the 35<sup>th</sup> RAC meeting and congratulated Dr. B.B. Bindroo for his new assignment as Director of the Institute and appreciated the efforts taken to keep the the Institute's campus clean and beautiful, maintenance of mulberry plots, laboratories, also presentation and compilation of the agenda & explanatory notes of the meeting. At the onset of the meeting, the following books, brochure, R&D report were released by the honorable dignitaries.

**Book**

1. Annual Research & Administrative Report (2010-11), CSR&TI, Berhampore
2. Mulberry Breeding
3. Silkworm breeds & hybrids developed for Eastern & North-Eastern India

**Brochure**

1. Mulberry variety for irrigated zone - S1635 (in Hindi, English and Bengali languages)

Later on, agenda-wise items were taken up for discussion.

**ITEM NO.1: CONFIRMATION OF THE MINUTES OF THE 34<sup>TH</sup> MEETING OF RAC HELD  
ON 26<sup>TH</sup> MAY, 2011 AT CSR&TI, BERHAMPORE**

The minutes of the last RAC meeting was confirmed since no comments were received from the members.

**ITEM NO.2: REVIEW OF FOLLOW-UP ACTION ON THE RECOMMENDATIONS/  
DECISIONS OF THE 34<sup>TH</sup> MEETING OF RAC HELD ON 26<sup>TH</sup> MAY, 2011 AT  
CSR&TI, BERHAMPORE**

The follow-up actions taken as per the recommendations / decisions of the 34<sup>th</sup> RAC meeting by the concerned scientists were reviewed and found satisfactory.

As regard to popularization of waterlogged tolerant mulberry variety C-2028, the Chairperson expressed that the variety may be made popular in the southern states, specially where water logged conditions prevail and many of the farmers hesitate to take up sericulture due to want of such variety. She also suggested for taking initiative for popularizing the variety in the southern region and appreciated the initiative taken for trial of the variety in NSSO farm at BSF, Palakkad.

**[Action: Sci-C, Mul. Physiol. section]**

The programme entitled, “**Improvement of yield and quality of mulberry leaf in subtropical hills of eastern India through the refinement of pruning schedules and application of Morizyme-B**” was presented. Chairperson expressed that, based on the observations of one crop, it is better not to draw conclusion about the symptoms of leaf fall and hence, the PI was advised to continue the study for one more season.

[Action: Sci-C, RSRS, Kalimpong]

### **ITEM NO.3: DIRECTOR’S REPORT ON THE WORK CARRIED OUT BY THIS INSTITUTE DURING THE PERIOD FROM MAY, 2011 TO SEPTEMBER, 2011**

An overview of the R&D activities carried out by the Institute was presented by the Director of the institute before the house on the following aspects.

- a. Mulberry/Silkworm Crop Improvement
- b. Productivity Improvement
- c. Mulberry/Silkworm Crop Protection
- d. Human Resource Development
- e. Extension Communication Programme
- f. Cluster Promotion Programme
- g. Publication
- h. Developmental activities under MG-NREGA at the Institute

### **ITEM NO. 4: REVIEW OF CONCLUDED PROJECTS / PROGRAMMES / PILOT STUDY**

No project/programme/pilot study was concluded during the period.

### **ITEM NO.5: REVIEW OF PROGRESS OF ONGOING RESEARCH PROJECTS/ PROGRAMMES.**

Progress of ongoing research projects / programmes/pilot study was reviewed critically by the house and suggestions / recommendations made are as follows:

#### **MAIN INSTITUTE**

##### **MULBERRY BREEDING & GENETICS SECTION:**

Progress of two ongoing research projects viz. (1) **PIB-3422: Development of mulberry genotypes for improvement in productivity and quality**, and (2) **PIB-3424: Development of low temperature stress tolerant mulberry genotypes for sub-tropical plains**, along with one programme entitled **All India Coordinated Experimental Trial on Mulberry (Phase-III)**” was reviewed by the house and found as per the milestone.

##### **AGRONOMY SECTION:**

Progress of one ongoing programme entitled **BPP (VP)-001: Field evaluation of antitranspirants for increasing leaf yield of mulberry under rainfed condition**, was reviewed and found as per the milestone. Feasibility of spraying KCL (1%) by the farmers in 0.2 acre of mulberry plantation was found to be small. The Chairperson advised the concerned scientist to take up the programme at least in 1.0 acre of mulberry. The PI clarified that majority of the sericulture farmers in West Bengal have small land holding (0.5 – 1 acre) and therefore, could not take up the technology in larger areas.

##### **SOIL SCIENCE & CHEMISTRY SECTION:**

Progress of two ongoing projects entitled (1) **PPS-3435: Studies on micronutrients for sustained high productivity of quality mulberry in Eastern and North-Eastern India** and (2) **PPS-3452: Terrestrial carbon sequestration for sustained high productivity of quality mulberry** and

one programme entitled **Evaluation of soil fertility for sustained production of quality mulberry leaf in Eastern India under long-term fertilization** was presented and found as per milestone.

