

Field Evaluation of the Efficacy of Four Insecticides in the Control of Tea Mosquito

VIJAY SINGH and G. B. PILLAI

Central Plantation Crops Research Institute
Kasaragod-670 124, Kerala, India

The adults and nymphs of tea mosquito *Helopeltis antonii* Sign. suck sap from the tender shoots, freshly emerged leaves, inflorescences, immature nuts and developing apples. The injury made by this pest results in drying up of the new flushes, giving scorched up appearance to the trees, shrivelling and falling of the immature nuts of different stages. The need for an alternative insecticide has often been felt in the past as sometimes endosulfan which is effective in controlling tea mosquito was not readily available in certain cashew growing areas.

An experiment was laid out in farm of the Central Plantation Crops Research Institute, Kasaragod, Kerala, India and it had run for three consecutive crop seasons from 1975-76 to 1977-78. The insecticides used in this trial included quinalphos, formothion, diazinon and endosulfan all at 0.05 per cent concentrations, applied as high volume sprays using ordinary rocker sprayers. Each treatment was replicated 20 times in a completely randomised design with single tree plots. Three rounds of insecticide treatments were done, at the time of emergence of new flushes, inflorescence emergence and fruit set, taking into account the trend of population build-up of the pest. The number of sample panicles per tree was fixed on the basis of the canopy size and the number of shoots all round the canopy. Observations on the number of inflorescences showing blight symptoms (partial or full), characteristics showing blight of tea mosquito infestation, were recorded from each of the experimental trees.

All the insecticide treatments were significantly effective and superior to control in minimising the pest infestation for all the three years. However, spraying of endosulfan 0.05 per cent recorded the least degree (17.7%) of inflorescence infestation as against 90.9 per cent in the untreated control plots. Endosulfan was followed by quinalphos and formothion which recorded 25.3 per cent and 26.0 per cent infestation respectively. Diazinon treatment recorded 34.1 per cent inflorescence infestation. Three rounds of spraying at the time of emergence of new shoots, panicles and fruit setting are necessary to bring down the tea mosquito infestation on cashew. Of the different insecticides tried endosulfan has given consistently better results, followed by quinalphos and formothion all at 0.05 per cent concentration.