

FIELD EVALUATION OF BHC, CARBARYL AND ENDOSULFAN FOR THE CONTROL OF THE COCONUT COREID BUG, *PARADASYNUS ROSTRATUS* DISTANT

K. N. PONNAMMA*, CHANDY KURIAN**, A. S. SUKUMARAN* AND K. M. ABDULLA KOYA**

The first record of *Paradasynus rostratus* Distant (Heteroptera: Coreidae) associated with coconut as a nut crinkler pest in India was made by Kurian *et al.* (1972) from Kerala (Krishnapuram, Alleppey District). This bug has five nymphal instars with a total life period of 82-97 days. The nymphs and adults feed on the developing coconuts causing immature nutfall and formation of puny or barren nuts with the characteristic deformities. The feeding punctures produced just below the perianth develop into necrotic lesions, which subsequently leave permanent somewhat deep furrows or crinkles with gummosis. In a bunch, those buttons which escape shedding in spite of the infestation by the bug develop into undersized or barren nuts.

An experiment was conducted in farmers' field at Krishnapuram to evaluate the efficacy of insecticides for the control of

the pest. The insecticides tested included BHC 0.1 per cent, carbaryl 0.05 per cent and endosulfan 0.1 per cent. Each treatment comprised ten infested palms each and another ten infested palms were maintained as untreated control. The insecticide suspension was sprayed

on to unopened spathes and on coconut bunches except the newly opened inflorescences, which were still in the receptive stage. Observations on the incidence were recorded in terms of infested nuts having the characteristic crinkles and gummosis. Insecticidal application and



1. Tender nut showing nature of damage. 2. Nut became barren as a result of attack

* Scientist -S1 at CPCRI Kayangulam, Kasaragod and Calicut respectively.

** Head of the Division of Entomology, CPCRI, Regional Station, Kayangulam.

observation on the incidence (in terms of nut damage) were carried out once in two months. Data on the incidence collected for a period of one year were analysed and the results are furnished in Table 1.

Table - I

Comparative efficacy of BHC, carbaryl and endosulfan under field conditions for the control of coreid bug infestation on coconut

Treatments	1	2	3	4	5	Mean
T ₁ - BHC 50% W. P. 0.1%	13.03	10.18	6.02	3.76	0.56	6.71
T ₂ - Carbaryl 50% W. P. 0.05%	16.34	17.00	14.71	15.04	7.99	14.22
T ₃ - Endosulfan 35 EC 0.1%	26.28	22.9	22.05	14.93	4.54	18.14
Control	35.12	33.92	36.25	31.42	18.6	31.06
Mean	22.69	21.00	19.76	16.29	7.92	

C. D. for treatments 6.41 Significant at 1%

C. D. for intervals of spraying 7.71 Significant at 1%

The data reveal that all the three insecticides-BHC, carbaryl and endosulfan- at the doses tried, were effective in bringing down the pest incidence. Among the three insecticides BHC was significantly superior to carbaryl and endosulfan. BHC was followed by carbaryl and endosulfan. However, the latter two chemicals did not differ significantly between themselves.

It can be concluded from the above results that four rounds of spraying with BHC, at two months intervals could effectively control the pest. But since chlorinated hydrocarbons are being progressively withdrawn from the list of commonly used plant protection chemicals, it is advisable to use carbaryl 0.05 per cent or endosulfan 0.1 per cent for the control of this coreid bug.

SUMMARY

Field evaluation of BHC, carbaryl and endosulfan for the control of coconut coreid bug, *Paradasynus rostratus* Distant was carried out. Results revealed that it is advisable to use carbaryl 0.05 per cent or endosulfan 0.1 per cent for the control of this coreid bug.

References

- Kurian C, Pillai G B, Abraham V A and Mathen K (1972). Record of a coreid bug (nut crinkler) as a new pest of coconut in India. *Curr. Sci.* 41 (1): 37
- Kurian C, Abraham V A and Abdulla Koya K M (1979) Studies on *Paradasynus rostratus* Dist. (Heteroptera: Coreidae) a pest of coconut. In: *Proc. PLACROSYM* 11. PP. 484-500.