Regarding the programme, the Chairperson wanted to know whether the farmers practically afford the application of VAM @ 75 kg in the mulberry field once in four years. To this effect, the concerned PI of the programme informed that the VAM is being regularly supplied to the farmers under IVLP programme once in four years.

#### **MULBERRY PATHOLOGY SECTION:**

One ongoing **Central Sector Scheme-2107: entitled Development of forecasting and forewarning system of mulberry diseases** was reviewed and progress found as per milestone. To make the presentation more comprehensive, the concerned PI was advised to prepare the power point presentation location-wise separately to show the disease intensity/severity clearly.

[Action: Dr. S. K. Dutta, Sci.-C, Mul. Pathology Section]

#### **SILKWORM BREEDING AND GENETICS SECTION:**

One project entitled **AIB 3466: Development of region specific bivoltine breeds suitable for fluctuating and seasonally variable** and seven programmes viz. (1) **BAI (P)-003: Identification of improved multivoltine hybrids for unfavourable seasons in West Bengal**, (2) **BAI(P)-007: Establishment of molecular ID for the mulberry silkworm breeds (*Bombyx mori*. L) evolved by CSR&TI, Berhampore**, (3) **BAI(P)-008: Screening and identification of bivoltine breeds for Eastern and North Eastern India**, (4) **BAI(P)-009: Field level testing of new hybrids**, (5) **BAI(P)-010: Popularization of authorized silkworm hybrids** (6) **BAI(RP)-001: Germplasm maintenance** and (7) **Mulberry Silkworm Race Authorization Prog. (Phase-VIII)** were reviewed and progress found as per milestone.

While reviewing the progress of the project **AIB 3466**, the Chairperson suggested to adopt shuttle breeding programme, for which, the concerned PI informed that the programme has been taken up involving the nested RSRs. As regards the programme entitled **BAI(P)-007: Establishment of molecular ID for the mulberry silkworm breeds (*Bombyx mori* L) evolved by CSR&TI, Berhampore**, the PI was advised to study the single nucleotide polymorphism for the silkworm breeds.

[Action: Dr. Srikumar, Sci-C, SBG section]

#### **SILKWORM PHYSIOLOGY & REARING TECH. INNOVATION SECTION:**

Progress of one project entitled **Standardization and determination of temperature tolerance potentiality in different developmental stages of silkworm, *Bombyx mori* L.** and one programme entitled **BPP(VP)-003: Validation trial on the superiority of paired row plantation in chawki mulberry garden with regard to leaf yield and cocoon productivity** was reviewed and found as per the milestone. It was observed that the project mentioned above did not bear Code No., for which, the concerned PI informed that the project code is yet to be allotted by the C.O., Bangalore. The Chairperson opined that communication may be made for getting the project code number from C.O., Bangalore at the earliest.

[Action: PI of the project]

#### **ENTOMOLOGY SECTION:**

Progress of two ongoing programmes entitled (1) **PRE3345: Development of the weather based forecasting models for mulberry pests** and (2) **BPR(VP)-006: Studies on the field efficacy of selected dose of insecticide in whitefly management**, was reviewed by the house and found as per milestone. As regards the programme, the PI was advised to consider the wind velocity in future along with the other parameters for the study.

[Action: Dr. S.K. Mukhopadhyay, Sci-C, Extn. Divn.]

## **SILKWORM PATHOLOGY SECTION:**

The progress of the two ongoing programmes and one pilot study was reviewed by the house and found as per the milestone. As for the programme entitled **BAR(PS)-002: Formulation of broad spectrum room disinfectant for silkworm disease management**, it was observed that the programme was not formulated in proper order and the house advised the concerned scientist to clearly spell out the fumigant chemicals used as disinfectant and also its mode of action.

[Action: Dr. S. Chakraborty, Sci-B, Silkworm Pathology Section]

## **BIOTECHNOLOGY SECTION:**

The progress of two DBT funded ongoing projects in collaboration with CCMB, Hyderabad, entitled (1) **PIG 3441: Development, validation and utilization of SCAR marker(s) for powdery mildew (*Phyllactinia corylea*) resistance in mulberry** and (2) **Development of DNA marker based genetic linkage map of mulberry and QTL analysis for agronomically important *planta* traits** was reviewed and the progress found as to be satisfactory. While reviewing the progress of the project **Development of DNA marker based genetic linkage map of mulberry and QTL analysis for agronomically important *planta* traits**, the concerned scientist was enquired about the identity of the peptide. In this context, the PI informed that the peptide is yet to be identified and the work is in progress in that direction.

While reviewing the progress of the programme entitled **BPP(PS)-001: Improvement of mulberry through *in vitro* mutagenesis and somaclonal variation**, the justification of taking up of the study based on observation made in horticultural plants was questioned, since similar works have already been done earlier in mulberry, elsewhere. The Chairperson expressed that field utility of somaclonal variants is not encouraging in mulberry and hence, the concerned PI was to collect more references on the field applicability of somaclonal variants for mulberry, for which the PI may visit some related institutions for gaining more knowledge and the know how .

