

ABSTRACT

Ph. D. Thesis

RESEARCHES ON THE BIOLOGY AND CONTROL OF *HOPLOCAMPA* SP. (HYMENOPTERA, TENTHREDINIDAE) IN BEKİROĞLU AND PAPAZ PLUMS IN AYDIN PROVINCE

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In this study was investigated the population density, distribution and some biological properties of *Hoplocampa flava* L. on plums. It was also compared to attractiveness between Rebell-Bianco polypropylene and white plexiglass (with four surfaces) traps. The effects of mass trapping and azadirachtin on *H. flava* population were investigated.

To determine the population fluctuation of *H. flava*, six white plexiglass traps were placed to each orchard which contains Bekiroğlu and Papaz varieties in Umurlu and Çakmar towns. Traps were controlled once a week in between February and May. The trials were constituted according to the randomized parcel experiment design with five replicates were planed to determine the effect of Azadirachtin and mass trapping on *H. flava* population.

The spread rates of *H. flava* were 95,42 % in Serçeköy, 70,88 % in Beyköy, 69,69 % in Ovaköy, 87,16 % in Umurlu 41,66 % in Erbeyli and 38,09 % in Köşk.

The first eggs of *H. flava* in plum fruits were appeared in the second week of March, and one week later, the first damaged fruits by *H. flava* were found. The first adults were obtained at the first week of March when the plums were entirely budded. The adults were caught to traps in the highest number at the end of March. The flights of the adults completely ended at the second or third week of April. The flights of *H. flava* started and ended in Bekiroğlu one week earlier than Papaz. In 2006, the difference of density of *H. flava* between Bekiroglu and Papaz varieties was not significant, but the difference was significant in 2007. The population density of *H. flava* adults caught on traps did not change according to the directions. The ratios female/male of *H. flava* captured on traps during green plum seasons changed between 1/2 and 1/4,5.

The difference between attractiveness of polypropylene and white plexiglass traps was not significant in 2005, but more adults were caught on white plexiglass traps in 2006. The effect of azadirachtin on *H. flava* population was significant, but the effect of mass trapping was not significant.

Key Words

plum, mass trapping, azadirachtin, population fluctuations, Rebell-Bianco, white trap.