BOOK OF ABSTRACTS

XIV International Scientific Agriculture Symposium

"Agrosym 2023"

Jahorina, October 05-08, 2023

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INFLUENCE OF INSECTICIDES APPLICATION ON CHANNEL LENGTH IN STEM OF MAIZE PLANTS CAUSED BY FEEDING OF LARVAE OF EUROPEAN CORN BORER (*Ostrinia nubilalis* Hbn.)

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Abstract

In maize plants the attack of European corn borer can cause significant damages, which can lessen by insecticide application in crop protection. The aim of this study was to determine the effect of insecticides on the total length of channels in maize plant stem formed by the feeding of larvae *Ostrinia nubilalis*. The research was carried out in Maize Research Institute "Zemun Polje" on the experimental field in 2018. Study used three maize genotypes of different FAO ripening groups (ZP 434, ZP 600 and ZP 666) and three insecticides chlorantraniliprole (200 g l^{-1}), bifenthrin (100 g l^{-1}) and lufenuron (50 g l^{-1})+(cypermethrin (50 g l^{-1}) + chlorpyrifos (500 g l^{-1})), which were applied only after the maximum flight of the first generation to protect plants from attack of European corn borer. The result showed significantly different total length of channels in the stem of plants, caused by feeding of the larvae of European corn borer, which varied from the lowest on treatment with insecticide chlorantraniliprole in maize genotype ZP 600 (170.00 cm) to the highest in maize genotype ZP 666 (278.33 cm) on the control variant (without insecticide application). For all treatments, the average value of total length of channels in stem, was the lowest 192.92 cm in ZP 434, slightly higher 195.42 cm in ZP 600, while the highest average value of total length of channels was 233.34 cm in maize genotype ZP 606. The established differences for total length of channels depended on genotype and type of insecticide applied.

Key words: *maize, genotype, pest, insecticide, length of channels.*