

**MINUTES OF THE 45th RESEARCH COUNCIL MEETING HELD ON 25th & 26th
NOVEMBER, 2016 AT CSR&TI, BERHAMPORE, WEST BENGAL**

The 45th Research Council meeting of CSR&TI, Berhampore was held on 25th & 26th November, 2016 to review the progress of on-going and concluded research projects/ programmes of the Main Institute besides considering new research project/ programme proposals submitted by the scientists. The meeting was presided over by Dr. Kanika Trivedy, Director, and the Chairperson, Research Council (RC), CSR&TI, Berhampore.

Dr. U. K. Bandyopadhyay, Scientist-D (PMCE) welcomed Dr. Kanika Trivedy, Director and the Chairperson, RC, Members and all participant Scientists of the Institute in the 45th RC meeting. At the outset, he expressed sincere thanks to the Director for her dynamic leadership and inspiration to the scientists for their involvement in projects/ programmes for 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 welcomed all scientists and participants in the meeting and expressed happiness for their commendable efforts and responsibilities to maintain the Institute as ISO standards on R & D interventions. She stressed upon that a team of Nodal officers with respect to different disciplines of Sericulture should be framed for the review of new project proposals. The new project proposals should be reviewed by the Nodal officers concerned and they should give their critical comments. The scientists should modify their project proposals and incorporating the suggestions made by the Nodal officer concerned before placing in the Research Council meeting.

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

Agenda-wise discussions were held as follows:

ITEM NO. 1: CONFIRMATION OF THE MINUTES OF THE 43rd & 44th RESEARCH COUNCIL MEETING HELD ON 8th – 9th DECEMBER, 2015 and 13th APRIL, 2016, RESPECTIVELY.

Since no comments 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 8th – 9th DECEMBER, 2015 and 13th APRIL, 2016.

Regarding **BAR(VP) 016**: “Ghar Sodhan- Aroom and appliances”, due to transfer of scientist progress has not been made, the Shri. Rahul, K., Sci-B was further advised to immediately perform the comparative analysis of the efficacy of Ghar Sodhon with the existing room disinfectants either by Disc diffusion method or by collecting the Swab samples from various parts of the rearing room and calculate the microbial load before and after application of the disinfectants.

[Action: Mr. Zakir Hossain, Sci-D and Shri. Rahul. K, Sci-B, SW Pathology Section]

Regarding the new project proposal entitled, “**Isolation and cloning of Polymorphic DNA fragments for analysis of variants Nistari strains existing in North-East India**”, the Chairperson advised to include two more Nistari strains (Yellow & White) in the study. Further the data should be correlated with respect to survival and other phenotypic traits.

[Action: Dr. A. K.Verma, Sci- D, SBG Section and Ms. Pooja. M, Sci-B, Biotechnology Section]

Regarding **BPP (VP) 015**: “Validation of E³ WM © SH/PM Weed Mower cum Shoot Harvest / Pruning Machine”, the chairperson advised the Dr. R. Mahesh, Scientist-B to discuss the issue with Dr. J. P. Gupta, Professor, Dept. of Farm Machinery and Power, B.C.K.V to explore the options of converting the existing electrically operated machine to petrol/ diesel operated machine and try to explore other possibilities with respect to mechanization.

Further Dr. V. Lakshmanan, Dr. A.K. Verma & Dr. R. Mahesh were advised to consult Shri. Abhijit Saha, Junior Engineer of this institute with respect to mechanization involving Deflossing machines, machines related with sex separation based on weight of Cocoon, Chandrike folding machine etc.

Atleast one of the above machines should be ready for the use before **31st Jan., 2017**. So that it can be included in the Institute’s RFD 2016-17.

[Action: Dr. V. Lakshmanan, Sci- D, Seri division; Dr. R. Mahesh, Sci-B, Mori-I and Shri. Abhijit Saha, Jr. Engineer, Maintenance Section]

Regarding the project **PPA 3499**: "Evaluation of in West Bengal", the Chairperson advised to perform the studies according to the milestone and strictly adhere to deadline with respect to submission of monthly, quarterly and annual reports in time to PMCE. PI was also advised to discuss the progress in person with the Director immediately. The area-wise progress data as give in the approved project should also be presented.

