



SERI NEWS

Quarterly Newsletter of
CSRTI-Mysuru

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For Digital Circulation

From the Director's Desk



I am glad to present the first issue of the quarterly newsletter, **SERI NEWS**, from CSRTI-Mysuru. The newsletter is brought out with the aim of highlighting the activities of the Institute and its nested units. Progress made in R&D, HRD and ECP is intended to be flashed through this digital medium.

News on science and technology, advancements made in sericulture research, silk, its economics, trade, etc., could find a place on this platform. Interesting scientific or Sericultural snippets could reverberate through the thought processes of researchers, paving the way for better results.

The experienced scientists and field functionaries may well share their proficiency and knowledge, so may the novices about their thoughts and dreams for making this venture a successful one, as the famous adage says. *'The greatest glory in living lies not in never falling, but in rising every time we fall'.*

World Environmental Day

World Environment Day was celebrated at CSRTI-Mysuru on June 5, 2023. A LiFE pledge was administered by the Director to the CSRTI-Mysuru fraternity. Kessuru plantation at the CSRTI-Mysuru premises was organized on the occasion. The Director, scientists, officials, students and workers joined the plantation activity.



Patent granted: A patent was granted for an innovative Heating System for use in Sericulture to CSRTI-Mysuru on June 1, 2023, for the application filed on March 31, 2015.



Reshme Krishmimela at Mandya



CSRTI-Mysuru in association with Dept. of Sericulture, Karnataka, organized a *Reshme Krishimela* and Award Distribution Programme at Mandya on 3rd March 2023. It was organized with the theme, ***Bivoltine Sericulture to increase income***, to create awareness and empower sericulture farmers on the new sericulture technologies to enhance production of quality bivoltine cocoon and in turn to increase their income. A Sericulture exhibition was also organized on the occasion and more than 750 farmers from different districts of Karnataka participated.



Workshop on Seri by-Products



Workshop on the ***Development of diversified Seri by-products: Recent achievements and future perspectives*** was organised on 20th May 2023. Dr. Chandish R. Ballal, Director (Retd.), NBAIR, Prof. K. Byrappa, Pro-VC, Adichunchanagiri Univ., Prof. H. B. Manjunatha, UoM, Dr. B. T. Srinivasa, Director (Tech.), Dr. S. Gandhi Doss, Director were present.

Training under ATMA



Training programme to Bivoltine farmers on 25th May 2023 at Samudrapalli village, Palamaner cluster AP, was organized under ATMA. Training was imparted to the sericulture farmers by Dr. M. Venkatachalapathy, Scientist-D on cocoon crop management aspects.

Sericulture - Way to Prosperity



Then



Now



Then



Now

It has been well proven by two Seri-farmers, Sri S. Sathyamurthy and S. Gangadharam from Adivibudguru, Kuppam taluk, Chittor district, AP, that sericulture is doing wonders in their lives. One of them was living in a thatched hut, and another was in a tiled single-room house. Now both of them have constructed their own RCC houses side by side with two floors within six years into sericulture. This is what sericulture can do for farmers.

Report: Arun Kumar GS & Amit Kumar

Fruit Coating with Sericin protein

Fruits are very rich sources of proteins, sugars, flavonoids, phenols, vitamins, and other minerals. It serve as an important component in the daily diet of humans. As the fruits are perishable in nature, spoilage occurs in a short period of time, and to enhance the shelf life of fruits, different coating materials such as wax, cellulose, starch, etc., are being used. It is observed that the wax coating has an adverse effect on human health due to its non-digestive nature. The use of coating materials that are easily digestible without causing any ill effects on human health can be used. In this regard, sericin, the silk protein produced by the silkworm *Bombyx mori*, can be used as a coating material to avoid fruit spoilage and enhance shelf life. In a study, it was observed that coating apples with sericin solution enhanced their shelf life by 15-20 days, compared to uncoated apples.



