

Efficacy of some insecticides against cashew tea mosquito bug *Helopeltis antonii* Sign

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ABSTRACT

Keywords: Cashew, *Helopeltis antonii*, chlorpyrifos, triazophos, lambda-cyhalothrin

Cashew is one of the major significant sources of foreign currency for our country and it is also one of the important crops of Konkan region of Maharashtra State. Nearly 60 different pests have been reported on cashew. Among them the Tea Mosquito Bug, *Helopeltis antonii* Sign. is the most serious one, which is responsible for considerable yield losses in cashew. A field trial was conducted during 2005 at Cashew Research Farm, Regional Fruit Research station, Vengurle, Dist. Sindhudurg, (M.S.) with an objective to identify an alternative insecticide for management of Tea Mosquito Bug relative to the recommended spray schedule. The results indicated that out of six treatments selected, the treatment of 0.003% lambda-cyhalothrin was observed significantly superior over all other treatments followed by 0.01% triazophos that was also significantly superior over rest of the treatments.

Cashew is one of the most important dollar-earning crops of Maharashtra and especially in Konkan region of Maharashtra. Among the several pests infesting cashew, Tea mosquito bug (TMB), *Helopeltis antonii* Signoret (Heteroptera, Miridae) is the most destructive pest of cashew causing damage to tender shoots, inflorescence, immature nuts and apple of various stages of crop development. The nymphs and adults suck the sap from tender shoots, inflorescence, immature nuts and apple. In very severe case of damage even up to 100% loss in the yield may be observed. To control this pest many insecticides are recommended at present. Since last decade the spray schedule comprising of monocrotophos (0.05 %) or propenophos (0.05%) at flushing stage, endosulphan (0.05%)

at flowering and carbaryl (0.1%) or diamethoate (0.3 %) at fruiting stage are being used to control to TMB. Therefore, efforts were made to find out the most effective insecticide for the management of Tea mosquito bug. This study was taken up under AICRP cashew Programme at Regional Fruit Research Station, Vengurle (Maharashtra).

The field experiment was conducted during 2005 on cashew variety Vengurla-7 at Regional Fruit Research Station, Vengurle. The observations on Tea mosquito bug incidence were recorded 30 days after application of the insecticides as detailed in Table 1. For recording observations, fresh 52 leader shoots were selected randomly at 4 sides (E, W, N, S) of the trees under observation and labelled individually. The incidence

Table 1
Incidence of tea-mosquito bug in various treatments (2005)

Treatment details	I st Spray	II nd Spray	III rd Spray	C.U. A.V.
T ₁ Recommended spray schedule	09.37 (17.77)	13.22 (21.25)	09.85 (18.05)	09.19 (17.26)
T ₂ Chlorpyrifos at 0.05%	09.20 (17.01)	09.86 (18.23)	06.97 (15.22)	07.47 (15.46)
T ₃ Triazophos at 0.01%	05.29 (13.97)	07.45 (15.69)	05.53 (13.39)	05.17 (12.97)
T ₄ Lambda-cyhalothrin at 0.003%	4.33 (11.84)	5.65 (13.55)	3.85 (10.96)	3.94 (11.03)
T ₅ Profenophos at 0.05%	06.61 (14.79)	11.05 (19.21)	07.57 (15.54)	07.42 (15.40)
T ₆ Control	13.94 (21.80)	20.31 (26.72)	11.54 (19.70)	13.25 (20.88)
S.E.	0.93	0.88	1.06	0.54
C.D. at 5%	2.80	2.66	3.19	1.63

of tea mosquito bug was recorded in 0 to 4 scale.

- 0- No lesions /streaks.
- 1- 1 to 3 necrotic lesions/streaks.
- 2- 4 to 6 coalescing or non- coalescing lesions/streaks.
- 3- Above six coalescing or non-coalescing lesions/streaks.
- 4- Lesion/streaks confluent or wilting or drying of affected shoot/panicles.

The data so obtained was converted into per cent incidence using following formula:

Per cent pest incidence =

$$\frac{\text{Sum of all numerical ratings}}{\text{No. of shoots observed} \times \text{maximum rating}} \times 100$$

The results indicated that all treatments tested against Tea mosquito bug during the field trial conducted in 2005, significantly reduced infestation of tea mosquito bug. During 1st spray the treatment of 0.003% lambda-cyhalothrin was found significantly superior in reducing the infestation of tea mosquito bug over rest of the treatments except the treatment

of 0.01% triazophos, which was at par with it. This was followed by 0.05% profenophos. The trend was similar after the 2nd and the 3rd spray. The practiced treatment of 0.05% chlorpyrifos was the next best treatment but was found at par with 0.05 % profenophos.

These results indicated that out of 6 treatments selected, the treatment of 0.003 % lambda -cyhalothrin (T4) was observed significantly superior over all other treatments followed by 0.01% triazophos (T3) which was also significantly superior over rest of the treatments.

Literature Cited

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