

## IMPACT OF VARIOUS INSECTICIDES ON NATURAL ENEMIES IN COWPEA ECOSYSTEM

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**Abstract:** A field study was conducted to evaluate the safety of insecticides against natural enemies associated with insect pests of cowpea. The results revealed that all the treatments exerted significant impact on the populations of natural enemies (coccinellids, syrphid flies and spiders). However, thiamethoxam 30 FS was found to be relatively safe insecticide against these natural enemies. Combinations (seed treatment with thiamethoxam 70 WS + spray with imidacloprid 17.8 SL, seed treatment with thiamethoxam 30 FS + spray with imidacloprid 17.8 SL, seed treatment with imidacloprid 17.8 SL + spray with thiamethoxam 30 FS), imidacloprid 17.8 SL and spinosad 45 EC were moderate toxic while quinalphos 25 EC was the most toxic for the same. Thus, thiamethoxam, imidacloprid or their combinations as seed treatment and spray, and spinosad can be used in cowpea ecosystem for better pest management as they are less toxic for natural enemies.

**Keywords:** Insecticides, Natural enemies, Predators, *Vigna unguiculata*

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