

Project Title : Pilot Project with Special Reference to Area-Wide Control of Olive Fruit Fly, *Bactrocera Oleae* (Gmel.) by Using Nuclear Techniques

Start /End Date : 2002-2005

Supporting Body : GDAR

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Summary : The studies were carried out in the laboratory and field. The field studies were carried out in olive orchards belong to the government in Çanakkale-Gökçeada island. 60 Gy the irradiation dose was found as hinder medfly (*Ceratitis capitata* Wied.) adult emergence dose.

The parasite *Psytalia concolor* Szepl. has been reared on medfly mature larvae in laboratory. Irradiated (60 Gy) and unirradiated medfly larvae were also utilized to determine the parasitism rate, sex ratio and efficiency of the parasite. As a result of the tests were not found any statistical difference between the irradiated and unirradiated larvae. The most suitable host-parasite rate and parasitisation period were determined as 3L/3h parameter for mass rearing under the laboratory conditions.

Field studies was initiated to determine the parasitism efficiency of *Psytalia concolor* in nature against olive fruit fly, *Bactrocera oleae* (Gmelin) by utilizing field-branch cages in Gökçeada island. The highest parasitism rates were found to be 21,5% and 16,84% in the third and fourth generations respectively.

Mass trapping applications and parasitoid releasing were initiated in the experimental area between 2002-2004. Combined efficiency of parasitoid releases and mass-trapping technique was estimated to be average 79,32% and 71.48% in 2002 and 2003 years respectively. Efficiency of only parasitoid releases was determined to be average 70.08% and 67.83% in 2003 and 2004 years respectively.