

FUNGICIDE EFFECT ON *FUSARIUM GRAMINEARUM* AND CONCENTRATION OF MYCOTOXIN IN THE EAR OF MAIZE (*ZEA MAYS* L.)

Atala Hillary*, Gábor Tarcali

University of Debrecen, Faculty of Agricultural, Food Sciences and Environment Management, Plant Protection Institute, Debrecen, HUNGARY

*corresponding author: atalahillary@gmail.com

Maize (*Zea mays* L.), being the queen of cereals and one of the most significant crops grown globally, both as human food, raw material for agricultural processing industries, and feeds for animals, is highly threatened by a wide host of fungal diseases. Fusarium Head Blight (FHB) caused by *F. graminearum* is more devastating, thus causing high yield loss and grain contamination, hence posing food safety and health concerns to both human and animal life globally. The objective of the study was to investigate how different fungicides affect Fusarium infection and mycotoxin concentration in maize. The MV Koppány maize variety was planted on 20 small plots (3 m x 6 m) at the Institute of Plant Protection, University of Debrecen, and allowed to thrive under natural infestation with *Fusarium graminearum*. Treatments included: Mycostart Bio (mycorrhiza preparation) 35 kg/ha dose, Genium 4l/ha dose, 60 ml/ 15 square meter plot + Solvitis Zn plant conditioners 1 l/ha dose, 15 ml/ 15 square meter plot, Fungicides Prosaro which contain prothioconazole + tebuconazole active substances was used at a dose of 1 l/ha dose and 15 ml/15 square meter plot. T-test analysis showed that *Fusarium* infection was greatly reduced because of the use of fungicide Prosaro, which contains prothioconazole + tebuconazole active substances, as compared to the control plots, however, Further analysis is to be done to establish the concentration of mycotoxins in the ear.