

Announcement

Organic pest management strategies for successful silkworm rearing



Sericulture is practiced mainly in Karnataka, Tamil Nadu, Andhra Pradesh, West Bengal, Jammu & Kashmir and parts of the northeastern states of India, with Karnataka contributing to a massive share of 40% of the silk produced today in the country.

The cultivation of mulberry plays a significant role in determining the cost of cocoons and silk. It is estimated that 60-70% of production cost goes to mulberry cultivation— a chief food for *Bombyx mori*. One hectare of fertile land can produce about 15-40 tones of mulberry leaves over 12 months. Hence, the farmers' endeavour has always been to increase the yield of mulberry leaves in order to minimise the overall cost of production.

Of the several pests that infest the mulberry crop, two species, *Tetranychus sp* and *Polyphagotarsonemus latus* are present throughout the year. A small white mark appears on the tender leaves of the mulberry when these insects are overgrown. The mulberry leaves decolour from green to brown, and broad markings appear. Such infested leaves become unsuitable for silkworm feeding.

The silkworm *Bombyx mori* is highly susceptible to insecticides, and the application of insecticides is not advisable because the silkworms can be harmed by chemicals on the leaves, either through consumption of contaminated leaves or through other contacts with the insecticides. Hence, mulberry plantations intended for silkworms should be free of pesticides. It has been reported that production can be reduced by more than 30 per cent annually due to insecticide poisoning.

Our field experience in controlling the mite with our eco-friendly product

The purpose of this study was to design a strategy to control mite infestation in mulberry plantation using our organic product (CODED SAMPLE FOR TRIAL) APEDA Input certified. The experimentation demonstrated that farmers who applied the product were satisfied with the product's performance. Acceptance level grew with wide popularity among the farming community. The product was sprayed at 3ml per litre and was able to control more than 90% of the pest population with two applications and a longevity of more than 25 days. Moreover, the crop showed a positive physiological difference in terms of increased leaf lamina, increased stem girth and leaf thickness which contributed to increased yield. Besides, the product proved to be safe for silkworms since the product had no chemical residues that could potentially pose a risk to the growth and multiplication of silkworms.

Conclusively, the knowledge on product safety will help us assist more farmer groups to initiate preventive and curative management measures. The additional inbound feature of the product that promotes increased growth and yield of mulberry besides controlling the pest warrants wider acceptability to protect and safeguard the sericulture industry.