[Shri G.C.Das, Sci-C, BV Cell]

Regarding the **BPP (VP) 012**: "Real time spatio Yield weather model", the PI was advised to submit the concluded report immediately in the prescribed format for onward transmission of CO, Bangalore.

Regarding the **BPI (P) 033**: "Screening of mulberry seedlings..... thermo-tolerance" the PI was advised to highlight the reasons for failure to implement the programme and submit the same in a concluded format to the C.O immediately for further necessary action.

Regarding the **BPP(RP) 012**: "Optimum resource.....value added compost", the PI was advised to submit the final report stating the production and utilization of the vermicompost and further a new proposal including budget particulars may be submitted to C.O., Bangalore for continuation of the programme.

[Dr. M. Chaudhuri, Sci-D, Mori-I]

Regarding the project, **CSS-2107**, the PI was advised to consult the Nodal officers and advise them to visit the field during the crop as well as rearing and collect the reports and the same should be submitted to PMCE also.

[Dr. S. K.Dutta, Sci-D, Mulberry Pathology Section]

Regarding the concluded prog., **BPP (P) 036**: "Development of organic silk: a new approach", Dr. Mahesh, Scientist-B, was advised to give a copy of the final report to Dr. R. Kar, Sci-D, RSRS Kalimpong.

Further, he was also advised to consult with the in-charge of RSRS, Kalimpong & Shri S.T. Lepcha, Sci-D, REC Rangpo and initiate a new project in the adopted village in Sikkim state with respect to organic silk production.

[Action: Dr. R. Kar, RSRS Kalimpong, Dr. S. T. Lepcha , REC Rangpo and Dr. R. Mahesh, Sci-B, Mori-I]

Regarding the project, **PPS 3504**: "Study on root rot disease of mulberry its control measures", The PI was advised to perform the study by sterilizing the soil and inoculating the pathogen under aseptic conditions. The PI was advised to take the help of Shri. Anil Pappachan, Sci-B in conducting the study with respect to validation of pathogen. Further, the PI was advised to inform Dr. Soumen Chattopadhyay, Sci-D, Biotechnology section during his field visits, in order to facilitate collection of fresh samples for research work in an ongoing project in Biotechnology division.

[Dr. S. K.Dutta, Sci-D, Mulberry Pathology Section]

The sectional In-charge, Entomology section was advised to concentrate on mass multiplication of Biocontrol agents and to manage the white fly infestation well in advance to avoid crop loss. Mrs. Indira Chaterjee, TA can also be taken in production of bio-control agent in laboratory. Further, in this regard the in-charge was advised to consult the experts, Dept. of Agricultural Entomology, B.C.K.V, for new explore and collaborative project.

[Dr. S. Chanda, Sci-D, Entomology Section]

Regarding the project **BMO (P) 042**: "Seri Model village (IVLP)", the PI was advised to submit the final report immediately in the prescribed format for onward transmission to the CO. Bangalore. The achievements and the monetary aspects to be discussed with the Director before submitting the concluded report.

[Shri. D. Das, Sci-D, Extension & Publicity Division]

ITEM No.3: CONSIDERATION OF NEW PROJECTS:

The following 5 (Five) project proposals were discussed and decisions were as follows:

1. **Title: Development of new productive bivoltine breeds/ hybrids suitable to Eastern and North-Eastern India.**, presented by Dr. V. Lakshmanan, Sci-D, SBG Section.

Duration: 5 Years

Observations/ Suggestions: The Chairperson advised the PI to explore the possibilities of utilizing the genetic materials developed by shuttle breeding and the concluded projects. Further he was advised to take critical comments from Dr. Nirmal Kumar, Former Director, CSR&TI, Berhampore before submitting complete proposal to C.O., Bangalore. Breeder of SBG section was advised to work in close association with reeling section so that outcome of the reeling data could be timely taken in to account. A JRF position may be incorporated with proper budget provisions in the proposal.

