

Comparison of different methods to control fruit fly *Acanthiophilus helianthi* Rossi (Diptera: Tephritidae) in Iran

ABSTRACT

Problem statement: The safflower fly is one of the most important insect pests of safflower in Iran. Losses caused by larval feeding on receptacle tissue or seeds leads to disrupted plant activities, reduction in flower buds and ultimately, to decreased quality and quantity of crop. **Approach:** To evaluate the efficiency of different methods of fruit fly control on Safflower, a field experiment was carried out at the Agricultural Research Station in Gachsaran, Iran in 2009. Five diverse methods, insecticides, baiting, cultural, Integrated Management and no treatment were assessed on weight of one thousand seeds, percentage of oil, percentage seed damage and harvest/ha. **Results:** Damage percentage and harvest/ha varied significantly in various control methods. Integrated Management and insecticide control indicated best results with harvest potential of 1850 and 1723kg/ha with a least damage of 5% and 8% respectively. The minimum harvest (1103 kg/ha) and the most damage (39.4%) were recorded in plants where no treatment was applied. Bait trap method produced a harvest of 1405 kg/ha along with a damage of 20%. **Conclusion:** The results indicate the integrated management was significantly more successful compared to other methods.

Keyword: Safflower; Fruit fly; Damage; Integrated management