

ON THE CONTROL OF *HYMENIA RECURVALIS* (FABRICIUS)
ON AMARANTHUS

Amaranthus (*Amaranthus gangeticus*), red and green, suffers badly from the attack of its notorious pest *H. recurvalis*. Little information is available on the control of the pest other than the mechanical measures. Fltcher 1914, recommended spraying with a mixture of 1 oz nicotine sulphate, 4 oz of whale oil and 4 gallons of water. Bhattacharjee and Menon (1964) found that dusting with 0.65 percent gamma BHC and spraying with 0.25 percent DDr gave good control of the pest.

A field trial was conducted in the Agricultural College Farm, Vellayani in 1962-63 to find out the comparative effect of some less poisonous insecticides and the mechanical method in controlling the pest. The treatments were as shown in Table 1. A randomized block design with 5 repli-

cations was adopted for the experiment. Individual plot size was 8 ft x 8 ft. Spraying was done with a knapsack sprayer, giving a thorough coverage to the leaves and stems. Altogether three spraying, were given, first, six days after transplantation and the second and third at bi-weekly intervals. In mechanical control plots, the caterpillars were taken by hand and destroyed at intervals of two weeks.

Effect of the treatments was assessed by counting the number of caterpillars on the plants and the leaves attacked by them, once before the application of treatments and on three occasions after the commencement of spraying operations at intervals of two weeks. Results of the statistical analysis of the data are presented in Table I.

Table 1

Mean number of caterpillars of *Hymenia recurvalis* and percent damaged leaves on amaranthus under different control treatments

Treatment	Total no. of caterpillars	Mean no. of caterpillars	Percent damaged leaves
Lindane 0.05% S	15	3.00	19.08
<i>Bacillus thuringiensis</i> (62.5 x 10 ⁹ spores per 100 cc)	21	4.20	22.95
Malathion 0.05% E	43	12.60	29.92
Mechanical control	74	14.80	33.68
No treatment	273	54.60	35.20
C. D.		8.46 (1.01)	19.58 (0.05)

S = Suspension

E = Emulsion.

It is observed that all the four treatments are significantly superior to the control in checking the infestation of the caterpillar. Lindane and *Bacillus thuringiensis* are more effective than malathion and mechanical control. Significant difference in the percentage of leaves attacked by the pests under the different treatments also is evidenced and there is a marked decrease in leaf damage on the lindane and *B. thuringiensis* treated plants.

References

- Fletcher, T.B. 1914. Some South Indian Insects 431—432
- Bhattacharjee, N. S. and Ramdas Menon M. G. 1964. Bionomics, biology and control of *Hymenia recurva*'is (Fabricius) (Pyralidae : Lepidoptera) : *Indian J. Ent.* 26 : 76—183

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