

Application of kaolin powder for control of olive Fruit fly *Bactrocera oleae* Gmelin (Diptera: Tephritidae)

Abbasi Mozhdehi, Mohammad Reza

*Agricultural and natural resource research center of Guilan, Rasht, Iran
(mozhdehi.185@gmail.com)*

Summary

In Iran the several methods for control of olive fruit fly *Bactrocera oleae* Gmelin (Diptera: Tephritidae) are applied, such as yellow sticky traps. Alone and with sexual pheromones, bottle traps and McPhail traps that contain protein hydrolysate. For this experiment conducted in Roudbar olive research station in 2010, we applied kaolin powder as one of the methods for control and decrease of damage of olive fruit fly. We applied 3 different treatment concentrations containing 5%, 3%, 1.5% of kaolin and water as control. Solutions were sprayed after monitoring with pheromone traps and protein traps. In first stage, after pit hardening of fruits, kaolin was sprayed on trees which coincided with in the beginning of summer. The second and third stage has been done in the end of summer and in the beginning of autumn when we observed maximum sexual activity. Results showed significant difference between treatment concentrations 5% and 3% with 1.5% and control ($p < 0.05$). The average number of attacks (total infestation) per olive tree was 3.84 ± 0.28 , 6.96 ± 0.42 , 10.1 ± 0.18 and 18.78 ± 0.34 for treatments of 5%, 3%, 1.5% concentrations and water. Due to the low solubility of this material in water, concentration of 5% has been recommended for spraying on trees. Application of kaolin powder is very useful to control of olive fruit fly and will be one of the methods in IPM.

Key words: olive fruit fly, *Bactrocera oleae*, kaolin, control