

STUDY OF FOLIAR FERTILIZER PRODUCTS ON THE YIELD AMOUNT AND GENERATIVE FACTORS OF MAIZE

PÉTER JAKAB¹, ISTVÁN KRISTÓ² HAJNALKA LEDÓNÉ DARÁZSI¹, MARGIT HÓDINÉ SZÉL¹

¹University of Szeged, Faculty of Agriculture, Hódmezővásárhely, Hungary

²National Agricultural Research and Innovation Centre, Department of Field Crops Research, Szeged, Hungary
jakabpeter@mgk.u-szeged.hu

We examined the effect of different foliar fertilizer products on the yield and generative factors of maize in 2017. The experiment was set in three replications, organised in random blocks on the area of Tangazdaság Ltd. in Hódmezővásárhely. The size of each plot was 7.6 m². The soil of the experiment was meadow chernozem. Soil analysis data showed that it had had good nitrogen, and very good phosphor and potassium contents. We examined three foliar fertilizer products and its combination. The applied products were Algafix, Amalgerol and Fitohorm Turbo Zn. During the experiment we applied once foliar fertilization with a dose suggested by manufacturers. The foliar fertilizers were put out with back-pack-sprayers. The year 2017 was unfavourable for maize production. In 2017 the amount of precipitation in the vegetative period of maize was lower by 43.8 mm than the average. The average temperature showed a positive deviation compared to the average of several years. The positive deviation of average temperature together with deficient precipitation had a negative effect on the development of maize, which resulted in low yields. The preceding crop was winter wheat. Fall tillage involved deep ploughing at 32 cm depth in the experimental year. Apart from foliar fertilization the parcells received the same agrotechnology. We harvested the plots by hand. We processed the obtained data by single factor variant analysis. Without foliar fertilization the yield of the examined hybrid was 6.53 t/ha. With foliar fertilization the yield ranged between 6.67-7.14 t/ha. Under the influence of foliar fertilization treatments, the yield increased (0.14-0.61 t/ha), but the increase compared to the control yield was not significant. We obtained the highest yield in the Amalgerol+Fitohorm Turbo Zn treatment (7.03 t/ha) and Algafix+Amalgerol treatment (7.14 t/ha). Out of the generative factors, the thousand grain weight changed most due to the foliar fertilization and the cob diameter and cob:grain yield ratio changed the least. The effect of foliar fertilization was moderate on the studied generative factors.

We have only one year results. Proper conclusion can be drawn only from the results of several years. To make further examinations is essential.