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Demonstration, Popularization, Dissemination, Adoption and Impact of Technologies for the Management of Rugose Spiralling whitefly in Coconut using Innovative Extension Methodologies

Erode district is one of the leading producers of Coconut in Tamil Nadu and currently the crop is being cultivated in 6,000 hectares of land with the average productivity of 17,777 nuts/ha. Based on the report received from my department officials on incidences of this pest on coconut across the district, I requested an expert team from ICAR-NBAIR, Bengaluru to visit the infested coconut plantations and advise the remedial measures to manage the pest for the department officials and farmers. In response to my request Dr. K. Selvaraj, Dr. T. Venkatesan and Dr. G. Sivakumar made many visits and supplied and validated the following technologies to farmers in the villages viz., Alathukombai, Vellode, Modachur, Alukulli and Voothimadai Puthur in Erode Dist., Tamilnadu.

1. Mass production technology for parasitoid "*Encarsia goudeloupae* for the suppression of rugose spiralling whitefly *Aleurodicus rugioperculatus* using in coconut.
2. Potent (Strain ICAR-NBAIR Pfu-5) *Isaria fumosoroseus* for the management of rugose spiralling whitefly (RSW) *Aleurodicus rugioperculatus*

Furthermore, the scientists conducted several awareness-cum-field demonstration programmes on biological control of rugose spiralling whitefly in the district during 2019-2021 using the following innovative extension methodologies viz., farmers participatory approach, Gosti meeting, distribution of technical materials, field demonstration and mobile communication (Whats App) to farmers and department officials. Besides, the scientists also established a new infrastructure in 500 sq. Metre area for the large scale production of parasitoid (*Encarsia guadeloupae*), with the financial support (Rs. 20 lakhs) from Kumaraguru Institute of Agriculture at Erode District for the purpose of distribution to farmers for the management of the pest. The parasitoids (*Encarsia guadeloupae*) were produced in large numbers and distributed to farmers for the augmentative release.

The progressive coconut farmers in and around Erode district visited the production unit on fortnightly basis. The trainings were imparted to them on establishment of RSW on Cana and banana plants, release of parasitoids on whitefly colonies and further multiplication of parasitoids on the pest. Identification of RSW and parasitoids was imparted on the spot to the farmers. Furthermore, the farmers were trained on collection and field release of parasitoids.

I am happy to state that the released parasitoids and the entomopathogenic fungus *Isaria fumosorosea* established in the coconut crop ecosystem and multiplied in large numbers and the pest incidence has declined drastically. The technology was adopted by 150 farmers and has disseminated to 1000 ha in and around Erode Dist, Tamilnadu. Economic analysis of the impact of conservation and augmentation of *E. guadeloupae* and foliar application of *I. fumosorosea* for management of RSW indicated that there is a reduction of crop protection cost @ Rs 9500/ha and reduction in pesticide usage @ 900 ml of pesticides/ha. I felt that the adoption of these biological control technologies improved the standard of living of the marginal and small farmers by improving their marginal income, soil health, soil productivity and attained a great success.

I congratulate and appreciate the scientists Dr. K. Selvaraj, Dr. T. Venkatesan and Dr. G. Sivakumar for their outstanding contributions for the cause of farming community.

Thanking you


Yours faithfully,
(C.KATHIRAVAN)