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Short Communication

Effect of Fenoxycarb (Insegar 25 WP) on Adults of *Spodoptera litura* (Fab.)

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The tobacco caterpillar, *Spodoptera litura* (Fabricius) is a well known polyphagous pest and is distributed throughout the tropical and subtropical parts of the world, including large portion of India. In Rajasthan, it exists as an endemic pest. Its population increases suddenly and it takes an epidemic form causing heavy damage to a variety of crops including millets, pulses, oilseeds, vegetables and fiber crops. Fenoxycarb disrupts reproduction of insects and can be used as a component of IPM.

The experiment was conducted under laboratory conditions in the Department of Entomology, SKN College of Agriculture, Jobner, during 1998-1999. Freshly emerged adults (0 to 12 h old) of *S. litura* were used for topical application of fenoxycarb solution in acetone. It was applied on the ventral side of the terminal segment of the abdomen with a micro-syringe. The doses were 0.5, 1.0, 2.0, 5.0 and 10.0 µg/moth. The control moths were treated with acetone only. The adults after treatment were allowed to copulate and breed further. The pattern of different crossings was: (I) treated male (TM) x untreated female (UF) (ii) treated female (TF) x untreated male (UM) (iii) treated male (TM) x treated female (TF). Five pairs of moths were taken in each replication and 3 replications were maintained for each treatment.

The fecundity significantly decreased in all three crosses with the increasing levels of fenoxycarb and also the effects were more in the crosses where both the sexes were treated (Fig. 1). Similar results with IGRs treatment on other insects have been reported (El-Guindy and Bishara, 1976; Bhargava and Srivastava, 1991; Valonzuela *et al.*, 1991).

Fenoxycarb at all levels significantly reduced the egg viability over control. The mean per cent egg viability at different levels of fenoxycarb ranged from 85.70 to 45.33. Cross 3, where both the sexes were treated, was significantly superior in reducing the egg viability as compared to other crosses. Similar results were reported by Masner *et al.* (1987); Bhargava and Srivastava (1991); Valonzuela *et al.* (1991).

The oviposition period of female adults treated with fenoxycarb was also reduced. This reduction in fecundity was due to the checking of efferent passage through which the eggs passed before being laid (Shukla, 1980).

The longevity of mated and unmated adults of both sexes got reduced significantly