

**MINUTES OF THE RESEARCH COUNCIL MEETING HELD ON
18TH AUGUST, 2011 AT CSR&TI, BERHAMPORE, WEST ENGAL**

The Research Council meeting of CSR&TI, Berhampore was held on 18th August, 2011 under the chairmanship of Dr. B.B. Bindroo, Director, CSR&TI, Berhampore with a view to review the progress of on-going and concluded research projects/ programmes of the Main Institute & its nested RSRSs, besides considering the new research projects/ programmes proposals submitted by the scientists. The list of the participants is enclosed in Annexure - I.

While welcoming all the scientists of this Institute/ nested units and other participants, Dr. B.B. Bindroo, Director and Chairman of Research Council expressed that to cope up with the way for execution of R&D programmes adopted by the CSB, research work at this institute should be more analytical and due efforts have to be taken to achieve the goals as set under Results Framework Documents (RFD) of Central Silk Board (CSB) for the Institute. Though, a lot of commendable work has already been done by this Institute so far, still so many works have to be taken to fulfill and achieve the targets. Accordingly, he expressed that the scientists should come forward and formulate research projects which are need based and feasible to be accomplished within the available infrastructure. He also urged the scientists to interact actively with their valuable suggestions during the course of discussion on research projects/ programme in a positive way which would become boon for other scientists to carry out R&D activities smoothly for development of sericulture industry.

Afterwards, agenda-wise discussions were held.

Item No. 1: Confirmation of the minutes of the meeting held on 22nd & 23rd February, 2011.

Since no comment was received from any corner the minutes were confirmed.

Item No.2: Review of the follow up action taken on the decision of the Research Council meeting held on 22nd & 23rd February, 2011 and on 31st March – 1st April and 4th - 7th April, 2011.

Follow up action taken by the concerned on the decisions of the earlier Research Council meeting held on 22nd & 23rd February, 2011 and on 31st March – 1st April and 4th - 7th April, 2011 (Special RC) was reviewed and outcome of which are hereunder:

For selection of suitable breeds/ hybrids available at RSRSs, it was observed that Dr. N. Suresh Kumar, Sci-C had visited RSRS, Kalimpong only and selected the breeds / hybrids. Since selection of silkworm breeds/ hybrids are required for preparation / formulation of new research projects and also for the **Bivoltine Promotion programme**, Dr. Kumar was advised to complete the work based on the information / data available from the RSRSs at this Institute, immediately so as to use the breeds / hybrids for further development.

(Action: Dr. N. Suresh Kumar, Sci-C, SBG Section)

Progress on preparation of the project entitled, “**Socio-economic empowerment of women sericulturists / stakeholders through technological updating and training**” was discussed and it was found that though Dr. N. K. Saha, Sci-D has put efforts on it, the project proposal is not more than a usual theoretical interpretation of extension strategies / aspects already available in the extension manuals. The Chairman expressed that the project should have been prepared in a different and more precise way incorporating therein the practicalities of the events / work programmes to be undertaken by the women sericulturists. However, after a threadbare discussion, the Chairman suggested Dr. N. K. Saha, Sci-D to hand over all the materials of project to Dr. (Mrs.) Subhra Chanda, Sci-C who should in turn prepare the project putting emphasis on women empowerment which is the need of the hour for the sericulture industry as explained.

(Action: Dr. N.K. Saha, Sci-D and Dr. (Mrs.) S.Chanda, Sci-C)

On the new project proposal entitled “**Study of combining ability of the developed sex limited bivoltine and multivoltine breeds of *Bombyx mori* L. and biochemical characterization of promising combiners**” which was presented in the earlier RC meeting, the concerned PI informed that the comments on the above project is yet to receive from the Director (Tech.), C.O., Bangalore. Since the project has a great importance on commercial point of view and also demand from NSSO, grainages in the region, the concerned PI was advised to pursue the matter and get the project initiated at the earliest. He further advised to include some more suitable breeds in the project. However, on receipt of the comments if any, the project needs to be undertaken by a specialized scientist on the subject.

[Action: Dr. L.M. Saha, Sci.-C]

With regard to the new project entitled “**Identification of gene involving in drought / cold tolerance and development of efficient protocols for transformation in mulberry**” which has been renamed as “**Cloning of cDNAs for genes inducible by drought and cold stress in mulberry and attempts to improve tolerance in elite mulberry variety through transgenic approach**”, it was observed that for hardening / raising the plants developed through transgenic approaches, the green house facilities are essential. Therefore, the PI was advised to include green house facilities in the project and keep budget provision accordingly. Moreover, the project being a collaborative with the Bose Institute, Kolkata, PI should also obtain a consent letter from the collaborator Institute and submit to this Institute for further necessary action. The project was approved and the concerned scientist was advised to send to DBT, New Delhi for perspective funding.

