

Efficacy of Various Insecticides on Safflower fly, *Acanthiophilus helianthi* Rossi (Diptera: Tephritidae) in Kohgiluyeh and Boyerahmad Province (Iran).

ABSTRACT

Safflower fly (*Acanthiophilus helianthi* Rossi) is one of the main limiting factors to expand the production area of the crop in several countries. Since use of selective insecticides is one of the most important methods for pest management, we evaluated the efficacy of six insecticides against *A. helianthi* infesting safflower. Field studies were conducted at the farm of Agriculture Research Station Gachsaran, in 2008-2009, to determine the effects of six different insecticides on the damage and incidence of *A. helianthi* on safflower variety 'Sina'. After first spray overall mean population larvae of *A. helianthi* inside flower heads was 3.83, 4.95, 5.79, 6.86, 7.67, 8.31 per 10 flower head on Endosulfan 35EC, Chlorpyrifos 20 EC, Monochrotophos 28 EC, Deltamethrin 2.8 EC, Malathion 56 EC, and Supracide 40 EC treated plants respectively, while on control plants the population larvae was 12.59. Similarly, after the second spray of each of the same insecticides the population larvae of *A. helianthi* was 4.69, 6.25, 7.63, 8.43, 9.37 and 10.75 respectively. Where in controls there were 17.20 larvae of safflower capsule fly. Percent decrease of population of larvae safflower capsule fly in comparison to control after the first spray was highest in Endosulfan 35 EC (74.22) followed by Chlorpyrifos 20 EC (64.93), Monochrotophos 28 EC (56.09), Deltamethrin 2.8 EC (49.63), Malathion 56 EC (40.96) and Supracide 40 EC (37.76). After the second spray percent decrease over control recorded was highest in Endosulfan 35 EC (85.56), followed by Chlorpyrifos 20 EC (73.10), Monochrotophos 28 EC (65.96), Deltamethrin 2.8 EC (62.81), Malathion 56 EC (54.54) and Supracide 40 EC (47.64).

Keyword: Efficacy; Insecticides; *Acanthiophilus helianthi*; Safflower.