

## ABSTRACT

### STUDIES ON POPULATION CHANGES AND PARAZITOIDS OF OLIVE FLY (*BACTROCERA OLEAE* GMEL.) (DIPTERA: TEPHRITIDAE) IN OLIVE GROVING AREAS IN AYDIN PROVINCE AND INVESTIGATIONS ON THE CONTROL METHODS COMPATIBLE WITH ORGANIC OLIVE PRODUCTION

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The emergence period and population changes of Olive fruit fly (*Bactrocera oleae* Gmel.) (Diptera: Tephritidae) and its parasitoids were studied in this study. Besides, control methods compatible with organic olive production were investigated as well.

As a result of studies on population monitoring, it can be concluded that Olive fly populations fluctuated in a very low levels. However in Umurlu in 2009, olive fly population emerged a little higher than the other years and sampling places, and 307 flies/trap were caught at 30.10.2009 in Umurlu.

Two parasitoid individuals (Chalcidoidea) were found during the studies. It shows that the incidence of the parasitoids is very low in olive groving areas of Aydin province.

Effectiveness of different attractants, such as diammonium phosphate (DAP), ammonium bicarbonate, ammonium sulphate, and ammonium acetate, Nu-Lure and pheromone was studied. DAP in 2 % was the most attractive. Olive fly populations were controlled under economical injury level in all study sites by the traps with DAP in 2 %.

In addition, it was also studied the effectiveness of kaolin, spinosad, and copper hydroxide, and the results were showed that kaolin and spinosad were quite effective.

**Key words:** *Bactrocera oleae*, organic farming, alternative combat, mass trapping.