[Action: Dr. P.K. Tewary, Sci.-C]

For validation trial of C-2028 waterlogged tolerant mulberry variety, it was informed that 1000 saplings of C-2028 variety will be supplied to BSF, NSSO, Palakkad, Kerala in the month of Sept.,2011. The Chairman advised the concerned scientist to supply C-2028 planting material to the DoS, Jharkhand, besides, to REC, Gumla for nuclear stock maintenance in waterlogged area of the unit’s farm at Gumla. For this, the Incharge, REC, Gumla will submit indent to this Institute. Further, Scientist-D (Mori.) was advised to establish a demonstration plot for C-2028 variety at this Institute.

[Action : Sci-D (Mori.), Dr. A. K. Misra, Sci-C and Sci-C, REC, Gumla]

As regards popularization of “Silkworm rearing technology” emanated through the concluded project **APR-3250** of SWP&RTI Section, it was observed that the technology is already under popularization under the ToT/IVLP programme, it is not necessary to repeat it as a separate programme. The Chairman advised the concerned scientist to withdraw the programme forthwith.

[Action: Dr. T. Dutta (Biswas), Sci-C]

Regarding the project entitled “**Effect of composite plant growth promoting micro organisms (PGPM) on nutrient accusations, yield and quality of mulberry (*Morus* spp.) leaves on acid soils of West Bengal**”, the Chairman expressed that for studying the microorganisms, the infrastructure, expertise and laboratory facilities available at this Institute may be effectively utilized instead of collaborating with other Institutes / Universities. Shri Ram Laxhan Ram, Sci-B, PI was advised to revise the project accordingly, include the scientists from RSRS, Kalimpong and Soil Science & Chemistry Section of this Institute and submit the project for obtaining comments from the referees.

[Action: Ram Laxhan Ram, Sci-B, RSRS, Kalimpong]

Regarding the project entitled “**Poverty elevation of tribes through sericulture technologies**”, already submitted to the DST, New Delhi for funding, by RSRS, Jorhat, it was learnt that the DST has suggested certain modification / alteration etc. on the project. Since the project is on the poverty elevation through sericulture development in the Eastern and North-Eastern region, the Chairman desired that the documents / modified project proposal be made available to the Director for perusal and further needful.

[Action: Sci-D, RSRS, Jorhat]

While reviewing the Central Sector Scheme (CSS-2107), it was observed that the budget allocated for the scheme could not be spent fully within the time schedule, therefore, Dr. A. Ghosh, Sci-D (Mori.), Dr. S. K. Dutta, Sci-C and Dr. M. D. Maji, Sci-C were advised to sit together and explore the possibilities

for purchase of various meteorological data recording related equipments such as rain gauge, hygrometer, thermometer etc. so that the budget could be utilized fully and no fund should go as unspent. Further, the Chairman advised that in case of RECs which are housed in a rented building, they should also set up a rain gauge facility for rainfall data recording under the scheme.

[Action: Dr. A. Ghosh, Sci-D (Mori.), Dr. S.K. Dutta, Sci-C, CSR&TI, Berhampore and Dr. M.D. Maji, Sci-C, RSRS, Kalimpong]

In the North-Eastern region, since there is ample scope for bivoltine sericulture development, the Chairman advised the Sci-D, RSRS, Jorhat, to prepare a project on “**Bivoltine promotion programme**” for Eastern and North-Eastern states exploring the areas in North-Eastern states where potentiality of bivoltine rearing is immense. Further, it was also suggested to frame up a comprehensive strategy for bivoltine promotion in the region so as to make the programme successful.

[Action: Shri T. K. Biswas, Sci-D, RSRS, Jorhat]

Item No. 3: Review of the progress of the ongoing research projects/ programmes of the Main Institute/ RSRSs.

I. Main Institute:

MULBERRY BREEDING & GENETICS SECTION:

Progress of two ongoing research projects entitled “**PIB 3422: Development of mulberry genotypes for improvement in productivity and quality**” and “**PIB 3424: Development of low temperature stress tolerant mulberry genotypes for sub-tropical plains**” and one programme AICEM(P-III), was reviewed by the house and found as per milestone.

