COCONUT LEAF EATING CATERPILLAR





CENTRAL PLANTATION CROPS RESEARCH INSTITUTE (INDIAN COUNCIL OF AGRICULTURAL RESEARCH) Kasaragod - 670 124, Kerala, India The leaf eating caterpillar *Opisina arenosella* is one of the major caterpillar pests of the coconut palm. The caterpillar devours the green parenchymatous tissue of the leaves. The pest inhabits the lower surface of the leaflets inside galleries made of silken webs reinforced with excreta and the scraps of leafbits. As the caterpillars feed on the functional chlorophyll containing tissues, the photosynthetic effeciency of the palm is reduced drastically and this results in poor nut production. The leaves which are put to thatching, fencing and such other purposes are also rendered unsuitable. The pest also infests palmyrah, talipot, wild date and certain ornamental palms.

In India, the pest infestation was recorded mostly from the coastal and backwater areas. But, it also occurs in coconut gardens near rivers, tanks and paddy fields in some of the interior tracts.

The pest occurs throughout the year, but the peak period of infestation is in summer, particularly during February-March. But, when the South-West monsoon is delayed the pest population can be noticed upto June. Among the weather factors, high relative humidity prevailing in the coastal and backwater areas favours the pest build up.

O. arenosella completes its egg to adult stages in about two months. Eggs are laid on the lower side of the leaflets on or near the old larval gelleries and the emerging larvae/pupae/adults spend their life on the palm itself.

Control

Infested leaves/leaflets can be clipped off and burnt in cases of mild infestation. This prevents further spread of the pest.

When the infestation occurs at a medium level, biological pest suppression using the indigenous parasitoids is quite effective. The bethylid parasitoid Goniozus nephantidis @ 20%, the elasmid Elasmus nephantidis @ 50% and the chalcidid Brachymeria nephantidis @ 30% may be relelased depending on the stage of the pest present in the field. The dose for release of the parasitoid is fixed on the

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population of the target stage of the pest. When it occurs in a multistage condition, release all the parasitoids @ 40%. The release has to be done, at fortnightly intervals, and continued till the population subsides below the economic injury level.

The parasitoids are multiplied in the Zonal Parasite Breeding Laboratories and in the Biological Control Laboratory at Central Plantation Crops Research Institute, Kayangulam. The latter supplies the nucleus cultures of parasitoids to the Zonal Parasite Breeding Stations in the coconut growing states, where *O. arenosella* is a problem. The parasitoids are made available to the farmers, on request, from the Zonal Parasite Breeding Stations maintained by the Department of Agriculture, Kerala State.

In cases of severe outbreaks following integrated approach is more feasible.

 Cut and burn the badly infested leaves/ leaflets and then spray the palms with 0.02% dichlorvos, which is less toxic to the beneficial parasitoids.

2. Mix 2 ml of dichlorvos 100 E.C. in 10 l of water and this suspension is sufficient for spraying four palms at a time. The insecticide suspension is to be sprayed on the lower surface of the leaves, so as to drench the larval galleries.

3. Release of parasitoids can be done three weeks after spraying. Suitable species of parasitoids at the specified doses are to be released till the pest population is suppressed.

> Published by: M. K. NAIR Director Central Plantation Crops Research Institute Kasaragod - 670 124, Kerala. Text prepared and edited by G. B. Pillai B. Sathiamma

> > August 1989

Printed at: Sharada Press, Mangalore.

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