Decision: Approved as a 3 years Project. The PI was advised to consider aforementioned suggestions and submit the project/concept note in detail by 31/12/2016, for sending to C.O., Bangalore for approval.

[Action: Dr. V. Lakshmanan, Sci-D, SBG Section]

2. **Title: Development of a silkworm rearing seat disinfectant with special emphasis on control of viral diseases** presented by Mr. Zakir Hossain, Sci-D, SW Pathology Section

Duration: 2 years

Observations/ Suggestions: The PI was advised to maintain the pure cultures of the pathogens to study the efficiency of different disinfectants. PI was also advised to increase the proposed timeline from two years to three years and the budget. After threadbare discussion, Chairperson advised the PI to concentrate mainly on development of disinfectants for the management of grasserie disease. Dr. V. Vijay, Sci.-B can be included as Co-investigator and his specialization may be utilized in the project.

Decision: Approved as a 3 years Project. The PI was advised to consult with the Director with complete project proposal before submitting the project/concept note by 31/12/2016, for sending to C.O., Bangalore for approval.

[Action: Mr. Zakir Hossain, Sci-D, SW Pathology Section]

3. **Title: Development of promising mulberry (*Morus spp.*) genotypes through polyclonal seed orchard** presented by Shri D. Chakravarty, Sci-D, MBG Section

Duration: 5 years.

Observations/ Suggestions: The PI was advised to propose project for a period of three years. Further the PI was advised to restrict his study to germ-plasm maintained at this institute and consider the possibility of taking up of raising of saplings as a project meanwhile establish the polyclonal orchard. Also PI should consider the possibility of taking output from AICEM project. Accordingly project title, objectives and budget should be revised.

Decision: Approved as a 3 years Project. The PI was advised to modify the project/concept note as per the suggestions and submit by 31/12/2016 for sending to C.O., Bangalore for approval.

[Action: Shri. D. Chakravarty, Sci-D, MBG Section]

4. **Title: Molecular characterization, assessment and validation of the efficacy of the low molecular weight peptides isolated from mulberry leaf against major silkworm and its host plant diseases** (Collaborative proposal with NBU, West Bengal) presented by Ms. Pooja. M, Sci-B, Biotechnology Section

Duration: 3 Years

Observations/ Suggestions: PI was advised to modify the objectives, methodology and outcome in relation to proposed title. The PI was advised to take-care the work allotment between CSR&TI, Berhampore and the collaborating institute. Further PI was advised to incorporate necessary changes with respect to conducting the bio-assay experiments simultaneously in CSR&TI, Berhampore and collaborating institute and results jointly be validated. The man power (JRF) should be proposed to work at CSR&TI,

Berhampore & NBU, jointly. The PI was also advised to modify the investigators list of the collaborating institute.

Decision: Approved as a 3 years Project. The PI was advised to modify the project/concept note and submit by 31/12/2016 for onward transmission to C.O., Bangalore for approval.

[Action: Ms. Pooja. M, Sci-B, Biotechnology Section]

5. **Title: Preliminary evaluation of newly evolved mulberry genotypes for mulberry improvement** presented by Shri. Suresh, K., Sci-B, MBG section.

Duration: 3 Years

Observations/Suggestions: It is a next phase of concluded project **PIB 3479**: Development of as markers for selection. In addition, PI should consider the promising line(s) showing powdery mildew resistance which is an outcome of project PIB-3521. PI was also advised to make provisions for the labour wages and accordingly increase the budget of the proposed project.

Decision: Approved as a 3 years Project. The PI was advised to consider the suggestions in the project and submit the complete project proposal before 31/12/2016 for onward transmission to C.O., Bangalore for approval and coding. He was also advised to present in the forthcoming RAC meeting.

[Action: Shri. Suresh, K., Sci-B, MBG section]

ITEM No.4: REVIEW OF CONCLUDED PROJECTS:

The following four projects were concluded during the period and presented in the meeting.

1. **Title of the project: PIB 3479:** Development of high yielding mulberry varieties using physiological growth parameters as markers for selection.

Duration: Oct., 2012 – Sept., 2016

Observation/Suggestion: The PI was advised to present in forthcoming RAC meeting.