Report: Ravindra and Dhaneshwar Padhan

CPP Review Meeting



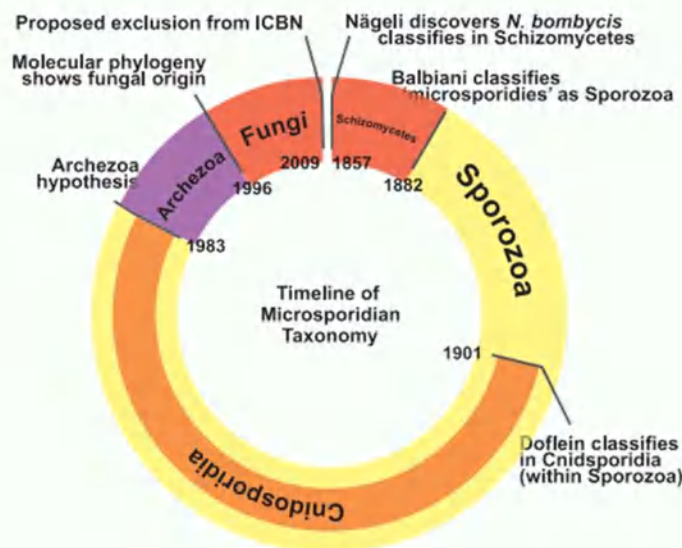
Cluster Promotion Programme South Zone Review Meeting for the year 2022-23 and Action plan for the year 2023-24 was held on 19.04.2023 at CSRTI, Mysuru under the chairmanship of Dr. S. Gandhi Doss, Director and Coordinator, South Zone CPP. Appreciation certificates were distributed to the CDFs with best performance during the year 2021-22.

Pebrine Monitoring Meeting



22nd Pebrine monitoring meeting and Brain Storming workshop on virulence and nonvirulence of microsporidia infecting silkworm was conducted on 3rd April 2023. Dr. B.T. Srinivas, Director (Tech), Dr. S. M. Moorthy, Director, NSSO, Dr. Gandhi Doss, Director CSRTI-Mysuru, Scientists/officials of KSSRDI, APSSRDI & DoS AP, Karnataka and Tamil Nadu attended

'Nomadic' life of a microsporidia



Citation: Keeling P (2009) Five Questions about Microsporidia. PLoS Pathog 5(9): e1000489. doi:10.1371/journal.ppat.1000489

Timeline of the changing taxonomic position of microsporidia, from their discovery in 1857 to the present.

When first described in 1857, they were classified as schizomycete fungi. Later they were considered sporozoan protists (and more specifically members of the subgroup Cnidosporidia), a position favoured for over 100 years. In 1983 a new hypothesis radically departed from this idea, suggesting they were an ancient, primitive lineage that evolved before the origin of mitochondria. Molecular data originally supported this possibility, but as data accumulated, it became clear that they were in reality highly reduced fungi, a conclusion broadly supported by the genomic data now available, although their exact relationship to fungi remains contentious. doi:10.1371/journal.ppat.1000489.g002

Report: J. Justin Kumar

Beware of May-June beetles !

May-June beetles, also known as cock chafer beetles or root grubs or white grubs are polyphagous attacking several crops.

Life cycle

Egg Stage: Female lays about 800-1000 eggs inside earthen sheaths made out of wet soil at a depth of 5 to 6 cm. The eggs are semi-circular in shape and white in colour. The incubation period is ~12-14 days.

Grub stage: The young ones are called as grubs which develop in 3 stages which takes 30-40, 150-160 & 180-190 days respectively. The grubs are light yellow in colour with brownish or blackish head capsule. They feed on the roots of sugarcane and other crops and grow up to 6 cm.

Pupal stage: They pupate in soil which lasts for 90-110 days.

Adult stage: Immediately after pre-monsoon or monsoon showers the adults emerge out from the soil during night hours and start voraciously feeding on the leaves for about 10-12 days.

Damage to mulberry: During night time, the adult beetles enter into mulberry garden in swarms and feed voraciously on the foliage. Besides leaves, they also eat away the tender stem portions of the branches. The affected gardens resemble cow grazing and lot of small black faecal pellets appear on the ground below the plants.

Management

- After first showers, the beetles appear in the mulberry garden - collect and destroy by putting in kerosene solution.
- Install light trap to attract and collect the beetles during night hours and destroy.
- Adult beetles get attracted to neem branches if placed over mulberry in the evening hours, collect and destroy.
- Plough deeply just before monsoon so as to expose their immature stage to sun light as well as to predatory birds.
- Drench the soil with 0.2% Chlorpyrifos 20% EC to kill the grubs.
- Spray Intrepid @1.5ml/lit during evening hours so as to kill the adults which visit mulberry garden during night hours (follow 20 days safety period).

Report: J. B. Narendra Kumar



Executive Editor:
Dr. S. Gandhi Doss

Editors:
Amit Kumar
Arunakumar GS
Justin Kumar J

Published by:
Dr. S. Gandhi Doss
Director, CSRTI-Mysuru
Central Silk Board, Min. of Textiles
Govt. of India, Manandavadi Road
Srirampura, Mysuru 570 008

For submission & subscription:
serinewscsrtimeys@gmail.com