AGRONOMY SECTION:

Progress of one ongoing validation programme entitled “**BPP(VP)-001: Validation trial on field evaluation of antitranspirants for increasing leaf yield of mulberry under rainfed condition**”, was reviewed by the house and found as per the milestone.

SOIL SCIENCE & CHEMISTRY SECTION:

Progress of two ongoing projects “**PPS 3435: Studies on micronutrients for sustained high productivity of quality mulberry in Eastern and North-Eastern India**” and “**PPS 3452: Terrestrial carbon sequestration for sustained high productivity of quality mulberry**” and two programmes entitled “**PPS-3347: Evaluation of soil fertility for sustained production of quality mulberry leaf in Eastern India under long-term fertilization**” and “**BPP(VP)-002: Validation trial of the ready reckoner of sulphur fertilizer application for obtaining targeted yields of mulberry**”, of which one project (PPS-3347) switched to programme with reduced number of treatment as per instruction of C.O., Bangalore, was reviewed by the house and found as per milestone.

MULBERRY PATHOLOGY SECTION:

Review of one ongoing programme under **Central Sector Scheme (CSS-2107)** was made by the house and the progress found as per milestone. The scientist is required to expedite the procurement of equipments under the scheme without further delay.

(Action: Dr. S. K. Dutta, Sci-C, Mulberry Pathology Section)

BIOTECHNOLOGY SECTION:

Progress of two ongoing DBT funded projects in collaboration with CCMB, Hyderabad, entitled “**PIG-3441: Development, validation and utilization of SCAR markers(s) for powdery mildew (*Phyllactinia corylea*) resistance in mulberry**” and “**Development of DNA markers based genetic**

linkage map of mulberry and QTL analysis for agronomically important *planta* traits” and one Pilot Study entitled **“BPP(PS)-001: Improvement of mulberry through *in vitro* mutagenesis and somaclonal variation**” was reviewed and found as per the milestone. However, the gap filling of the progeny population is to complete immediately and experimental plots to be kept well up dated every time.

(Action: Concerned Scientist, Biotechnology Section)

SILKWORM BREEDING & GENETICS SECTION:

Progress of one collaborative project just initiated with CSGRC, Hosur entitled **“AIE-3454: Evaluation of elite bivoltine silkworm germplasm under different agro-climatic conditions (AISGEP – Phase-II)**, three ongoing programmes entitled **“BAP(P)-010: Popularization of authorized silkworm (*Bombyx mori* L.) hybrids**”, **“BAI(P)-009: Field level testing of new hybrids**” and **“Mulberry Silkworm Race Authorization Programme (P-III)”** and one pilot study entitled **“BAI(P)-001: Identification of improved multivoltine hybrid for unfavourable seasons in West Bengal**” was reviewed by the house and progress was found as per milestone.

However, while reviewing the programme entitled **“BAI(P)-010: Popularization of authorized silkworm (*Bombyx mori*)”**, the Chairman advised the PI Dr. G.K. Chattopadhyay, Sci-C to reflect the progress of the said programme in the Annual Report for the year 2010-11 since the same was started during Sept.,2010.

[Action: Dr. G.K. Chattopadhyay, Sci-C, SBG Section]

SILKWORM PHYSIOLOGY & RTI SECTION:

Progress of one ongoing programme entitled **“BPP(VP)-003: Validation trial on the superiority of paired row plantation in chawki mulberry garden with regard to quality leaf yield and cocoon productivity”** was reviewed and found as per milestone. It was also felt that scientists involved should be more energetic to complete the trials at three locations as envisaged.

(Action: Concerned Scientist, Sw. Physiology & RTI Section)

SILKWORM PATHOLOGY SECTION:

The progress of two ongoing programmes entitled **“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* L”** and **“BAR(RP)- 005: Survey and surveillance of silkworm diseases in the traditional sericultural districts of West Bengal”** and one pilot study entitled **“BAR(PS)-002: Formulation of broad spectrum room disinfectant for silkworm disease management”**, was reviewed by the house and found as per milestone.

As regards the programme entitled **“BAR(RP)-005: Survey and surveillance of silkworm diseases in the traditional sericultural districts of West Bengal”**, the Chairman advised the PI Shri Zakir Hossain, Sci-C to prepare a compiled report from the last 15-20 years data so as to observe the trend on the incidence so that the huge data base is utilized in a more prospective way. Considering the necessity for continuation of the programme Dr. M.V. Santha Kumar, Sci-C and Dr. S.K. Dutta, Sci-C were advised to also associate with the compilation of the data as above and also to find out the origin of the above programme which is being carried as to be a routine one. It was also expressed that putting more workload in the form of merely collection of data under survey and surveillance of disease incidence by the RECs is not justified and feasible as the REC are already burdened with other works. However, the decision for continuation shall be taken in due course after the full compiled report of last 15-20 years is put to the Director.