[Action: Shri. Suresh, K., Sci-B, MBG section]

2. **Title of the project: AIB 3501:** Development of multivoltine silkworm (*Bombyx mori*, L) breeds with high shell percentage and high neatness of silk filament.

Duration: July, 2013 – June, 2016

Observation/Suggestion: The PI was advised to perform validation on a larger scale trial at RTI & the reeling parameters should be assessed by Automatic Reeling Machine (ARM). He was also advised to submit the concluded report immediately in prescribed format and present in the forthcoming RAC meeting.

[Dr. A. K. Verma, Sci-D, SBG Section]

3. **Title of the project: AIB 3480:** Development of silkworm *Bombyx mori* L. breeds from a gene pool with higher genetic plasticity.

Duration: Sept., 2012 – Aug., 2016

Observation/Suggestion: The PI was advised to submit the concluded report immediately in prescribed format and present in the forthcoming RAC meeting.

[Dr. A. K. Verma, Sci-D, SBG Section]

4. **Title of the project: ARP 3516:** Studies on synbiotics (combination of probiotic and prebiotic) induction for control of common diseases of silkworm *Bombyx mori* L.

Duration: Oct., 2014 to Sept., 2016

Observation/Suggestion: The PI was advised to submit the concluded report in prescribed format and present in forthcoming RAC meeting.

[Shri. Rahul, K. Sci-B, Silkworm Pathology Section]

ITEM No. 5: REVIEW OF THE PROGRESS OF THE ONGOING RESEARCH PROJECTS/ PROGRAMMES OF THE MAIN INSTITUTE:

Progress of ongoing research projects/ prog./ pilot study of different sections of the Institute was reviewed critically and suggestions/ recommendations were as follows:

MULBERRY BREEDING & GENETICS SECTION:

Progress of following 6 ongoing research projects and 1 program was reviewed.

- **AICEM III**- All India Co-ordinated Experimental Trial on Mulberry,
- **PIB 3481**- Evaluation of mulberry varieties suitable for low input soils,
- **PIB 3505**- Development of Drought Tolerant Mulberry variety for Rainfed Sericulture [Collaborative project with CSGRC, Hosur],
- **PIB 3515**- Evaluation of newly developed triploid mulberry varieties under irrigated condition,
- **PIC 3554**- Candidate gene based molecular marker(s) for screening promising recombinants in mulberry,
- **PIB 3576**- Evaluation of New Mulberry Genotypes for Improvement in Productivity and Quality
- **BPI (P) 025**- Maintenance of Mulberry Germplasm Bank at CSR&TI, Berhampore (WB)

Regarding the project **AICEM III**, the PI was advised to compile and analyze the data and present in the forth coming AICEM meeting.

Regarding the project **PIB 3481**, the PI was advised to exclude the two stations of DoT(S) where plantation has not been taken.

Regarding the project **PIB 3505** it was discussed that, as Shri Ananda Rao, CI of the project has been retired, the PI was advised to consult Dr. Jhansi Lakshmi to suggest a substitute.

Regarding the project **PIC 3554**, the PI requested the chairperson for the extension of the project as there was a delay in the initiation. In this regard, the PI was advised to continue the project and may opt for outsourcing as advised earlier by RAC. The PI was also advised that if there exists a need for extension, it may be appealed before concluding of the project period.

Regarding the programme **BPI(P) 025**, the PI was advised to do all cultural operations in time and maintain the accessions in good condition.

Progress of rest 02 projects [**PIB 3515 & PIB 3576**] was as per the milestones.

[Action: Dr. Rita Banerjee, Scientist-D, MBG Section]

MORICULTURE-I DIVISION:

Progress of following 06 ongoing research projects was reviewed.

