

## Relative Toxicity of Apparent Pesticides against Safflower Capsule Fly, *Acanthiophilus helianthi* Rossi (Diptera: Tephritidae) under Laboratory Conditions

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**Abstract :** Safflower capsule fly, *Acanthiophilus helianthi* Rossi (Diptera: Tephritidae), is a key pest of safflower in Iran. The toxicity of Methidathion, Malathion, Deltamethrin, and Lufenuron to adult males and females of *Acanthiophilus helianthi* was studied under laboratory conditions. Malathion was the most toxic among the tested compounds followed by Methidathion, Lufenuron, and Deltamethrin to *Acanthiophilus helianthi* at 24 h post treatment, the respective LC50 values were 0.40 ppm, 0.68 ppm, 10.99 ppm, and 11.75 ppm for males and 0.46 ppm, 0.97 ppm, 13.45 ppm, and 16.32 ppm for females. At 48 h post treatment, Malathion was the most toxic followed by Methidathion, Deltamethrin, and Lufenuron to *Acanthiophilus helianthi*, LC50 values were 0.08 ppm, 0.54 ppm, 1.80 ppm, and 1.96 ppm for males and 0.34 ppm, 0.64 ppm, 1.88 ppm, and 2.37 ppm for females. At 72 h post treatment, Malathion was the most toxic followed by Methidathion, Lufenuron, and Deltamethrin to *Acanthiophilus helianthi* LC50 values were 0.04 ppm, 0.33 ppm, 0.44 ppm, and 0.71 ppm for males and 0.09 ppm, 0.36 ppm, 0.75 ppm, and 0.82 ppm for females. It is observed that LC50 values for treated adult females increased more than in the treated adult males at 24 h, 48 h, and 72 h post treatment. It means that the adult males were more susceptible to the tested insecticides than the adult females.

**Keywords :** safflower, Methidathion, Deltamethrin, Lufenuron, Malathion, Tephritidae, safflower capsule fly, *Acanthiophilus helianthi*

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