[Action: Smt. N. Lalitha, Sci-B, Biotech. Section]

## **EXTENSION:**

While reviewing the progress of the programme entitled **Technology Assessment and Refinement through Institute Village Linkage Programme (Phase-III)**, Dr. D. Sen, Member, RAC expressed that since refinement of technology is the objective of the programme, mode of refinement need to be mentioned clearly. He also opined that the problems which require attention, need to be considered. The suggestion was agreed upon by the house and it is decided that the scientists working in the Extension Division should have adequate knowledge on relevant data pertaining to their work activities on their finger tips and should also have clear ideas about the technologies for popularization at the farmers' field. Since the programme was observed to be not a technology assessment and refinement one, it was decided the programme be designated as IVLP hence forth.

[Action: PI/Co-PI of the project, Extn. Divn.]

## **REGIONAL SERICULTURAL RESEARCH STATIONS:**

### **RSRS, Kalimpong:**

The progress of ongoing two collaborative projects, three programmes and one Central Sector Schemes (2107) of the Main Institute and two own programmes of RSRS, Kalimpong was reviewed by the house and found as formulated earlier.

### **RSRS, Koraput:**

Progress of ongoing two collaborative projects, five programmes and one Central Sector Scheme (2107) of the Main Institute conducted through the station was reviewed by the house and found found to be satisfactory.

**RSRS, Ranchi:**

While reviewing the progress of ongoing one collaborative project, three programmes and one Central Sector Scheme (2107) of the Main Institute conducted through the station was found as was planned.

**RSRS, Jorhat:**

Two ongoing collaborative projects, one programme and one Central Sector Scheme (2107) of the Main Institute conducted at RSRS, Jorhat was reviewed and showed good progress.

**ITEM NO. 6: APPROVAL OF NEW RESEARCH PROJECT / PROG./ PILOT STUDY**

A total of 6 (six) projects and 5 (five) programmes were reviewed critically and project / programme-wise decisions are as below:

**1. Title of the Project: Development of high yielding mulberry varieties using physiological growth parameters as markers for selection - Dr. Jalaja S. Kumar, MBG section**

**Duration:** 7 years

**Observation/Suggestion:**

1. Specific physiological traits and relevance of characteristics should be clearly mentioned in the project.
2. Population of mulberry plant progenies was found to be higher; the concerned PI was advised to reduce the number of progenies. Moreover, No. of varieties taken for the study should be reduced in consultation with Dr. M. K. Ghosh, Sci-D (Mori.) before sending the project to C.O., Bangalore for Code No.

**Decision of RAC:** Approved and to obtain allotment of code number from C.O. Bangalore.

**2. Title of the Project: Evaluation of mulberry varieties for low input soils – Dr. M.K. Ghosh, Scientist-D (Mori.)**

**Duration:** 5 years

**Observation/ Suggestion:** The Chairperson suggested that the study of rooting behaviour and proliferation will be more useful than the root anatomy study and hence, the PI should modify the project accordingly.

**Decision of RAC:** Approved and to obtain Code No. from C.O. Bangalore.

**3. Title of the Project: Development of silkworm (*B. mori* L.) breeds from a gene pool with higher genetic plasticity - Dr. G.K. Chattopadhyay, SBG Section**

**Duration:** 4 years

**Observation/suggestion:**

1. It was observed that the definition of the project and comments received from the referees' are not in conformity and hence, PI should defend the comments of the referees properly. It was suggested to reduce the budget towards purchase of Gel Documentation System and restricted the project cost to Rs. 3 lakh. However, the instrument may be shared with other sections / divisions of the institute.

**Decision of RAC:** Approved subject to modification of the budget, and to obtain Code No. from C.O. Bangalore.

**4. Title of the Project: Identification of DNA markers associated with bacterial leaf spot resistance in mulberry (*Morus spp.*) [Collaborative project proposal with SBRL, Kodathi] - Dr. R. Banerjee, Biotechnology Section**

**Duration:** 3 years

**Observation/suggestion:**

The budget provision kept for the project was found on the higher side. The PI was advised to explore the possibility of reducing the budget so that work plan is not hampered. However, after a detailed discussion, it was decided that expenditure towards purchase of Gel Documentation System should be cut down from Rs. 8.0 lakh to Rs. 5.0 lakh. The remaining Rs. 3.0 lakh for purchase of the instrument may be met from the budget allocation of the proposed project proposal of Dr. G. K. Chattopadhyay, entitled **Development of silkworm (*B. mori* L.) breeds from a gene pool with higher genetic plasticity**, where there was a proposal and could be utilized for both the projects.