- **PPF 3532**- Assessment, development and management of area under mulberry in major sericulture districts of West Bengal using geo-spatial technique
- **PPF 3585**- Application of Growing Degree Days as a model driver for developing mulberry yield weather model
- **PPF 3598**- Arsenic contamination in mulberry sericulture of Bengal Plain and its alleviation through application of zinc in soil
- **PPA 3588**- Evaluation of Low Cost Drip Fertigation Systems on Yield and Quality of Mulberry Leaves
- **PIN 3587**- Improvement of leaf quality and productivity through external application of seaweed extracts in mulberry
- **PPS 3600**- Soil health card preparation for mulberry growing soils in Eastern and North-Eastern India, were reviewed and progress was as per the milestone.

Regarding the project **PPF3532**, the PI was advised to present the data including the recent photographs.

Regarding the project **PPS 3600**, the PI was advised to fine tune the month-wise micro action plan immediately and discuss with the Director to avoid further delay in the initiation of the project. Further the PI was advised to train the concerned Technical staff in soil sampling and its analysis.

Regarding the project **PPF 3585**, the PI was advised to discuss the methodology of silkworm penology with the Director for further course of action.

Progress of rest 03 projects [**PPF 3598, PPA 3588 & PIN 3587**] was as per the milestones.

Further, the PIs of all programmes (**BPP (VP) 012; BPI (P) 033 & BPP (RP) 012**) were advised to submit the concluded reports for onward transmission to C.O., Bangalore without fail on or before 31.12.2016.

[Action: Dr. Monica Chaudhuri, Sci-D, Mori-I]

BV CELL:

On ongoing research project **PPA: 3499** "Evaluation of field level performance of Vishala mulberry variety in different locations under irrigated conditions in West Bengal" was reviewed. The PI was advised to compile and present area/district wise leaf yield of Vishala variety & S-1635. The PI was also advised to strictly adhere to deadline with respect to submission of monthly, quarterly and annual reports in time to PMCE.

[Action: Shri G.C. Das, Scientist-C, BV Cell]

MULBERRY PATHOLOGY SECTION:

Regarding the project, **CSS 2107**, the PI was advised to compile and analyze the data. Results should be depicted through graphs and conclude the project in time. Regarding the project, **PPS 3504**, the PI was advised to study the efficacy of the biocontrol agent *Trichoderma* and present the result.

[Action: Dr. S. K. Dutta, Scientist-D, Mulberry Pathology Section]

SILKWORM BREEDING AND GENETICS SECTION:

Progress of following 4 research projects and one programme was reviewed.

- **AIB 3466-** "Development of region specific bivoltine breeds suitable for highly fluctuating and seasonally variable climatic conditions of Eastern and North-Eastern India"
- **AIB3547-** "Development of high temperature and high humidity tolerant bivoltine breeds of silkworm (*Bombyx mori* L)"
- **AIB 3545-** "Authorization trials of silkworm hybrids in Eastern and North Eastern states"
- **AIB 3514-** "Development of multivoltine based Congenic /Nil breed of silkworm *Bombyx mori* L through introgression of *Id* gene and its uses"
- **BAI(RP) 003-** "Maintenance of multivoltine and bivoltine germplasm", were reviewed and progress was as per the milestones.

Regarding the project **AIB3514**, the PI was advised to perform on farm trails before concluding the project. The PI of **AIB3545** was advised to furnish the details of total supply of DFLs distributed till date.

Progress of rest 04 projects/progs. [**AIB3466, AIB3547 & BAI(RP) 003**] was as per the milestones.

Regarding new project **AIB 3602**, the PI was advised to discuss with Dr. Nirmal Kumar for further course of action.

[Action: Dr. V. Lakshmanan, Sci-D, and Dr. A.K. Verma, Sci-D, SBG Section]

SILKWORM PHYSIOLOGY AND REARING TECHNOLOGY & INNOVATION SECTION

One ongoing project **AIT 3557-** "Multi locational field Trial on transgenic Bm NPV resistant Silkworm strains to establish their efficacy and generate data for their regulatory approval (Collab. APSSRDI, Hindupur)" was reviewed and the PI of this project was advised to incorporate reeling performance data.

[Action: Dr. J. Sarkar, Sci-D, SP&RTI Section]

SILKWORM PATHOLOGY SECTION:

Progress of following two research projects and one programme was reviewed.