[Action: Shri Zakir Hossain, Sci-C, Dr. M.V. Santha Kumar, Sci-C, & Dr. S.K. Dutta, Sci-C]

ENTOMOLOGY SECTION:

Review on the progress of one ongoing research programme entitled “**PRE-3345: Development of weather based forecasting system for mulberry pests**” and one validation programme entitled “**Studies on the field efficacy of selected dose of insecticide in whitefly management**” was reviewed and found as per milestone, however, the scientist are have to present the progress in a very lucid and applicable way.

EXTENSION DIVISION:

Progress of one ongoing programme entitled “**Technology Assessment and Refinement through Institute Village Linkage Programme (Phase-III)**” was reviewed and found as per milestone by the house.

TRAINING DIVISION:

The house reviewed the progress on training programmes (Structured and Non-Structured courses) besides training conducted under “**Management Development Programme**” for officers, scientists / officials and “**Skill Updation programmes**” for farmers and found satisfactory.

II. RSRSs:

Progress of ongoing projects (collaborative of MI) conducted at RSRSs, was reviewed by the house and found as per the milestone. In case of own programmes (2 Nos.) of RSRS, Kalimpong entitled “**B-KPG (P)-005: Improvement of yield and quality of mulberry leaf in sub-tropical hills of Eastern India through the refinement of pruning schedules and application of Morizyme-B**” and “**B-KPG (P)-004: Studies on the leaf webber, *Glyphodes pyloalis* (Walker) and its eco-friendly management**”, the progress was found as per milestone.

ITEM NO.4: Review of concluded projects/programmes:

During the period one programme entitled “**Validation trial of mulberry based intercropping system in wider spacing under irrigated condition**” of Agronomy Section and one pilot study entitled “**Studies on multiple mating ability of bivoltine male moths and its effect on production of popular Multi x Bi dfls under tropical condition**” of SBG section were concluded. Since the final report of the above concluded programme/study was already reviewed by the RAC in its 34th meeting held on 26.05.2011 and found satisfactory. Regarding the outcome of the validation of intercropping system in wider mulberry spacing, the scientist must prepare a technology write up and submit the same for further action.

(Action: Dr. A. K. Misra, Sci-C, Mulberry Physiology Section)

Item No. 5: CONSIDERATION OF NEW PROJECTS/SUB-PROJECT/ PROG., IF ANY.

Following nine (9) new research projects and eleven (11) programmes/ pilot study were presented by the scientists in the meeting which were discussed critically and observations / decisions taken are as follows:

Project:

1. “**Genotyping of mulberry varieties developed at CSR&TI, Berhampore and development of linkage map for important agronomical traits**” (In collaboration with Bose Institute, Kolkata) – by Dr. M. K. Ghosh, Sci-D.

The project was presented by Dr. G. Gangopadhyay, Bose Institute, Kolkata, in the house. There was elaborate discussion on the project. The Chairman enquired about the field applicability of the

study and number of progenies to be screened under the project. Since the time frame kept for progeny development study found to be less, the concerned PI was advised to increase the project time period.

Decision: Approved. Since the project was found to be a molecular based study and also aimed to get funds from the external agencies, the PI was advised to submit a full project and send to the DST, New Delhi for perspective funding.

[Action: Dr. M.K. Ghosh, Sci-D, MBG Section]

2. “Evaluation of newly developed triploid mulberry varieties for productivity and quality” by Dr. P.K. Ghosh, Sci.-C

Crossing between diploid and tetraploid may not always necessarily ensure triploidy in all the resultant / developed progenies, therefore, cytological confirmation for all the progenies in a population are necessary to make sure about their ploidy. Leaf anatomy especially thickness of leaf lamina *vis-a-vis* cytological study should also be undertaken to confirm the ploidy of the progenies. Data recording on disease and pest incidence is not required if crop protection measures are taken. Hence, expt. No. E01 needs modification. Further, before initiating the project, ploidy status i.e. triploidy of the progenies is to be confirmed first and then go for further studies with the confirmed triploids.

Decision: Approved subject to mandatory confirmation of ploidy of the genotypes cytologically within a fortnight and also the incorporation of the suggested modifications.

