

Population Density of Overwintering Larvae of Carob Moth [*Apomyelois* (= *Ectomyelois*) *ceratoniae* Zell. (Lepidoptera: Pyralidae)] in Pomegranate Orchards in Southeastern Anatolia

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Aim of the study: Carob Moth [*Apomyelois ceratoniae* Zeller (Lepidoptera: Pyralidae)] is a key pest in pomegranate orchards in Southeastern Anatolia Region of Turkey. The pest causes significant damage and reduces marketability of fruits, and is difficult to control using insecticides. The pest overwinters at different larval stage in infested pomegranate fruits. Therefore, infested fruits hanging on the trees or fallen to the floor are important for Carob Moth's summer population in pomegranate orchards. In addition, removing infested fruits from orchards is vital in order to control the pest. In this study, we aimed to determine the overwintering larvae population density in pomegranate fruits remaining on or under the trees.

Material and Methods: This study carried out in two pomegranate orchard located in Şanlıurfa Central and Suruç County during 2016-2017 winter periods. The trial was designed in a randomized complete block design with five replications. For this purpose, 20 hanging fruits and 20 fallen fruits were collected in each row. The infested and uninfested fruits registered individually. The infested rate with Carob Moth is calculated. Also overwintering larvae numbers were determined from collected infested pomegranate fruits.

Results: As a result of the study, infestation rate of fallen fruits in Central and Suruç County were determined as 52% and 26% respectively while hanging fruits were 25% and 15% respectively. Moreover, the density of the pest overwintering larvae population in the fallen fruits were determined as 9.50 larvae/10 infested fruits and 12.00 larvae/10 infested fruits respectively, while the numbers of overwintering larvae density in hanging fruits were 6.40 larvae/10 infested fruits and 6.80 larvae/10 infested fruits respectively. Removal of those infested pomegranate fruits from the orchards in winter are very important to reduce the population density of the pest in summer period in pomegranate orchards.

Keywords: *Apomyelois ceratoniae*, pomegranate, overwintering larvae, population density, pest management.