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Efficacy of Some New Insecticides for the Control of Okra Shoot and Fruit Borer, *Earias vittella* (Fabricius)

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Among the various insect pests attacking okra crop, the okra shoot and fruit borer, *Earias vittella* (Fabricius), is a serious pest causing severe damage to the shoots and fruits. In the earlier stage of crop, larvae bore terminal shoots, causing death of tip and development of side shoots. With the appearance of buds, flowers and fruits, they are also bored which ultimately drop down. The infested fruits become stunted in growth and deformed in shape, which become unfit for human consumption. In okra, the maximum incidence of this pest was reported to be 37.18 and 69.01 per cent during *kharif* and summer crops, respectively on okra fruits (Mote, 1977).

A field trial was conducted to evaluate the efficacy of some new insecticides at the College Farm, College of Agriculture, Junagadh Campus, Junagadh during 1987 on Gujarat-1 variety of okra in rainy season. Ten treatments including control (Table 1) were tried in randomised block design with four replications with a plot size of 5 m x 3 m. All the recommended agronomic practices were followed. Two sprayings of insecticides were carried out at an interval of 15 days. The first spraying was carried out at fruit formation stage and the second 15 days after the first spray. Healthy and damaged okra fruits were examined and counted at each picking to know the percentage infestation of okra fruits. The yield data of healthy and damaged okra fruits were also recorded. The data thus obtained were statistically analysed.

The result of the trial (Table 1) on per cent infestation in okra fruits revealed that all the insecticides were significantly superior to the control. Among different insecticidal treatments, the lowest infestation of this pest was recorded with 0.015% fenvalerate. The next effective treatments were 0.01% cypermethrin and 0.07% endosulfan which were equally effective for the control of this pest. The insecticidal treatments viz., 0.0075% fluvalinate, 0.2% carbaryl, 0.1% acephate and 0.04% monocrotophos did not give good control. The maximum fruit infestation was recorded with 0.05% quinalphos and 0.1% malathion. The yield of healthy okra fruits was maximum in the treatment of 0.015% fenvalerate. The next best treatments were 0.01% cypermethrin, 0.07% endosulfan,

TABLE 1

Efficacy of different insecticides for the control of *E. vittella*.

Sr. No.	*Treatment*	*Concentration used (%)*	*Per cent fruit infestation*	*Av. yield of healthy okra fruits (t/ha)*
1	Fenvalerate	0.015	8.14	5.180
2	Cypermethrin	0.01	16.52	4.027
3	Endosulfan	0.07	21.87	3.835
4	Fluvalinate	0.0075	33.72	3.702
5	Carbaryl	0.2	37.56	2.623
6	Acephate	0.1	37.92	3.412
7	Monocrotophos	0.04	40.20	3.144
8	Quinalphos	0.05	41.57	3.506
9	Malathion	0.1	44.53	2.094
10	Control	—	57.06	2.080
	S. Em. ±		2.30	0.314
	C. D. at 5%		6.68	0.912
	C. V. %		13.57	18.81

0.0075% fluvalinate, 0.05% quinalphos, 0.1% acephate and 0.04% monocrotophos and they were at par for the yield of the healthy okra fruits. Dhamdhere *et al.* (1984) reported that 0.01% fenvalerate was superior for the control of this pest by considering per cent infestation and yield of healthy okra fruits.

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