[Action: Dr. P.K. Ghosh, Sci-C, MBG Section]

3. “Evaluation of mulberry varieties suitable for low input soils” by Dr. M. K. Ghosh, Sci.-D

Rooting behaviours being one of the important characters for screening of low input variety, necessary parameters should be studied accordingly. Information on the area and the low input soil status in all the four states proposed in the project should be mentioned in the origin of the project. Sub-REC, Bhandra may be included in the project considering the soil status at Bhandra instead of RSRS, Ranchi as it has no land of its own.

Decision: Approved, subject to incorporation of the above suggestions.

[Action: Dr. M.K. Ghosh, Sci-D, MBG Section]

4. “Development of high yielding mulberry varieties using physiological growth parameters as markers for selection” by Dr. (Mrs.) Jalaja S. Kumar, Sci.-C

The project is envisaged to screen high yielding mulberry varieties through physiological growth characters as markers, the parameters such as, nature of dormancy i.e., longer / shorter, leaf senescence, sprouting behaviours etc. should also be studied.

Decision: Approved subject to inclusion of the above suggestions. Since the project is physiology related, the PI was advised to include Dr. A. K. Misra, Sci-C as CI in the project for physiological studies.

[Action: Dr. (Mrs.) Jalaja S. Kumar, Sci.-C, MBG Section]

5. “Population interactions of pests and their natural enemies in mulberry eco-system of Eastern & North-Eastern India” by Dr. M.V. Santha Kumar, Sci.-C

Decision: Approved. The PI was advised to send the project to DBT for funding. It was also suggested to include Dr. Sudeb Chatterjee, Sci-C, RSRS, Kalimpong as CI in the project in place of Dr. U. K. Bondapadhyay, Sci-C.

[Action: Dr. M.V. Santha Kumar, Sci-C, Entomology Section]

6. **“Development of integrated management system of leaf rust diseases of mulberry for sub-tropical hills of Darjeeling and Sikkim”** by Dr. M. D. Maji, Sci.-C, RSRS, Kalimpong

The project was discussed at length and it was observed that the objective and the work plan proposed of the project for leaf rust disease management through integrated management system do not corroborate the objective as given and found to be totally ambiguous, with no relevance to the components as presented.

Decision: **Not approved.** However, the concerned scientist was advised to formulate a new project entitled **“Standardization of package of practices for mulberry cultivation in sub-tropical hills”** for the benefit of the sericultural farmers especially in the hills of Darjeeling and Sikkim.

[Action: Dr. M. D. Maji, Sci.-C, RSRS, Kalimpong]

7. **“Studies on productivity and profitability of mulberry sericulture in Assam”**, by Dr. S.N. Gogoi, Sci.-C, RSRS, Jorhat.

Decision: **Not approved.** The proposed project was found to be a total repetition of another recently approved project of the same RSRS, thus, did not suffice justification. However, the concerned scientist was advised to formulate a new project on mulberry aspects and submit to the Institute soon.

[Action: Sci-D, RSRS, Jorhat and Dr. S.N. Gogoi, Sci.-C, RSRS, Jorhat]

8. **“Studies on planting geometry of high bush mulberry plantation in North-East India”** by Dr. S.N. Gogoi, Sci.-C, RSRS, Jorhat

While discussing the project, following observations / suggestions were made –

Title of the project may be rewritten as **Studies on planting geometry of dwarf mulberry plantation in North-East India**, besides taking spacing and plant height as variables. Pruning of mulberry to be done at a height of 4 ft., 5 ft and 6 ft. Three spacing such as, 6’x6’, 6’x8’ and 8’x8’ with three replications may be considered. The concerned PI of the project is advised to sit with Shri N. K. Das, Sci-C, Statistics Section of the Institute and finalize the work plan, treatment details etc. and immediately submit the project for further action.

Decision: **Approved** subject to the modification as suggested above.

[Action: Dr. S.N. Gogoi, Sci.-C, RSRS, Jorhat]

9. **“Appropriate requirement for fertilizers for sustainable productivity in high yielding mulberry varieties”**, by Dr. S.K. Mondal, Sci.-C.

The project was discussed at length and found to be standardization of chemical fertilizers requirements for mulberry cultivation. The project needs modification considering the references of earlier concluded projects / reports in this line. The PI was advised to recast the project in consultation with Dr. A. Ghosh, Sci-D (Mori.), Dr. R.N. Dutta, Sci-D (Trg.), Dr. S.K. Majumder, Sci-C and Shri N. K. Das, Sci-C of this Institute and submit the project proposal for perusal immediately.

Decision: **Not approved** in present form. However, the concerned PI is advised to recast the project thoroughly as decided and submit to the Director within 10 days for further needful action.

