

Infestations of Olive Fruit Fly, *Bactrocera oleae* (Rossi) (Diptera: Tephritidae), in Different Olive Cultivars in Çanakkale, Turkey

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Abstract : The olive fruit fly, *Bactrocera oleae* (Rossi), is an economically important and endemic pest in olive (*Olea europaea*) orchards in Turkey. The aim of this study was to determine olive fruit fly infestation in different olive cultivars in the laboratory. Olive fly infested fruits were collected in Çanakkale province to establish wild fly population. After having reproductive olive fly colonies, 14 olive cultivars were tested in the controlled laboratory conditions, at 23±2 °C, 65% RH and 16:8 h (light: dark) photoperiod. The olive samples from 14 different olive cultivars were collected in October 2015, in Campus of Dardanos, Çanakkale Onsekiz Mart University. Observations were carried out detecting some biological parameters such as the number of oviposition stings, active infestation, total infestation, the number of pupae and the adult emergence. The results indicated that oviposition stings were not associated with pupal yield. A few pupae were found within olive fruits which were not able to exit. Screening of the varieties suggested that less susceptible cultivar to olive fruit fly attacks was Arbequin while Gemlik-2M 2/3 showed significant susceptibility. Ovipositional preference of olive fly females and the success of larval development in different olive varieties are crucial for establishing new olive orchards to prevent high olive fruit fly infestation.

Keywords : infestation, olive fruit fly, olive cultivars, oviposition sting

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