

Persistent Toxicity of Imidacloprid to *Aphis gossypii* Glover and *Amarasca biguttula biguttula* Ishida on Okra

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Abstract : Investigations were carried out to evaluate the persistent toxicity of imidacloprid, thiamethoxam and dimethoate to *Aphis gossypii* and *Amarasca biguttula biguttula* under laboratory condition during 2012. The experiment was conducted in a completely randomized block design with three replications in the glass house of department of Entomology M. P. K. V. Rahuri. Okra plants were raised in glass house following all recommended agronomic practices. The 21 days old plants were used for assessing the effect of insecticides on aphids and jassids. The insecticides were diluted with distilled water to make desired concentrations and used for foliar application. The insecticides included in the study were imidacloprid 17.8 SL, imidacloprid 70 WG, thiamethoxam 25 WG and dimethoate 30 EC. Untreated check was maintained by spraying with distilled water. The mortality of aphids and jassids on treated leaf were recorded at 1, 3, 5, 7, 9, 11, 13, 15, 17, 21, and 25 days after spray till zero per cent mortality observed for each treatment. Treated leaves from the glasshouse were brought to laboratory and were put in tube with moist cotton swab at the bottom of leaf and sucking apparatus was fit to the tube. Ten jassids were sucked in each tube from the plants in the field. Evaluated insecticides differed in their persistence and index of persistence toxicity against both insects of different treatments. Recommended dose of imidacloprid (25 g a.i/ha) persisted for 21 days against both aphids and jassids. However dimethoate, a conventional insecticide persisted for 11 days.

Keywords : *Amarasca biguttula biguttula*, *Aphis gossypii*, imidacloprid, persistent toxicity

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