

Project Title : The determination of insect pests and mites, and observation on the population fluctuation of the key pest in fresh onion fields in Izmir Province

Start /End Date : 2006-2012

Supporting Body : GDAR

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Co-researchers : -

Summary : In this study, determination of harmful insect and mite species, defining of the key pest and its natural enemies and timing of control by observing the population fluctuation of the key pest in fresh onion cultivated areas of Izmir province has been aimed. For that reason, 155 onion fields have been observed in Bayındır, Çeşme, Kemalpaşa, Menemen, Tire and Torbalı Districts in 2006, periodically. As a result, *Thrips tabaci* Lindeman (Thysanoptera: Thripidae) and *Bactericera tremblayi* Wagner (Hemiptera: Trioizidae) have been considered as the key pest and the second major pest, respectively. In the following years, 93 and 71 onion fields have been observed in Bayındır, Menemen and Tire in 2007 and 2008, resp.

Throughout the study, 7 species from Thripidae, 2 species from Phlaeothripidae and 4 species from Aeolothripidae of Thysanoptera have been found. Different species from 12 families of Diptera have been determined. The most important species among dipterans has been determined as *Delia platura* Meigen of Anthomyiidae Family. In addition, 6 families, 7 species and 4 genera from Hemiptera, 2 families, 6 species from Coleoptera and 1 species from Neuroptera order have been determined. From Prostigmata, Mesostigmata and Astigmata (Acarina) orders, 16 families, 15 species and 5 genera of mites have been recognized. In the study, some Cryptostigmata (Acarina) and Collembola individuals could be recognized at order level.

Population fluctuations of *T. tabaci* and *B. tremblayi* have been followed in one field each in Menemen, Tire and Bayındır Districts in 2007-2008 and 2008-2009 vegetation periods. It has been found that *Curteria duzgunesae* Saboori, Çobanoglu and Bayram (Acarina: Erythraeidae) could take the population of *T. tabaci* under suppression in Bayındır. Yellow and blue sticky traps have been used to determine the population level and color orientation of *T. tabaci* and *F. occidentalis*, the major pests in Menemen and Tire, in 2007-2008 and 2008-2009 periods. As a result of statistical analysis, no relation has been found between species and trap catches. On the other hand, *T. tabaci* was the most abundant species captured in yellow sticky traps in both districts and years.