[Action: Dr. S.K. Mondal, Sci.-C, Agronomy Section]

Programme:

1. **“Isolation, purification and identification of Gattine virus infecting silkworm, *B. mori* L.”** - by Shri Zakir Hossain, Sci.-C

Decision: **Approved.**

[Action: Shri Zakir Hossain, Sci.-C, Sw. Pathology Section]

2. **“Popularization of botanical pesticides for the management of major mulberry pests”** - by Dr. M.V. Santha Kumar, Sci.-C

The concerned PI of the programme was advised to make available the technology report emanated from the concluded project on **“Control of thrips and mealy bugs”**, to the DoT (Seri.), Govt. of West Bengal with a request to popularize / commercialize the technology with the farmers under the CDP / popularization programme. The Institute will render technical supervision support to the farmers.

Decision: **Approved**, subject to above modification.

[Action: Dr. M.V. Santha Kumar, Sci-C, Entomology Section]

3. **“Studies on the reelability of multivoltine hybrid cocoons during adverse climatic condition in Eastern and North-Eastern regions”** - by Shri N.B. Kar, Sci.-C

Decision: **Approved**.

[Action: Shri N. B. Kar, Sci-C, R&S Division]

4. **“Development of technology for production of silkworm, *Bombyx mori* L. eggs during summer season under West Bengal condition”** - by Shri T. N. Nath, Sci-C

It was observed that the study is related to the embryology and preservation of silkworm eggs. Production of silkworm eggs during unfavourable seasons being a serious concern faced by SSPCs, NSSO, the PI is advised to formulate a full fledged project in a holistic approach considering multivoltine and bivoltine breeds incorporating embryological study such as, incubation, rearing, egg production, egg preservation schedule etc.

Decision: **Approved as a project**, subject to above modifications in work elements. The PI should submit the project proposal to the Director within a period of 15 days for further necessary action.

[Action: Shri T. N. Nath, Sci-C, Sw. Physiology & RTI Section]

5. **“Improvement of rearing technology for autumn crop in sub Himalayan region.”** - by Smt. R. Bhutia, Sci-C, RSRS, Kalimpong

Decision: **Approved**. The concerned scientist was advised to take two winter crops by adopting the package of practices using local terms such as, Machan etc. in the programme and may also incorporate the actual practices as are done by the farmers at their places.

[Action: Smt. R. Bhutia, Sci-C, RSRS, Kalimpong]

6. **“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”** by Shri R.L. Ram, Sci-B, RSRS, Kalimpong

Decision: **Approved**.

[Action: Shri R.L. Ram, Sci-B, RSRS, Kalimpong]

7. **“Promotion of vermicompost through low cost pit at farmers’ level”** by Dr. U. K. Bandyopadhyay, Sci-C, RSRS, Kalimpong

It was observed that the programme proposed was not formulated with due care, rather than a simple and casual practice on vermicompost preparation.

Decision: **Not approved**. However, the PI is advised to submit new programme /project considering the local needs and place in the next RC meeting or before that.

[Action: Sci.-D, RSRS, Kalimpong and Dr. U. K. Bandyopadhyay, Sci-C]

8. “Major nutritional status of soils of mulberry growing area” by Smt. M. Pamehgam, Sci-C, RSRS, Jorhat

Suggestions / observations were:- Number of farmers and the area of study need to be clearly mentioned in the programme; besides, area or location-wise number of soil samples to be studied also need to be mentioned.

Decision: Approved. Dr. S.K. Majumder, Sci-C, Soil Sci. & Chemistry Section is advised to help the PI to formulate the programme in line with the programme being taken up at RSRS, Kalimpong.

9. “Fertility status of soils of REC (SU), Bhandara, Lohardaga on the basis pH, EC and available major nutrients (NPK)” by Dr. G.S. Singh, Sci-C, RSRS, Ranchi.

Decision: Approved. The concerned PI was advised to consider the data recording as followed by other RSRSs i.e. RSRS, Kalimpong and Jorhat, where similar programmes are taken up and consult Dr. S. K. Majumder, Sci-C and submit the same.

[Action: Dr. G.S. Singh, Sci-C, RSRS, Ranchi]

10. “Assessment of post cocoon parameters of newly developed silkworm hybrids released by CSR&TI, Behampore at faremrs’ level – feed back data generation” by Shri S.S. Manna, Sci-D, R&S Division.

The scientist showed his inability to perform the programme and instead requested that he be permitted to develop some machines.

