

Oraphan Yongwattana 2011: Impact of Etofenprox on Key Natural Enemies in Paddy Field. Master of Science (Entomology), Major Field: Entomology, Department of Entomology. Thesis Advisor: Assistant Professor Apichai Daorai, Ph.D. 72 pages.

The objective of this study focuses on the toxicity of etofenprox to long-jawed spider (*Tetragnatha mandibulata* Walckenaer) in the laboratory and the effect of etofenprox and imidacloprid on key natural enemies in the paddy field namely long-jawed spider (*T. mandibulata*), orb weaver (*Araneus inustus* (L. Koch), mirid bug (*Cyrtorhinus lividipennis* Reuter), and lady bug beetle (*Micraspis discolor* (F.)). The experiment was conducted in a rice field at Suphan Buri Rice Research Center, Suphan Buri province. It was based on complete randomized design with 3 replications. The treatments composed of etofenprox 10% EC at 20 ml and 40 ml/20 l of water and imidacloprid 100 SL at 15 ml/20 l of water. Insects and spiders were collected 1 day before application and 1, 3, and 7 days after application.

The laboratory test shows that etofenprox does not cause any mortality effect on the spiders even at a dosage of 100 times higher than the recommended rate. For the field test, etofenprox at the recommended dosage (20 ml/20 l of water), double dosage (40 ml/20 l of water) and imidacloprid at the recommended dosage (15 ml/20 litres of water) do not have any impact on *T. mandibulata*, *A. inustus* and *M. discolor*, but both compounds have an impact on *C. lividipennis*.

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Thesis Advisor's signature