

Turkish Journal of Agriculture and Forestry

Turkish Journal

of


Agriculture and Forestry

**The Effects of Different Irrigation Systems on the Inundative Release of
Trichogramma evanescens Westwood (Hymenoptera: Trichogrammatidae)
against Ostrinia nubilalis Hubner (Lepidoptera: Pyralidae) in the Second Crop
Maize**

Sevcan ÖZTEMİZ¹, Serpil KORNOŞOR²

¹Plant Protection Research Institute, 01321 Adana - TURKEY

²University of Çukurova, Faculty of Agriculture, Department of Plant Protection, 01330
Adana - TURKEY

 [Keywords](#)
 [Authors](#)



agric@tubitak.gov.tr

[Scientific Journals Home Page](#)

Abstract: This study was conducted to determine the effects of different irrigation systems on the inundative release of the egg parasitoid *Trichogramma evanescens* Westwood (Hymenoptera: Trichogrammatidae) against *Ostrinia nubilalis* Hubner (Lepidoptera: Pyralidae) in the second crop maize in the Çukurova region of Turkey in 1999 and 2000. *O. nubilalis*, *Ephestia kuehniella* Zeller (Lepidoptera: Pyralidae) and *T. evanescens* were reared in a climatic room under constant temperature of 25 ± 1 °C, relative humidity of $65 \pm 10\%$, and an appropriate light regime (16:8 LD). *Trichogramma evanescens* was applied twice at a rate of 75,000 parasitoid ha⁻¹ at 10-day intervals at the beginning of the oviposition period of the third generation of *O. nubilalis* in the second crop maize. Irrigation was an important factor for the effectiveness of *T. evanescens* and significant differences between the 2 irrigation systems tested were observed. The efficiency of *T. evanescens* was higher under flood irrigation than sprinkler irrigation conditions. Egg parasitism was 81.0% and 84.3% with flood irrigation, and 66.3% and 69.2% with sprinkler irrigation in 1999 and 2000, respectively. The reduction rate of infested plants with *O. nubilalis* was 80.0% and 88.3% with flood irrigation, and 60.7% and 68.9% with sprinkler irrigation in 1999 and 2000, respectively. Yield increased approximately 1500-2000 kg ha⁻¹ under flood irrigation as compared to sprinkler irrigation.

Key Words: Maize, *Ostrinia nubilalis*, *Trichogramma evanescens*, inundative release, irrigation systems

Turk. J. Agric. For., **31**, (2007), 23-30.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Agric. For., vol.31, iss.1.](#)