MCYR
MULTIDISCIPLINARY CONFERENCE
FOR YOUNG RESEARCHERS

Influence of fertiliser products on the yield and quality of corn grain

Elina Zakharchenko [1,2], Oksana Datsko [1*], Yurii Mishchenko[1], Serhii Butenko[1]

[1] Department of Agrotechnologies and Soil Science, Faculty of Agrotechnologies and Natural Resource Management, Sumy National Agrarian University, H. Kondratieva str., 160, 40021, Ukraine
[1] Institute of Agriculture of the Northeast, National Academy of Agrarian Sciences of Ukraine, Zelena str., 1, v.Sad, Sumy region, 42343, Ukraine

* **Correspondence:** oksana.datsko@snau.edu.ua

Background: In recent years, the question about organic cultivation of crops is becoming more popular. It means that farmers who want to use organic products have to follow certain rules. So, the aim of our study was to estimate the effect of seed inoculation and foliar fertilisation of corn by special fertiliser products with microorganisms certified Organic standard. **Methods**: Corn seeds were treated with biofertilizers in liquid (Leanum) and powdered (Vitamin O7) forms and then sown in the field. During the summer period, the plants were treated with liquid fertiliser once or twice. **Results**: It was found that fertilisation affected corn yield and grain quality – protein, ash, starch content. **Conclusions**: So, the use of seed inoculants and foliar fertilisation generally leads to increased yield, but at different levels. The protein and oil content had a weak positive correlation with applied fertilisers in the background of flat-cut tillage.

Keywords: biofertilizer, organic farming, microbial inoculation, seed treatment, foliar application.

Acknowledgement: We are thankful to the Czech government support provided by the Ministry of Foreign Affairs of the Czech Republic, which allowed this scientific cooperation to start within the project "AgriSci-UA Platform".