The Turkish Journal of Occupational / Environmental Medicine and Safety

Vol:1, Issue Supplement 2 Web: http://www.turjoem.com ISSN : 2149-4711 Oral Presentation

P61 : EFFECTS OF TWO DIFFERENT PYRETHROID GROUP INSECTICIDES ON MORTALITY OF *ITOPLECTIS MACULATOR* (FABRICIUS, 1775) OBTAINED FROM *ARCHIPS ROSANA* (LINNAEUS, 1758) PUPAE IN LABORATORY CONDITIONS

Mitat Aydoğdu, Utku Güner, Fulya Dilek Gökalp Muranlı
Trakya University Science Faculty Biology Department Balkan Yerleşkesi Edirne

Aim: In this study, the effects of two different Pyrethroid group insecticides used in orchards on mortality of *Itoplectis maculator* (Fabricius, 1775) (Ichneumonidae, Hymenoptera), the parasitoid of the leafroller pests *Archips rosana* (Linnaeus, 1758) (Tortricidae, Lepidoptera), were evaluated.
Method: *A. rosana* pupae were exposed to different concentrations of LCT (Lambda-chyhalothrin) and CYP (Alpha-cypermethrin) and their development were observed until adult stage. Some of these pupae were attacked by beneficial organisms. Each pupae dipped in sterile Petri dishes (10 cm diameter) in laboratory conditions (25 ±2^{0}C and % 50±5 relative humidity) was maintained using honey-water (1:1 ratio) absorbed on cotton pieces and sterile cherry leaves. Experiments were performed in five replicates and observed deaths were recorded for 7 days (Table 1).
Findings: Both insecticides were found to significantly decrease the survival rate compared to the control group.
Results: The results of the present study are thought to contribute to the development of biological control methods against leafroller pests in orchards.

Keywords: Lambda-cyhalothrin, Alpha-cypermethrin, Archips rosana, Itoplectis maculator, Surviving

Tablo 1. 7 günlük süre sonunda 10 pupa içinde hayatta kalan ortalama parazitoid sayısı.

Lambda-cyhalothrin	Kontrol Ort.±S.E.	10 µM Ort. ±S.E.	1 µM Ort. ±S.E.	1.10-¹ µM Ort. ±S.E.	1.10-² µM Ort. ±S.E.	1.10-³ µM Ort. ±S.E.
	2.6±0.2	***0.2±0.2	***0.4±0.24	2±0.31	2±0.31	2.4±0.4
Alfa-cypermethrin	Kontrol Ort. ±S.E.	20 µM Ort. ±S.E.	2 µM Ort. ±S.E.	2.10-¹ µM Ort. ±S.E.	2.10-² µM Ort. ±S.E.	2.10-³ µM Ort. ±S.E.
	2.6±0.24	***0.2±0.2	***0.2±0.2	*1±0.44	2±0.31	2.4±0.4

*(*p<0.05; ** p<0.01; *** p<0.001)*

Table 1. The average number of surviving parasitoids at the end of 7 days (parasitoid/10 pupae).

Lambda-cyhalothrin	Control Mean±S.E.	10 µM Mean±S.E.	1 µM Mean±S.E.	1.10-¹ µM Mean±S.E.	1.10-² µM Mean±S.E.	1.10-³ µM Mean±S.E.
	2.6±0.2	***0.2±0.2	***0.4±0.24	2±0.31	2±0.31	2.4±0.4
Alpha-cypermethrin	Control Mean±S.E.	20 µM Mean±S.E.	2 µM Mean±S.E.	2.10-¹ µM Mean±S.E.	2.10-² µM Mean±S.E.	2.10-³ µM Mean±S.E.
	2.6±0.24	***0.2±0.2	***0.2±0.2	*1±0.44	2±0.31	2.4±0.4

*(*p<0.05; ** p<0.01; *** p<0.001)*