**Decision of RAC:** Approved with modified budget and to obtain code No. from C.O. Bangalore.

**5. Title of the Project: Effect of composite plant growth promoting microorganisms (PGPM) on nutrient acquisition yield and quality of mulberry (*Morus spp*) leaves in acid soils of West Bengal – Shri R.L. Ram, RSRS, Kalimpong.**

**Duration:** 3 years

**Observation/suggestion:**

1. The Chairperson expressed that in case of new project with external funding, purchase of the necessary instruments should be planned in such a way that, for testing of any materials they should not depend on the Main Institute. The budget kept in the project seems to be higher; the PI was advised to keep budget provision limited to Rs. 6 lakh.
2. It was also decided that similar project could also be taken for the state of Sikkim since Govt. of India has kept sufficient fund for the development of North-Eastern states with external funding. This could be explored.
3. It was observed, that the scientist with expertise on microbial study is available at RSRS Kalimpong, who would be utilized for formulation of project for external funding. Further, Mrs. C. Maji, Scientist-D, RSRS Kalimpong was advised to prepare a project on her specialization and submit for external funding and present in the next RAC meeting.

**Decision of RAC:** Approved with modified budget and to obtain code No. from C.O. Bangalore.

**6. Title of the Project: Studies on the planting geometry of dwarf mulberry plantation in North-East India – S.N. Gogoi, RSRS, Jorhat.**

**Duration:** 2 years

**Observation/suggestion:** The Chairperson advised the PI to use proper terminologies and clearly mention the month when pruning is to be given to the mulberry plants. Besides, equipments / articles required for the project only to be kept in the budget.

**Decision of RAC:** Approved with modified budget and to obtain code No. from C.O. Bangalore.

**7. Title of the Programme: Studies on the identification of the casual agent symptomatic of Gattine like disease in silkworm *Bombyx mori* L – Shri Zakir Hossain, PMCE Divn.**

**Duration:** 1 year (October, 2011 to Sept.,2012)

**Observation/suggestion:** It was observed that the main objective of the programme was to identify the causal agent of gattine like disease. However, the SEM being a costly exercise, the budget provision for Rs.40,000/- only kept for, may not be sufficient. The PI of the programme was also advised to look into the matter that the technician operating the Scanning Electronic Microscope should be well versed about the interpretation of the scanning materials.

**Decision of RAC:** Approved subject to incorporation of the suggestion.

- 8. Title of the Programme: Studies on the reelability of multivoltine hybrid cocoons during adverse climatic conditions in Eastern & North-Eastern region -**  
Shri N.B.Kar, Reeling & Spinning Section.

**Duration:** 3 years (July, 2011 to March, 2014)

**Observation/ Suggestion:** It was suggested that the programme should also be taken up in other states under the purview of this Institute. However, the two states as proposed in this programme may be kept as such. It was also suggested that while preparing the programmes for other states, the concerned state sericulture departments may be approached for financial support.

**Decision of RAC:** Approved.

- 9. Title of the Programme: Improvement of rearing technology for autumn crop in sub-Himalayan region –** Smt. Regina Bhutia, RSRS, Kalimpong.

**Duration:** 2 years

**Observation/ Suggestion:** The budget provision kept for the programme was found to be less and hence, suggested to increase to Rs.20,000 /- for the cost of rearing articles, cost of manpower etc. It was further advised that the rearing equipments to be prepared for the programme should also be used at a later stage.

**Decision of RAC:** Approved subject to modification of the budget.

- 10. Title of the Programme: Assessment of fertility status of soils of RSRS farm and progressive farmers' fields in selected seri. villages of Kalimpong to increase the yield and quality of mulberry (*Morus spp*) leaves –** Shri R.L. Ram, RSRS, Kalimpong.

**Duration:** 1 year and 3 months

**Observation/ Suggestion:** The budget provision kept for the programme should be modified as realistic one.

**Decision of RAC:** Approved subject to modification of the budget.

- 11. Title of the Programme: Assessment of fertility status of soils of RSRS farm and progressive farmers' fields in selected seri. villages under RSRS, Ranchi, Koraput and Jorhat to increase the yield and quality of mulberry (*Morus spp*) leaves –**

- a. At RSRS Ranchi, PI - Dr. G.S. Singh, Sci-C.
- b. At RSRS, Koraput, PI – Shri S.K. Mishro, Sci-C
- c. At RSRS, Jorhat, PI – Ms. M. Pamehgam

**Duration:** 2 years (January, 2012 to December, 2013)

**Observation/ Suggestion:** The programme will be monitored by the scientists of Soil Science & Chemistry section of the Main Institute. The scientists at RSRS will execute the project at their jurisdiction.

**Decision of RAC:** Approved.

#### **ITEM NO.7. PROGRESS OF TRIALS / DEMONSTRATIONS OF TECHNOLOGIES AND FEEDBACK:**

Initiatives taken for conducting various trials / demonstration programmes by the nested RSRSs and RECs as per the annual target and its subsequent feedback on various aspects like mulberry cultivation (with existing and new plantation) under TAR through IVLP (Phase-III), promotion of vermicompost, testing of rearing package and establishment of Farmers' Field Schools etc., were discussed and achievements made found as per the objectives and time schedule.

