

THE EFFECT OF FOLIAR FERTILIZATION ON THE YIELD AND QUALITY PARAMETERS OF MAIZE GRAIN

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In our small plot experiment we examined the effect foliar fertilization on the yield and quality parameters of maize grain in 2016. The experiment was set in three replications, random blocks on the area of SZTE Tangazdaság Ltd. in Hódmezővásárhely. The soil of the experiment was meadow chernozem. Three different foliar fertilizer products were sprayed out individually and combined with each other as well, so there were six treatments and the control to be examined. The year of 2016 was favourable for maize production. In 2016 the amount of precipitation in the vegetative period of corn was higher by 23.7 mm than the average. The average temperature showed a positive deviation compared to the average of several years. The foliar fertilization was applied once (8 June). The preceding crop was winter wheat. Fall tillage involved deep ploughing at 32 cm depth in the experimental year. We harvested the plots were harvested by hand. We processed the obtained data by single factor variant analysis. Due to the favourable ecological conditions the yield of the control plot was 11.37 t/ha. With the application foliar fertilization the yield ranged between 11.61-12.86 t/ha. The foliar fertilization treatments increased the maize yield compared to the control, but it was not significant. We obtained the highest yield in the Amalgerol treatment (12.86 t/ha). We got high yield in Algafix + Amalgerol (12.34 t/ha) and Algafix + Fitohorm Turbo Zn treatment (11.93 t/ha). We examined the effect of foliar fertilization on the main quality parameters (dry matter content, crude protein content, starch content) of maize. The dry matter content was 86.62 % in control treatment. Under the influence of foliar fertilizer treatments the dry matter content ranged between 86.37-87.25 %. Several treatments increased this parameter, but the change was not significant. The value of crude protein (77.95 g/kg) was the lowest in control treatment. In the treated parcels higher values (77.36-78.88 g/kg) were measured, but the difference was not significant between control and treated results. The highest value was observed in Algafix + Amalgerol treatment (78.88 g/kg). The starch content also did not change significantly under the influence of different treatments. Our scientific results proved that foliar fertilization had favourable effect on the yield and quality parameters of maize.