Decision: In the light of the desire of the PI, the programme is **Not approved**. The concerned scientist is advised to formulate innovative projects considering the local needs and develop reeling machines.

[Action: Shri S.S. Manna, Sci-D, R&S Division]

11. “Field evaluation of plant growth regulator combination for improvement of quality leaf yield of mulberry especially under cold stress condition” by Dr. P. K. Tewary, Sci-C

The PI was advised to take the study for one year (Dec.,2011 to Nov.,2011) considering two winter crops at the DoT (Seri.), West Bengal farms namely Berhampore (STI), Akherighata, Bolpur/ Muluk and Kotasur.

Decision: Approved. The PI was advised to write to the concerned DoT (Seri.) offices for the above programme.

[Action: Dr. P. K. Tewary, Sci-C, Mulberry Physiology Section]

SUBJECT, IF ANY, WITH THE PERMISSION OF THE CHAIR :

Following changes of Principal Investigator(s)/Co-Investigator(s) consequent upon transfer, was approved in the house.

Sl. No.	Project/ Programme	Scientist earlier acted as PI/CI	Scientist to be acted as PI/CI
1.	PIB-3424: Development of low temperature stress tolerant mulberry genotypes for sub-tropical plains.	Dr. Shivnath, Sc.-C (PI)	Dr. M. K. Ghosh, Sc.-D (PI)
2.	B-KPG (P)-004: Studies on the leaf webber, <i>Glyphodes pyloalis</i> (Walker) and its eco-friendly management.	Dr. S.P. Chakraborti, Sc.-C (PI)	Dr. S. Chatterjee, Sc.-C (PI)
3.	Technology Assessment and Refinement through Institute Village Linkage Programme (Phase-II)	Dr. S.N. Bagchi, Sc-C (PI)	Sri D. Das, Sc.-C (PI)
4.	Studies on the biology and feeding efficiency of coccinellid predators <i>Scynmus</i> sp for management of whitefly on mulberry.	Dr. S.N. Gogoi, Sc.-C (CI)	Mrs. R. Das, Sc.-C (CI)

MISCELLANEOUS:

1. CSR&TI, Berhampore has recently been accredited as the research residence for pursuance for Ph. D. studies by the University of Kalyani. Therefore, all the interested scientists of this Institute may submit their biodata to the University of Kalyani to get their names registered as Ph.D. guide.

[All Scientists]

2. Scientists of RSRS, Koraput and Ranchi do not have research projects of their own other than pursuing collaborative projects of the Main Institute. Expressing his dismay, the Chairman advised the scientists of the above two RSRSs to formulate projects based on the need/ demand of their respective areas and submit to the Director by mid. of September, 2011 for further necessary action. Besides, the scientists of all RSRSs who do not have research project as PI should take serious note of it and take new projects for the development of sericulture in the command areas of RSRSs. This is for strict compliance.

[Action: Incharge and all Scientists, RSRSs, Koraput & Ranchi]

3. The Chairman desired that RSRS, Kalimpong and REC, Shillong should function as **Satellite Bivoltine Breeding Centres** for bivoltine promotion programme. To this effect, the Incharges of RSRS, Kalimpong, RSRS, Jorhat and REC, Shillong will maintain bivoltine silkworm breeders' stock and other related activities.

[Incharge, RSRS, Kalimpong / Jorhat, REC, Shillong]

4. The Incharge of RSRS should send the proposal for establishment of soil lab. In RSRSs for the approved research programme related to soil analysis, wherever, pH meter and other related small equipments are not available, may purchase locally following the proper purchase procedure.

[RSRS Concerned]

5. The RSRS, Koraput should submit programme on **Soil analysis** similar to other RSRSs by mid of September, 2011.

[RSRS, Koraput]

6. As far as grazing in mulberry plantation is concerned in Jharkhand, the Chairman advised Dr. G. Singh, Sci-C, RSRS, Ranchi to undertake the study by formulating new project on high bush mulberry cultivation.

[Action: Dr. G. Singh, Sci-C, RSRS, Ranchi]

7. After completion of rearings at RECs, post cocoon estimations may also be undertaken and the sample of cocoons to be provided to the R&S Division of the Institute for the purpose and to be dealt as a routine programme by the R&S Division.

[Action: All RECs, Scientist-E, R&S Division, CSR&TI, Berhampore]

8. The absence of some of the concerned scientists and a few station Incharges in the meeting has been viewed seriously. This act of remaining away deliberately shall be deemed as misconduct and is liable to be reflected in their APAR's.

[Action: All Concerned]

The meeting was ended with a vote of thanks.

