

Pathama Wongtip 2006: Effects of Spinosad on Nile Tilapia (*Oreochromis niloticus* Linn.), Lanchester's Freshwater Prawn (*Macrobrachium lanchesteri* De Man.) and Pond Snail (*Filopaludina martensi martensi* Frauenfeldt.). Master of Science (Entomology), Major Field: Entomology, Department of Entomology. Thesis Advisor: Assistant Professor Apichai Daorai, Ph.D. 145 pages.  
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The study on the effects of spinosad on Nile Tilapia, Lanchester's freshwater prawn and pond snail was carried out to obtain the 96 hr.  $LC_{50}$  and the effects on the growth rate both in a laboratory and in a lettuce field.  $LC_{50}$  values of spinosad were higher than 480 ppm for all 3 species.

The study in laboratory on the effects of spinosad on the growth rate was carried out at 0.1 and 1.0 ppm for 28 days. Spinosad had no effects on the death rate and weight of Nile Tilapia but had a positive effect on the length of Nile Tilapia. Spinosad had effects on the death rate of Lanchester's freshwater prawn and pond snail but had no effects on the growth rate of the two organisms.

The study in a lettuce field on the effects of spinosad on the growth rate was carried out at the recommendation rate (40 cc/20 L of water) and double recommendation rate (80 cc/20 L of water) for 56 days. Spinosad had effects on both the death rate and growth rate of Nile Tilapia. The death rate was highest and the growth rate was lowest at the double recommendation rate. However, spinosad had no effects on Lanchester's freshwater prawn and pond snail.

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