II. International Symposium on Multidisciplinary Studies (ISMS)

18-21May 2017, Rome/Italy

(Abstract Book)

II. Uluslararası Multidisipliner Çalışmaları Sempozyumu (ISMS)

18-21 Mayıs 2017, Roma/İtalya

(Özet Kitabı)

II. International Symposium on Multidisciplinary Studies (ISMS)

18-21May 2017, Rome/Italy

Abstract Book

II. Uluslararası Multidisipliner Çalışmaları Sempozyumu (ISMS)

18-21 Mayıs 2017, Roma/İtalya

Özet Kitabı

ISBN: 978-605-180-778-2

Editors • Prof. Zafer GÖLEN, Ph. D. & Assoc. Prof. Abidin TEMİZER, Ph.D.

Broadcaste Coordinator • Yaşar HIZ

General Publishing Director • Aydın ŞİMŞEK

Cover Design • Gürkan GÖÇER

Interior Design • Assoc. Abidin TEMİZER, Ph.D.

Edition• © Jun 2017 /Ankara, Turkey

ISBN • 978-605-180-778-2

Publisher: Gece Kitaplığı

Publishing Date: Jun 2017

Address of Publisher: Elif Sokak (Büyük Sanayi Sitesi), Sütçü Kemal İş Hanı, 7 / 111 İskitler / Ankara, Turkey

Tel: +90 312 384 80 40

GSM: +90 505 145 68 68

web: www.gecekitapligi.com

e-mail: gecekitapligi@gmail.com

Printing & Binding

Bizim Büro Matbaa Sanayi 1. Cadde Sedef Sk. No: 6/1 İskitler – Ankara, Turkey

Certificate Number: 26649

Sympoisum Website: ttp://www.ismsymposium.org

E-mail: ismsem@gmail.com

Title	RA	Asst. Prof. Ph.D.	RA	Ra. Ph.D.	Asst. Prof. Ph.D.	Sen. Res. Fell. Ph.D.
Name-Surname	Filip Franeta	Dejan Mirčić	Željko Milovac	Dajana Todorović	Saša Obradović	Vesna Perić Mataruga
Instition	Institute of Field and Vegetable Crops, Novi Sad-Serbia	State University of Novi Pazar-Serbia	Institute of Field and Vegetable Crops, Novi Sad-Serbia	University of Belgrade-Serbia	State University of Novi Pazar-Serbia	University of Belgrade-Serbia
E-mail	dmircic@np.ac.rs					

Title	**Effects of Insecticides on the Antioxidative Defense System in European Corn Borer (*Ostrinia nubilalis*)**

Abstract

The European Corn Borer (*Ostrinia nubilalis)* is one of the most damaging insect pests of corn and it has a detrimental influence on corn production. This work examines the effects of different insecticides on the antioxidative defense system of *Ostrinia nubilalis* larvae from Rimski Šancevi (near Novi Sad, Serbia). The experiment setup consisted of a completely randomized block design with 4 replicates. Four experimental groups were formed: control group (K) and C1 (indoxacarb – 0,25 ml ha^{-1}), C2 (chlorantraniliprole – 0,1ml ha^{-1}) and C3 (chlorantraniliprole + lambda cyhalothrin – 0,20 ml ha^{-1}). Larvae from maize stems (hybrid NS 6030, FAO group 600) were collected following 20 days after the insecticide application, after which the homogenates of whole larvae were made. Ultimately, determination of the superoxide dismutase (SOD) catalase (CAT) and glutathione S transferase (GST) activity was performed. The comparison of the experimental groups has determined that SOD activity decreases significantly, whereas CAT activity suggestively increases in group C2 in relation to K. GST activity is significantly higher in all insecticides-treated groups in relation to K. Results indicate that the highest variations in larval enzyme activity was recorded in group C2, which proposes chlorantaniliprole as the most efficient insecticide for further use.

Key words: antioxidative defense, chlorantraniliprole, indoxacarb, lambda cyhalothrin, *Ostrinia nubilalis*