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Persistence toxicity and field evaluation of Spinetoram 12 SC against *Spodoptera litura* Fabricius on okra

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ABSTRACT

Spodoptera litura (Fabricius) is a destructive defoliating polyphagous pest on various crops throughout India especially in vegetable crops. Experiments were undertaken to investigate the persistence of spinetoram 12 SC against larval stage of *S. litura* in the laboratory and to evaluate the effectiveness in the field in two seasons. The results of persistence toxicity revealed that there was continuous larval reduction upto 14 DAT under the laboratory condition in different doses of biological green insecticide spinetoram (36, 45 and 54 g a.i/ha). This reinforces the need to reapply spinetoram 10 – 14 days after the first application (peak of biological activity) for effective control. The order of relative efficacy (ORE) of the insecticides based on the persistent toxicity index (PTI) values was spinetoram 12 SC 54 g a.i./ha > spinetoram 12 SC 45 g a.i./ha > cypermethrin 25 EC 50 g a.i/ha > emamectin benzoate 5 SG 8.5 g a.i/ha > spinetoram 12 SC 36 g a.i./ha > quinalphos 25 EC 200 g a.i/ha. In field experiments spinetoram 12 SC was significantly effective at 45 and 54 g a.i./ha when sprayed thrice at 15 days interval and minimized the incidence of *Spodoptera litura*.

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