

SILKWORM SEED TECHNOLOGY LABORATORY KODATHI, BENGALURU

Proceedings of 50th meeting of research council held on 2.7.2019

The fiftieth meeting of Research Council of Silkworm Seed Technology Laboratory (SSTL), Kodathi was held on 02.07.2019 at Silkworm Seed Production Center (SSPC), Bengaluru. At the outset, Dr. S. Vidyunmala, Scientist D & Head, SSTL welcomed the Chairperson Dr. R. K. Mishra, Director, NSSO and other members. She briefed the house about the SSTL mandate and activities during the period under report and requested the Chairperson to conduct the meeting. Dr. R. K. Mishra, Director took up the meeting as per the Agenda.

Item No. 1: Confirmation of the minutes of the 49th meeting of Research Council

Since no comments were received from any of the members, the minutes were confirmed.

Item No. 2: Follow-up actions taken on the decisions / suggestions of the last Research Council meeting

The follow up actions of the comments / suggestions emanated from the last RC meeting were reviewed.

With regard to the proposal for “**Development of Lateral Flow Assay (LFA) Kit for diagnosis of Microsporidian infection in Silkworm *Bombyx mori* L**”, it was informed that Director, NSSO along with the Scientists of SBRL / SSTL have visited M/S Bhat bio-tech India (P) Ltd, Bengaluru and discussed the modalities. The Proposal would be presented soon.

Regarding the project **APS 3581 - Development of Technology for enhancing egg laying in *Bombyx mori* L by application of Mulberry volatiles**, it was informed that action has been taken as per the suggestions of the RC and the project was concluded after getting tangible results by Mar.2019.

In the project, APS 3612 “**Development of Seed preservation Technology for Muga Silkworm, *Antheraea assamensis* (Helfer)**”, it was informed that a clear-cut seed cocoon supply plan was made with CMERTI for ensured seed cocoon supply for the experiment. The scientists of SSTL and CMERTI were in regular contacts.

Information on the visit of the scientist from SSTL to BTSSO, Bilaspur with regard to discussions and collection of Tasar cocoons for the project APR 3635 “**Development of Seed cocoon and Seed preservation technology for Tropical Tasar Silkworm (*Antheraea mylitta* D.)**” was noted.

The modifications suggested in the project ARP 3634” **Microbial transformation of eco-friendly compounds for the management of silkworm (*Bombyx mori*.L) diseases**, for development of a small culture room for Micro biology experiments was noted.

Action taken on arrangements for seed cocoon procurement in the DBT sanctioned project **APS05001EF" Development of Technology for Enhancing egg laying in Vanya Silk moths by application of Host Plant Volatiles"** was noted.

Item No. 3: Review of concluded Projects/Programmes during the period under review

1. Development of technology for enhancing egg laying in *Bombyx mori* L. by application of mulberry volatiles (Collaboration with IIHR, Bangalore)-Dr. K. M. Vijaya Kumari, Sci-D.

The final outcome of the project was discussed and suggested to go for large scale testing during favorable season at SSPC, Bengaluru, Vijayapura and Hosur with the synthetic chemical blend and calculate the economics for technology adoption.

Item No. 4: Review of progress of on-going Projects/Programmes of the Institute

1. Development of seed preservation technology for Muga silkworm *Antheraea assamensis* Helfer (Collaboration with CMERTI, Lahdoigarh) - Dr. B. Sailaja, Scientist C.

The Committee observed the following:

1. Analysis of different age eggs for Single step refrigeration method is having practical difficulty in the grainages and also not as per the prevailing practice of Muga silkworm rearing. Hence it was advised to develop the single step preservation for the two/ three day's collected mixed eggs.
- 2 After getting perfect single step refrigeration results, mixed eggs preservation should be enhanced beyond 15 days by double step refrigeration method.
3. Scientist was advised to visit CMER&TI, Lahdoigarh for exposure to Muga crop pattern and industry requirements.
4. The request for Project extension was considered and referred to RCS, CO for final approval.
5. As a follow-up of the observations of the Technical audit by CO, it was suggested to conduct Eri silkworm rearing in the laboratory for confirmation of already developed schedule at SSTL & CMER&TI. After verification of the trials, eggs may be given to the farmers.

2. Development of Seed cocoon and seed preservation technology for Tropical Tasar Silkworm *Antheraea mylitta* D, collaboration with BTSSO, Bilaspur- Dr. P.Sudhakara Rao, Scientist D

The Committee suggested the following:

1. To put more efforts to control erratic emergence and Based upon the findings, a package has to be developed to avoid erratic emergence in the Tasar seed cocoon preservation.

2. After analysis of the results, to select 60h age egg for single and double step refrigeration method as by that time the appendages will be formed in the embryo and may withstand the cold.

3. Microbial Transformation of Natural and eco-friendly chemical compounds for the management of Silkworm Diseases of *Bombyx mori* L. Dr. R. Saravana Kumar, Sci-B

Committee suggested to focus mainly on Muscardine and Grasserie / Flacherie diseases. After successful achievements/ tangible results, it was advised to concentrate on Pebrine in next phase.

4. Development of technology for enhancing for egg laying in vanya silk moths by application of host plant volatiles. (APS 05001EF) - Collaboration with IIHR, Bengaluru & CMER&TI, Jorhat – Dr. K.M.Vijayakumari, Scientist D

The Committee analyzed the data presented and suggested to proceed in the designed way to reach the targets.

5. Silkworm disease monitoring of seed and commercial crop rearings of South Indian States (collaboration with CSR&TI, Mysore)

The committee reviewed the progress of the Silkworm Disease monitoring in the South - Indian states and suggested to take care of immediate rejection of the Pebrinised lots and to suggest remedial measures.

The meeting was concluded with thanks to the Chair.



26.8.2017

(Dr. R. K. Mishra)

Director NSSO and Chairperson for RC