## **ITEM NO. 8. REVIEW OF THE ACTIVITIES OF RESEARCH EXTENSION CENTRES & THEIR SUB-UNITS.**

The activities of various Research Extension Centres (RECs) and Sub-RECs were reviewed by the house and found as per the objectives.

## **ITEM NO. 9. EXTENSION COMMUNICATION PROGRAMME:**

Various Extension Communication Programmes viz. Resham Krishi Mela, Field Day, Exhibition, Awareness Programme, Audio-Visual Programme and Trainers'/Farmers' Training programme were organized by the nested RSRs, RECs and Sub-RECs of this Institute with the objective to update the knowledge of the sericultural farmers with the evolved technologies. The progress of the programmes was found satisfactory.

## **ITEM NO. 10. TRAINING IMPARTED**

Different training programmes were organized for awareness, skill updation and transfer of technologies both in the pre- and post-coocoon sectors through various structured (PGDS) and non-structured courses for sustainable development of sericulture in the region in particular and the country as a whole. During the period, a total of 335 candidates were trained.

While reviewing the training programmes, it was suggested to organize training for the woman sericulturists and to make them acquainted with the evolved technologies, since women groups are contributing a lot and are the back bone for executing the sericulture activities. To this effect the Chairperson suggested to take up projects on women development in sericulture especially for North-Eastern region.

[Action: Sci. – D, Training Division & Sci.-D of respective RSRs]

## **ITEM NO. 11: TECHNOLOGIES UNDER PATENTING AND COMMERCIALIZATION, IF ANY.**

As far as the process initiated by this institute for patenting/ commercialization of the products/technologies is concerned, the progress was reviewed by the house and found satisfactory.

## **ITEM NO.12: REVIEW OF THE RECOMMENDATIONS OF RRAC AND FEEDBACK FROM THE SLSCC AND OTHER DOS MEETINGS**

Progress on follow up actions taken by the institute and nested units on the decisions / recommendations of different RRAC and SLSCC meetings and feedback received from the DoSs/ DoTs, from time to time, were reviewed and found satisfactory.

## **ITEM NO. 13: Discussion and recommendation of CSB-DOS collaborative on-farm research projects/programmes such as Post-Authorization Trials, Transfer of Technology programme etc.**

A detailed discussion on the collaborative one project and 10 programmes namely (1) DST funded Project : Improvement of mulberry seed cocoons production at farmers' level with special reference to bivoltine seed cocoon in West Bengal, (2) All India Coordinated Experimental Trial on Mulberry (Phase-III), (3) BPP(VP)-001: Field evaluation of anti transpirant for increasing leaf yield of mulberry under rain fed condition, (4) BAI (P)-010: Popularization of Authorized Silkworm Hybrids, (5) BAI (P)-009 : Field level testing of new hybrids, (6) Mulberry Silkworm Race Authorization Programme (Phase VIII), (7) BPP(VP)-003: Validation trial on the superiority of paired row plantation in chawki mulberry garden with regard to leaf yield and cocoon productivity, (8) BAR(VP) -005: Study on the efficacy of newly developed bed disinfectant (Sericillin) in hot spot areas for the control of muscardine disease of silkworm, *Bombyx mori*, (9) BPR(VP)-006: Studies on the field efficacy of selected dose of insecticide in whitefly management , (10) Field evaluation of plant growth regulator combination for improvement of quality leaf yield of mulberry especially under cold stress and (11) Cluster Promotion Programme (CPP) with DoT (Seri.), West Bengal and other state sericulture departments was held. In this context, the Chairperson expressed support from DoT/DoSs and hoped that the sericulture community in the States will definitely be benefited. It was suggested to increase the number of farmers for each trial / study.

**ITEM NO.14: Subject if any, with the permission of the Chairperson**

- a) To develop national data base on mulberry genetic resources, a programme entitled **Evaluation & characterization of mulberry germplasm bank**, has been planned to undertake at this institute with the available mulberry germplasm. The house approved the programme and suggested that a senior level officer should be given the responsibility to supervise the work and at the same time, the personnel to be involved should also be deputed to CSGRC, Hosur to enrich their knowledge in maintaining the GPB.

[Action: Sci-D (Mori.), CSR&TI,BHB]

- b) As regards the concept note on the new research project proposal entitled **Assessment of agroclimatic impact on mulberry productivity towards precision sericulture**, submitted by Dr. (Mrs.) Monica Chaudhuri, Sci-C, the house approved and recommended the project for obtaining comments from the referees and thereby code No. from C.O., Bangalore. Dr. Maity, Member RAC opined that undertaking any project or programme related to climatic condition, a minimum of 5 years time is needed to arrive at a logical conclusion. The Chairperson suggested that initially the project may be taken up for a period of three years and can be extended for a period of two more years, based on the merit/utility/progress of the work carried out.