- **ARP3522** - "Isolation, cloning and characterization of antibacterial protein (s) from silkworm, *Bombyx mori* L"
- **ARP 3590**- "Studies on the efficacy of phototrophic bacterial extracts as feed supplement for management of diseases in silkworm, *Bombyx mori* L"
- **BAR (RP) 021**- "Survey, surveillance and monitoring of silkworm diseases in seed and commercial crops in Eastern and North Eastern India. (In collaboration with RSRs, RECs, DoS and NSSO)"

Regarding the prog., **BAR(RP)021**, the PI was advised that the works related to seed act and disease survey may be taken up together to reduce the time and effort. Further, the PI was advised to send reminder letters to respective officers in-charge for sending the data in time. The PI was also advised to change survey areas from Baridis, Mahadebgiri and Kakra to Ranchi, Lohardarga, Gumla and Pakur.

Progress of remaining 02 projects [**ARP3522** & **ARP 3590**] was as per the milestones.

Regarding quality control of the bed disinfectants, Scientist-D, SW patho. section was advised to collect samples of different bed disinfectants which are available commercially at market and analyze the samples composition with help of chemistry section and obtain the results. Further, Chairperson advised Dr. Mahesh, Sci.-B along with Dr. Vijay, Sci-B to help in the chlorine estimation of collected samples.

[Action: Shri. Z. Hossain, Sci-D, Sw. Patho. Section]

ENTOMOLOGY SECTION:

Progress of following 02 research projects and one programme was reviewed.

- **PPE 3517**- "Population interactions of pests and natural enemies in mulberry ecosystem"
- **PRE 3533**- "Identification of whitefly resistance in mulberry germplasm accessions"
- **BAR (RP) 022**- "Survey and Surveillance of Mulberry Pests in the Eastern and North Eastern regions of India", were reviewed and progress was as per milestones.

Regarding **BAR (RP) 022**, the PI (Entomology Section, CSR&TI, Berhampore) was advised to circulate final approved copy of the programme to all investigators who are working at RSRs/RECs level.

Progress of remaining 02 projects [**PPE 3517** & **PRE 3533**] was as per the milestones.

[Action: Dr. S. Chanda, Sci-D, Entomology Section]

BIOTECHNOLOGY SECTION:

Progress of following three research projects and one pilot study was reviewed.

- **PIB 3521**- Assessment of promising powdery mildew resistance lines for perspective commercial use
- **PIB-3548**- Evaluation of bacterial leaf spot resistant improved progenies of mulberry for field utilization
- **PRE 3589**- Assessment of designed antimicrobial peptides for mulberry protection against brown leaf spot and root rot: a biotechnological approach
- **BPI(PS)010**- Identification of biochemical markers for thermo tolerance in silkworm *Bombyx mori* L.

The PI of **PIB3521** was advised to handover the promising line(s) showing powdery mildew resistance to MBG section if possible for incorporation in further breeding programmes.

Progress of rest 02 projects [**PIB-3548** & **PRE 3589**] and 01 Pilot study [**BPI(PS)010**] was as per the milestones.

Further, the in-charge was advised to renew the existing tissue culture room and transferred/shifted to the present store room under Swachha Bharat.

[Action: Dr. Soumen Chattopadhyay, Sci-D Biotechnology Section]

EXTENSION DIVISION:

The in-charge of extension & publicity division was advised to distribute the DFLs in Seri model village and achieve the target. Further in-charge was advised to include the crop-wise rearing data of all the farmers who have reared Bivoltine and Multi x Bi. In-charge may send reminders to REC in-charges for submission of data in time. Again some of the units are merged and closed. So Scientist-D, Extension & Publicity Division, was advised to work actively with the nested units and achieve the targets of the annual action.

Regarding better management of extension activities, Chairperson advised the Mr. S. Afroz, Sci-B to prepare a manual and to distribute to extension units of this Institute.

Further, Shri Shafi Afroz was advised to modify the project with respect to **Adarsh Resham Gram**. He was advised to work out the possibility through which sericultural farmers of Mallickpur-Diara will be helpful. He was advised to work along with Dr. Tapati. D. Biswas, Sci-D in working out the scheme of the project.

