

Research Paper :

Efficacy of Certain Insecticides Against Arecanut Spindle Bug, *Carvalhoia arecae* Miller and China (Heteroptera:Miridae) Under Field Conditions

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SUMMARY

The study on efficacy of some insecticides against arecanut spindle bug was conducted in farmers fields. All the insecticides tested were effective in controlling the arecanut spindle bug. Malathion 5% dust, phorate 10% granules, monocrotophos 0.15% spray, lamda cyhalothrin 0.10% spray showed cent per cent mortality in bug population on seventh day after application. Chlorpyrrphos 0.20% spray and profenophos also showed higher efficacy in controlling the bug population. All other insecticides showed either moderate or least effectiveness but they were significantly superior over control.

Key words :

Spindle bug,
Carvalhoia arecae,
Arecanut,
Efficacy

The spindle bug *Carvalhoia arecae* Miller and China (Heteroptera: Miridae) was first reported as pest of arecanut palm from Dakshina Kannada (Karnataka) by Khandige (1955). Miller and China (1957) recorded this as a new genus and species from *Areca catechu*. These are brightly coloured red and black bugs, inhabit the innermost two or three leaf axils and are of a chronic problem in areca plantations of Kerala, Karnataka and parts of Tamilnadu (Nair, 1964). Both nymphs and adults hiding in leaf axils suck the sap from the emerging spindle and tender leaflets. Fresh feeding marks appear as watery streaks on the infested leaflets and spindle. These linear lesions turn brown and become necrotic resulting in small shot-holes. As a result of feeding, the spindle often dries and fails to open. Complete decay and death of the spindle during rainy season is also noticed. Persistent incidence of this pest without preventive measures would be detrimental to the general health and longevity of palm. Seedling and young palms under such condition may die.

Now, the spindle bug has assumed the pest status and spread extensively in areca gardens of Shimoga region and causing economic loss to the farmers. Very little information is available on control measures against spindle bug. General recommendations include keeping sachets with granular insecticides into

the innermost two or three leaf axils of arecanut palm (Sathiamma *et al.*, 1985; Jacob, 1990). In the present studies some insecticides including chemical and bio pesticides were tried for their efficacy against arecanut spindle bug.

MATERIALS AND METHODS

A field experiment was conducted to know the efficacy of some insecticides against arecanut spindle bug, *Carvalhoia arecae* in farmers field at Hatti village, which is located 10 km away from Channagiri. A total of three acres garden comprising palms of two years old was used. The experiment was laid out using randomized block design with 13 treatments (Table 1). Each treatment was imposed on ten plants with three replications. The knapsack sprayer was used for spraying and the nozzle was directed towards the spindle and inner most leaf axils. Dusting was done manually and granular insecticide was placed in perforated polythene sachet. Two such sachets were kept at the base of the spindle. Observations were recorded on number of bugs present prior to application and first, third and seventh day after application. Mean number of bugs from eight plants of each replication was worked out. Finally the data were subjected to statistical analysis.

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