[Action: Dr.(Mrs.) M. Chowdhuri, Sci-C, MBG, Section]

**MISCELLANEOUS:**

1. Comments on the projects received from the referees should be presented in the meeting clearly and the name of the referees should not be shown. PI of the project should properly weigh the comments/ suggestions given by the referees before incorporating in their project. It was also emphasized that scientists should have the conviction to know what exactly they are going to do and convince the referee if the suggestions/ comments given are not in accordance.
2. It was observed by the house many a times scientists think that the work undertaken by them is a new one which is often proved wrong at a later stage when the work is found to be already done elsewhere. In order to avoid indignity they should have adequate knowledge on the past works and then formulate the project/ programme after consultation with fellow scientists of relevant field.
3. Prior to the presentation of the project / programme in the house, scientists should get checked their presentation from their senior officers. At the same time, it should be tried to have a justified budget based on apprehending and realistic expenditure.
4. List of referees should be prepared keeping in mind that the experts whose names are to be included should have adequate experience and expertise in the respective field in sericulture. The Chairperson requested the members of the RAC to provide the names of the referees, if any, for the Institute.
5. Strengthening of R&D sections at the Institute with scientists having expertise in the field of Agronomy, Biochemistry, Biotechnology, Silkworm Pathology and Extension management.
6. Requirement of additional manpower (Scientists / Technical / Administrative) at the Institute and nested RSRSs / RECs.
7. Biotechnology laboratory may be strengthened with equipments and expert manpower supports for establishing it as a separate Biotechnology Division since the laboratory at present is continuing two ongoing DBT funded research projects in collaboration CCMB, Hyderabad and one new project got approved.

8. A common instrument facility needs to be established at the institute with the equipments namely CH-analyzer, Phase Contrast microscope, Gel documentation system, Ultra- centrifuge, Autoclaves etc. so that the scientists could share use them effectively.
9. Formulation and execution of more number of need based research projects by the scientists at the Institute and its nested RSRs. Scientist-Ds holding the charge of the respective RSRs to prepare and formulate projects of their own as PI and submit the same immediately.
10. Improving the sericulture farmers' condition by the State Sericulture department in their respective state by strengthening infrastructure at farmers' level and providing quality based market supports as the state departments are the main extension agencies.
11. Development of micro-clusters identifying 25-30 farmers for each cluster in phase-wise by each RSRs, RECs and Sub-RECs strengthening the Extension activities at nested units.
12. Extension Division of the Institute need to be strengthened with the scientists having Agriculture Extension background.
13. Renowned scientists / professors only may be the members of Research Advisory Committee (RAC) of the Institute.
14. Renovation of Institute's Guest house. At present, only 2 rooms are available in the Guest house. Since, more numbers are required to be accommodated in exigency, 5-6 more rooms are required to be constructed.

#### **GENERAL COMMENTS OF RAC MEMBERS**

**Dr. D. Sen, Member RAC** opined that the programme, Technology Assessment and Refinement through Institute Village Linkage Programme (Phase-III) indicates "Refinement of Technology", but not given emphasis on refinement of the technologies. He suggested deletion of the word "Refinement" in the project title, if possible. He, praised the Chairperson for excellent conducting of the meeting. He also suggested that the Extension division should be strengthened with the scientists from the Agricultural Extension background.

**Dr. S. Maity, Member RAC** expressed that a lot of healthy discussion had taken place in the meeting which will ultimately help the scientists of this Institute to enrich their knowledge in the right direction. He also appreciated the Chairperson for her dynamic leadership in making the RAC meeting meaningful.

**Dr. B. B. Bindroo, Director** conveyed thanks to Prof. M. Muniyamma, Chairperson, RAC for her untiring efforts during the last two days for providing valuable comments/suggestions on various research projects/programmes. He, assured the Chairperson to explore the initiative for external funding on various projects including those with SBRL, Bangalore and for which the RSRs have already been advised to take up more endeavours in this line. He also expressed that young scientists will be benefited a lot on the valuable suggestions made by the RAC as far as formulation of new projects/programmes are concerned. He ascertained that rigid efforts on the necessary changes in line with the guidelines provided by the Chairperson will be taken up for preparation of referees' list, strengthening of extension division of the institute, upgradation of laboratory facilities besides increasing the number of farmers by the respective RSRs, RECs and Sub-RECs.

**Prof. Muniyamma, Chairperson** in her concluding remarks, expressed her pleasure on the research activities being carried out at this institute, particularly on tissue culture and the books/booklet released during the occasion. She stressed on the need for preparation of a data base on the concluded research projects/programmes of this Institute since inception which should be ready by the next RAC. She also advised for obtaining information in respect of projects prepared by other CSB institutes so

that repetition of work could be avoided. She also suggested that all the Divisions/Sections should be strengthened with improved infrastructure and manpower.

Emphasizing on the external funding to execute need based research activities, she informed the house that Govt. of India has initiated a special programme for improvement of the quality of life of the people of North-Eastern India. Accordingly, project/programme giving thrust on the improvement of quality of life and generating income of the farmers through sericulture activity, should be explored. As for DBT funded projects, she advised to send the projects to the particular task force committee to get the approval without delay. She hoped that by the next RAC all the new projects/programmes approved, will be in force apart from some more new projects from the scientists of this institute. Regarding collaborative DBT funded project with other institution she suggested to explore the possibilities for arranging video conference with the collaborator in order to exchange views and perspectives in the relevant field besides deputing scientists to the collaborative institution for having exposure.