Regarding collaborative project with **IFFCO**, Shri Shafi Afroz was advised to make proper plan for its implementation at Adarsh Resham Gram Mallickpur-Diara.

Regarding **BV CPP**, the Shri G. C. Das was advised to take the help of respective nodal officer for effective monitoring of the programme and present the state wise progress data.

[Action: Dr. T. Dutta (Biswas), Sci-D, Extn. & Publicity Division]

TRAINING DIVISION:

The activities of Training Division in organizing various training program under structured and Non-structured courses were reviewed and found as per the milestone.

INCLUSION AND EXCLUSION OF PIS / CoIS OF THE PROJECTS / PROG. :

All the changes requested were accepted by the Chair and the same is enclosed in **Annexure - I**.

General comments:

1. All the PIs of new project initiated in the month of Oct/Nov, 2016 were advised to carry out the research work as per time schedule and discuss with the Director with respect to the work carried out. All PIs should maintain a proper record of progress reports and expenditure incurred the project.
2. Concluded reports of the Projects/ Programmes/ Pilot studies during 2015-16 should be submitted immediately for onward transmission to Central Office, Bangalore.
3. All PIs of concluded projects (2015-16 and till date) were advised to submit the status of patenting and commercialization of the technology emanated from their concluded projects, if any, for future course of action within 31.12.2016.
4. All PIs of the project/ Prog./ Pilot study reports (progress (monthly/ quarterly/ yearly) / concluded) to be submitted in the form of quantifiable terms.

[Action: Scientist-D (I/c) and All concerned]

At the end, the Chairperson expressed her satisfaction on the R&D progress made and advised the scientists of main Institute 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. Kanika Trivedy)
Director & Chairperson,
Research Council
CSR&TI, Berhampore

Annexure - I**Details for inclusion and exclusion of PIs / Cols of the projects / prog. due to transfer/retirement/ Resignation**

Project Code	Name of PI/CI	Replacement as PI/CI
ARP 3590	Dr. S. Chakraborty, Sc-C (CI) (Upto 02.07.16)	Md. Zakir Hossain, Sc-D, (CI)
ARP-3516	Dr. S. Chakraborty, Sc-C (PI) (Upto 02.07.16)	Mr. K. Rahul, Sc-B (PI)
	Mr. K. Rahul, Sc-B (CI) (Upto 02.07.16)	Md. Zakir Hossain, Sc-D, (CI)
ARP-3522	Dr. S. Chakraborty, Sc-C (PI) (Upto 02.07.16)	Mr. K. Rahul, Sc-B (PI)
	Mr. K. Rahul, Sc-B (CI) (Upto 02.07.16)	Md. Zakir Hossain, Sc-D, (CI)
BAR (RP) 021	Dr. S. Chakraborty, Sc-C (PI) (Upto 02.07.16)	Md. Zakir Hossain, Sc-D, (PI)
	Dr. N. R. Rao, Sc-C, (CI) RSRS Koraput (Retired)	Dr. K. C. Brahma, Sc-C, (CI) RSRS Koraput
	Dr. S.K. Dutta, Sc-D, (Team leader Murshidabad)	Mr. D. Chakravarty, Sc-D, (Team leader Murshidabad)
	Dr. A. K. Verma, Sc-D, (Team leader Malda)	Dr. D. Pandit, Sc-D, (Team leader Malda)
	Dr. D. Pandit, Sc-D, (Team leader U. Dinajpur)	Dr. S. Sarkar, Sc-C, (Team leader U. Dinajpur)
	Dr. D. Pandit, Sc-D, (Team leader D. Dinajpur)	Dr. S, Sarkar, Sc-C, (Team leader D. Dinajpur)
	Mr. S. Chatterjee, Sc-D, (Team leader Japaiguri)	Smt. Chandana Maji, Sc-D (Team leader Japaiguri)
	Mr. S. Chatterjee, Sc-D, (Team leader Coochbihar)	Smt. Chandana Maji, Sc-D (Team leader Coochbihar)
	Smt. Chandana Maji, Sc-D, (Team leader Darjeling)	Dr. V. Lakshmanan, Sc-D (Team leader Darjeling)
	Dr. N. R. Rao, Sc-C, (Team leader Koraput)	Dr. K. C. Brahma, Sc-C (Team leader Koraput)
	-	Md. Shafi Afroz, Sc-B (Team leader Pakur)
	-	Dr. G, S. Singh, Sc-D (Team leader Rachi, Lohardaga & Gumla)
	Mr. B. K. Basumatary, Sc-D (Team leader Jorhat)	Smt. M. Pamegham, Sc-C (Team leader Jorhat)
	Smt. M. Pamegham, Sc-C (Team leader Udalguri-BTC)	Mr. B. K. Basumatary, Sc-D (Team leader Udalguri-BTC)
AIB 3466	Dr. S. Chakraborty, Sc-C (CI) (Upto 02.07.16)	Md. Zakir Hossain, Sc-D, (CI)
PPS 3600	-	Dr, S. K. Misro, Sc-C (CI), RSRS Koraput Mr. S. B. Dey, Sc-C (CI), REC Dhenkikote
PIB-3481	Dr. M. V. Santhakumar, Sc-D (CI) (Resigned)	Dr. S. Chandam Sc-D (CI)
	Dr. M.K. Singh, Sci-D (CI) (Retired)	Dr. A.K. Verma, Sc-D (CI)
AIB 3602	-	Dr. V. Lakshmanan, Sc-D, (CI)