List of the participants attended the R.C. meeting held on 18th Aug.,2011 at CSR&TI, Berhampore(W.B.)

1. Dr. B.B. Bindroo, Director, CSR&TI, Berhampore
2. Shri M.K. Majumdar, Scientist-E, CSR&TI, Berhampore
3. Dr. P. Mitra, Scientist-D, CSR&TI, Berhampore
4. Shri R.N. Dutta, Scientist-D, CSR&TI, Berhampore
5. Dr. A. Ghosh, Scientist-D, CSR&TI, Berhampore
6. Shri S. S. Manna, Scientist-D, CSR&TI, Berhampore
7. Dr. A. K. Saha, Scientist-D, CSR&TI, Berhampore
8. Dr. N.K. Saha, Scientist-D, CSR&TI, Berhampore
9. Dr. M. K. Ghosh, Scientist-D, CSR&TI, Berhampore
10. Dr. S. Roy Chowdhuri, Scientist-D, CSR&TI, Berhampore
11. Shri T.K. Biswas, Scientist-D, RSRs, Jorhat
12. Dr. S. K. Mukhopadhyay, Scientist-C, CSR&TI, Berhampore.
13. Dr. M.K. Singh, Scientist-C, CSR&TI, Berhampore
14. Shri S. Rajaram, Scientist-C, CSR&TI, Berhampore
15. Dr. P. K. Tewary, Scientist-C, CSR&TI, Berhampore
16. Dr. P. K. Ghosh, Scientist-C, CSR&TI, Berhampore.
17. Dr. S.K. Majumder, Scientist-C, CSR&TI, Berhampore
18. Dr. A. K. Misra, Scientist-C, CSR&TI, Berhampore.
19. Shri N.K. Das, Scientist-C, CSR&TI, Berhampore.
20. Smt. S. Mukherjee, Scientist-C, CSR&TI, Berhampore
21. Shri N.B. Kar, Scientist-C, CSR&TI, Berhampore
22. Dr. (Mrs) R. Banerjee, Scientist-C, CSR&TI, Berhampore.
23. Smt. M. Patnaik, Scientist-C, CSR&TI, Berhampore
24. Dr. (Mrs.) M. Chowdhury, Scientist-C, CSR&TI, Berhampore
25. Dr. (Mrs.), T. Datta (Biswas), Scientist-C, CSR&TI, Berhampore
26. Dr. G. K. Chattopadhyay, Scientist-C, CSR&TI, Berhampore
27. Dr. S. Chatterjee, Scientist-C, CSR&TI, Berhampore
28. Md. Zakir Hossain, Scientist-C, CSR&TI, Berhampore
29. Dr. S.K. Mondal, Scientist-C, CSR&TI, Berhampore
30. Dr. L.M. Saha, Scientist-C, CSR&TI, Berhampore
31. Dr. Ram Kumar Saha, Scientist-C, CSR&TI, Berhampore
32. Dr. (Mrs.) S. Chanda, Scientist-C, CSR&TI, Berhampore
33. Dr. M. V. Santha Kumar, Scientist-C, CSR&TI, Berhampore
34. Mrs. R. Das, Scientist-C, RSRs, Jorhat
35. Smt. M. Pamehgam, Scientist-C, RSRs, Jorhat
36. Dr. S.N. Gogoi, Scientist-C, RSRs, Jorhat
37. Sri D. Das, Scientist-C, CSR&TI, Berhampore
38. Smt. R. Bhutia, Scientist-C, RSRs, Kalimpong
39. Dr. M.D. Maji, Scientist-C, RSRs, Kalimpong
40. Dr. U. K. Bondapadhyay, Scientist-C, RSRs, Kalimpong
41. Dr. N. R. Rao, Scientist-C, RSRs, Koraput
42. Dr. S.K. Dutta, Scientist-C, CSR&TI, Berhampore
43. Dr. Ghanashyam Singh, Scientist-C, RSRs, Ranchi
44. Dr. Gourav Gangopadhyay, Bose Instt., Kolkata
45. Shri H.A. Panduranga, Dy. Director (Comp.), CSR&TI, Berhampore
46. Dr. H. Lakshmi, Scientist-B, CSR&TI, Berhampore
47. Dr. N. Lalitha, Scientist-B, CSR&TI, Berhampore
48. Sri Ram Lakhnan Ram, Scientist-B, RSRs, Kalimpong
49. Shri P. Mahapatra, Computer Programmer, CSR&TI, Berhampore
50. Sri B. Gupta, Jr. Steno, CSR&TI, Berhampore