She also stressed upon the need for initiating the efforts on the evolved technologies as far as sericulture activity is concerned for wide publicity among the farmers through electronic media and AIR. Extension and Training Division should have good rapport with the media people and organize special lecture/AV Programmes. She also suggested to strengthen the Extension Division of this Institute by deploying scientists from Agricultural Extension background. Moreover, she also felt that, like CSR&TI Mysore the Extension Division also may have a cell where farmers can contact/call over telephone in order to get assistance or help.

She expressed that although the RAC does not have any administrative control, but sometimes she has to become very rigid during the course of discussion to keep up with the significance of the meeting. Moreover, it is the prerogative of the Chairperson, whosoever will be allowed for making comments during presentation of any project/programme, as because so many agenda items have to be finalized in the house, within the stipulated time.

Finally she conveyed whole-hearted thanks to the distinguished RAC Members, invitees, participants and the Director of the Institute, under whose able leadership every arrangement for conducting the meeting was executed in a very systematic manner.

The meeting ended with a vote of thanks to the Chair and to the members.

**APPROVED**

**Sd/-  
Prof. M. Muniyamma,  
Chairperson, RAC,  
CSR&TI, Berhampore (WB**

## Annexure-I

### LIST OF MEMBERS, INVITEES AND SCIENTISTS WHO ATTENDED THE 35<sup>TH</sup> MEETING OF RESEARCH ADVISORY COMMITTEE HELD ON 22<sup>ND</sup> & 23<sup>RD</sup> DECEMBER, 2011 AT CSR&TI, BERHAMPORE, W. B.

#### Members

1	Prof. M. Muniyamma, Ex-VC, Gulbarga University, Karnataka	Chairperson
2	Dr. H. K. Majumder, Scientist-G, IICB(CSIR), Kolkata	Member
3	Dr. S. Maity, Ex-Prof. BCKV, Mohanpur, West Bengal	Member
4	Dr. D. Sen, Ex-Director of Extn., NIRD, ICAR, Hyderabad	Member
5	Dr. B.B. Bindroo, Director, CSR&TI, Berhampore	Member Convener

#### DoT/DOS Members

6	Shri B.K. Mukherjee, Addl. Director (representative, Director of Textiles (Seri.), West Bengal)
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#### Invitees

1	Dr. K. Mondal, Scientist-D, ZSSO, Malda
2	Shri M. M. Banerjee, Dy. Director of Textiles(Seri.), Murshidabad, West Bengal

Sl. No.	Name	Designation	Address
1	Shri S. S. Manna	Scientist-D, R&S	CSR&TI, Berhampore
2	Shri R. N. Dutta	Scientist-D, Training	CSR&TI, Berhampore
3	Dr. M.K. Ghosh	Scientist-D, Mori.	CSR&TI, Berhampore
4	Dr. S. Roy Chowdhuri	Scientist-D, PMCE	CSR&TI, Berhampore
5	Dr. N.K. Saha	Scientist-D, Training	CSR&TI, Berhampore
6	Shri T.K. Biswas	Scientist-D	RSRS, Jorhat
7	Mrs. C. Maji	Scientist-D	RSRS, Kalimpong
8	Dr. M.K. Singh	Scientist-C, PMCE	CSR&TI, Berhampore
9	Shri Zakir Hossain	Scientist-C, PMCE	CSR&TI, Berhampore
10	Dr. S. K. Mukhopadhyay	Scientist-C, Extn.	CSR&TI, Berhampore
11	Shri. D. Das	Scientist-C, Extn.	CSR&TI, Berhampore
12	Dr. S.K. Mondal	Scientist-C, Agronomy	CSR&TI, Berhampore
13	Shri S. Rajaram	Scientist-C, Agronomy	CSR&TI, Berhampore
14	Dr. S.K. Dutta	Scientist-C, Mul. Patho.	CSR&TI, Berhampore
15	Dr. P.K. Tewary	Scientist-C, Mul. Physiol.	CSR&TI, Berhampore
16	Dr. A. K. Misra	Scientist-C, Mul. Physiol.	CSR&TI, Berhampore
17	Dr. P. K. Ghosh	Scientist-C, MBG	CSR&TI, Berhampore
18	Dr. Jalaja S. Kumar	Scientist-C, MBG	CSR&TI, Berhampore
19	Dr. (Mrs.) M. Chaudhuri	Scientist-C, MBG	CSR&TI, Berhampore
20	Dr. R. Kar	Scientist-C, Soil Sc. & Chem.	CSR&TI, Berhampore
21	Dr. S. K. Majumder	Scientist-C, Soil Sc. & Chem.	CSR&TI, Berhampore
22	Dr. (Mrs.) Rita Banerjee	Scientist-C, Biotechnology	CSR&TI, Berhampore
23	Dr. S. Chatterjee	Scientist-C, Biotechnology	CSR&TI, Berhampore
24	Smt. M. Patnaik	Scientist-C, Ento.	CSR&TI, Berhampore
25	Dr. M. V. Santhakumar	Scientist-C, Extn.	CSR&TI, Berhampore
26	Shri N. B. Kar	Scientist-C, R&S	CSR&TI, Berhampore
27	Dr. M.Z. Khan	Scientist-C, SBG	CSR&TI, Berhampore
28	Dr. G. K. Chattopadhyay	Scientist-C, SBG	CSR&TI, Berhampore
29	Dr. N. Suresh Kumar	Scientist-C, SBG	CSR&TI, Berhampore
30	Shri S. Sreekumar	Scientist-C, SBG	CSR&TI, Berhampore
31	Shri T.N. Nath	Scientist-C, SWP & RTI	CSR&TI, Berhampore