Annexure-II**List of the participants attended the Research Council meeting held on 25th and 26th November, 2016 at CSR&TI, Berhampore**

1. Dr. K. Trivedy, Director, CSR&TI, Berhampore – **Chairperson, Research Council**
2. Smt. C. Maji, Scientist-D, RSRS, Kalimpong
3. Dr. U. K. Bandyopadhyay, Scientist-D, CSR&TI, Berhampore
4. Dr. S. K. Dutta, Scientist-D, CSR&TI, Berhampore
5. Dr. S. Chanda, Scientist-D, CSR&TI, Berhampore
6. Dr. Rita Banerjee, Scientist-D, CSR&TI, Berhampore
7. Dr. N. Lakshmanan Velusamy, Scientist-D, CSR&TI, Berhampore
8. Dr. S. Chattopadhyay, Scientist-D, CSR&TI, Berhampore
9. Shri. N. B. Kar, Scientist-D, CSR&TI, Berhampore
10. Dr. P. K. Ghosh, Scientist-D, CSR&TI, Berhampore
11. Dr. M. Choudhuri, Scientist-D, CSR&TI, Berhampore
12. Dr. A. K. Verma, Scientist-D, CSR&TI, Berhampore
13. Dr. J. Sarkar, Scientist-D, CSR&TI, Berhampore
14. Dr. T. Dutta (Biswas), Scientist-D, REC, Kamnagar, Murshidabad
15. Shri D. Chakravarty, Scientist-D, CSR&TI, Berhampore
16. Shri. Zakir Hossain, Scientist-D, CSR&TI, Berhampore
17. Shri. D. Das, Scientist-D, CSR&TI, Berhampore
18. Shri. Gopal Chandra Das, Scientist-C. CSR&TI, Berhampore
19. Dr. Sukhabrata Sarker, Scientist-C. CSR&TI, Berhampore
20. Dr. V. Vijay, Scientist-B, CSR&TI, Berhampore
21. Dr. Manjunatha G.R., Scientist-B, CSR&TI, Berhampore
22. Dr. R. Mahesh, Scientist-B, CSR&TI, Berhampore
23. Shri. Suresh, K, Scientist-B, CSR&TI, Berhampore
24. Shri. Anil Pappachan, Scientist-B, CSR&TI, Berhampore
25. Ms. Pooja Makwana, Scientist-B, CSR&TI, Berhampore
26. Shri. Rahul, K, Scientist-B, CSR&TI, Berhampore
27. Shri. Tapas, M, TA, CSR&TI, Berhampore
28. Shri. Gourav Roy, JRF, CSR&TI, Berhampore