

## Compatibility of new insecticides with certain fungicides for management of leaf eating caterpillar (*Spodoptera litura* Fab.) on groundnut

P. Venkatarao

Received December 4, 2017 and Accepted March 9, 2018

**ABSTRACT :** Field study was conducted to evaluate the compatibility and bio-efficacy of newly released insecticides and certain fungicides alone and in combination against defoliator pest, *Spodoptera litura* (Fabricius) in groundnut during *Rabi* 2009-10. Emamectin benzoate 0.003% + hexaconazole 0.2%, emamectin benzoate 0.003% + mancozeb 0.25%, chlorfenapyr 0.002% + hexaconazole 0.2% and thiodicarb 0.075%+ hexaconazole 0.2% combinations at recommended doses were found to be superior to the rest of tested combinations with a mean per cent *S. litura* larval population reduction of 92.01% and comparable to that of insecticides alone. The mean per cent larval mortality of *S. litura* in insecticide alone treated plots ranged from 79.35 to 88.58%, whereas it was 80.10 to 92.01% in insecticide and fungicide combination treated plots and did not reduce the efficacy of the insecticides when mixed with fungicides. The dry pod yields were also highest in insecticide and fungicide combinations (2647 to 3532 kg/ha) compared to insecticides (2542 to 2787 kg/ha) or fungicides (2692 to 2900 kg/ha) alone and untreated control (2384 kg/ha). Both the fungicides enhanced the bioefficacy of insecticides slightly. All the five insecticides were compatible with the fungicides giving significant reduction in the population of *S. litura*. This information may be helpful for developing suitable mixture of insecticide-fungicides against the leaf eating caterpillar. No phytotoxic symptoms were noticed on groundnut during the period of experimentation.

**Key Words :** Groundnut (*Arachis hypogaea*), leaf-eating-caterpillar (defoliator pest) (*Spodoptera litura*), efficacy, insecticide-fungicides.