32	Mrs. S. Mukherjee	Scientist-C, Training	CSR&TI, Berhampore
33	Dr. L.M. Saha	Scientist-C, Training	CSR&TI, Berhampore
34	Dr. R.K. Saha	Scientist-C, Training	CSR&TI, Berhampore
35	Dr. S.K. Dutta	Scientist-C, Mul. Patho.	CSR&TI, Berhampore
36	Shri N. K. Das	Scientist-C, Statistics	CSR&TI, Berhampore
37	Dr. U.K. Bondapadhyay	Scientist-C	RSRS, Kalimpong
38	Smt. R. Bhutia	Scientist-C	RSRS, Kalimpong
39	Dr. Sudeb Chatterjee	Scientist-C	RSRS, Kalimpong
40	Smt. Ranuma Das	Scientist-C	RSRS, Jorhat
41	Smt. M. Pahmegam	Scientist-C	RSRS, Jorhat
42	Dr. Y. Debaraj	Scientist-C	RSRS, Jorhat
43	Dr. A.H. Naqvi	Scientist-C	RSRS, Ranchi
44	Dr. Ghanashyam Singh	Scientist-C	RSRS, Ranchi
45	Dr. S. Chakraborty	Scientist-B, S.W. Patho.	CSR&TI, Berhampore
46	Dr. H. Lakshmi	Scientist-B, SBG	CSR&TI, Berhampore
47	Smt. N. Lalitha	Scientist-B, Biotech.	CSR&TI, Berhampore
48	Shri P. Mahapatra	Computer Programmer	CSR&TI, Berhampore
49	Shri S. Roy	T.A., PMCE	CSR&TI, Berhampore
50	Shri B. Gupta	Jr. Steno. PMCE	CSR&TI, Berhampore
51	Smt. Sanchita Sarkar	JRF, Biotechnology Section	CSR&TI, Berhampore
52	Shri T. Maitra	T.A., Computer	CSR&TI, Berhampore

### ABSENTEE

#### Membres :

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| 1. | Dr. D.K. Bhattacharya, Prof. of Zoology, Univ. of Kalyani, West Bengal |
| 2. | Dr. N. Suryanarayana, Ex-Director, Central Silk Board                  |
| 3. | Dr. B. Saratchandra, Director (Tech), CSB., Bangalore                  |
| 4. | Dr. V. Sivaprasad, Director, NSSO Bangalore                            |

#### DoT/DoS, Members:

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| 1  | Smt. Monimala Phukan Barthakur, Director of Sericulture, Govt of Assam |
| 2  | Shri H.G. Simte, Director of Sericulture, Govt of Manipur              |
| 3  | Shri D. Engzananga, Director of Sericulture, Govt of Mizoram           |
| 4  | Shri R.R. Bang, Director of Sericulture & Weaving, Govt of Meghalaya   |
| 5  | Shri Khoda Ruja, DoT & H, Govt of Arunachal Pradesh                    |
| 6  | Shri Watimongba Walling, Dos, Govt of Nagaland                         |
| 7  | Shri T.K. Chakma, IAS, DoHH & Sericulture, Govt of Tripura             |
| 8  | Shri P. Bhattacharya, IAS, DoT (Seri), Govt of WB                      |
| 9  | Shri B.C. Mohapatra, IAS, DoT & H, Govt of Orissa                      |
| 10 | Shri P.K. Jha, IAS, DoH, Sericulture, Govt of Bihar                    |
| 11 | Shri Dharendra Kumar, IFS, Director (HS&H), Govt of Jharkhand          |
| 12 | Commissioner, Gram Udyog & DoS, Govt of Chhattisgarh                   |
| 13 | Shri D.R. Sharma, Director (Sericulture), Govt of Sikkim               |

#### Invitee

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|---|--|
| 1 | Joint Secretary (Tech), RO, CSB, Kolkata       |
| 2 | Joint Secretary (Tech), RDO, CSB, Guwahati     |
| 3 | Dy. Secretary (Tech), RDO, Bhubaneswar, Odisha |
| 4 | Asstt. Secretary (Tech), RDO, Patna, Bihar     |