

Predator *Macrolophus pygmaeus* (Rambur) on Different Prey Species Under Laboratory Conditions

Fatma DENİZ¹, Baran ASLAN², İsmail KARACA¹

¹Plant Protection Dept., Agricultural Faculty, Süleyman Demirel University, Isparta, Turkey

²Plant Protection Dept., Tefenni Vocational School of Higher Education, Mehmet Akif Ersoy University, Tefenni, Burdur, Turkey
ismailkaraca@sdu.edu.tr

Aim of the study: Whiteflies (Hemiptera: Aleyrodidae) and aphids (Hemiptera: Aphidoidea) are among the most important problems causing yield losses in agricultural production. These pests are not only cause damage by sucking leaf and plant tissue, but they also transfer viruses. Thus, multiple damages can be observed on the plants infested by aphids and whiteflies. In addition, these pests can be harmful during the whole cultivation period, and can give many offsprings. *M. pygmaeus* (Hemiptera: Miridae) is a polyphagous omnivorous predator feeding on whiteflies, aphids, mites and leafminers. The aim of this study is to determine of development of the predator *Macrolophus pygmaeus* (Rambur) on different prey species under laboratory conditions.

Material and Methods: In this study, feeding behavior and longevity of *M. caliginosus* were determined on nymphs of *Aphis gossypii*, *Myzus persicae* (Hemiptera: Aphidoidea), *Trialeurodes vaporariorum* (Hemiptera: Aleyrodidae) and eggs of *Ephestia kuehniella* (Lepidoptera: Pyralidae), which were harmful species in the crop production, and also on eggplants as control. Study was carried out in a climate chamber with 26±1°C temperature, %60±5 humidity and 16:8 (L: D) lighting conditions, in Süleyman Demirel University, Plant Protection Department, Biological Control Research and Application Laboratory.

Results: As a result, 54% of the predator individuals fed on eggplants died before reaching the adult stage, while all the individuals fed on the other hosts reached the adult stage. Four nymph stages and total nymph period of the predator fed on eggplants were the longest when compared with other foods. Total nymph period of the predator fed on the eggplant, *Ephestia kuehniella*, *Aphis gossypii*, *Myzus persicae* and *T. vaporariorum* were calculated as 19.56, 14.96, 18.12, 15.50 and 13.64 days, respectively. It can be concluded that *T. vaporariorum* is the most effective prey for the development of the predator.

Acknowledgements: The authors thank the Research and Technology Department of Süleyman Demirel University in Isparta, Turkey for financial support for this project (Project number: 4638-YL1-16).

Keywords: *Macrolophus pygmaeus*, Eggplant, *Ephestia kuehniella*, *Aphis fabae*, *Myzus persicae*, *Trialeurodes vaporariorum*