

THE INFLUENCE OF HUMIC FERTILIZER ON MORPHOLOGICAL AND PHYSIOLOGICAL PROPERTIES OF MAIZE CROP, IN THE CONDITIONS OF THE MOLDAVIAN PLATEAU

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Abstract

During 2010-2012 we made a study regarding the influence of a humic fertilizer (Lignohumat) on some morphological and physiological traits of maize. Lignohumat has a high content of humic acid and microelements, acting as a growth stimulant and anti-stress agent for plants. The study was carried out in the pedo-climatic conditions of the Moldavian Plateau, (Ezareni Farm, Iași, 47°5'-47°10' N lat. 27°28'-27°33' E long.), on a 3 - 4 % slope, cambic chernozem with clay-loamy texture. The soil has a medium content of N and P and good content of K, slightly acid pH and 2.5 – 3.0 % humus content. There were applied two treatments with the humic fertilizer, one on seeds with a dose of 100 g/10 l water/t seeds and one on vegetation, on the 3-4 leaves stage, using 60 g/ha / 300 l water. We determined the average number of seeds per cob, average plant height and leaf chlorophyll content. The results of the three experimental years revealed a positive influence of the humic fertilizer on the assessed traits, the differences compared to the control being statistically assured. Compared to the control, which had an average plant height of 178.5 cm, a chlorophyll content of 47.4 CCI and cobs with 508.1 seeds, the variant treated with Lignohumate recorded higher plants (with 8 cm), with better chlorophyll content (3,5 CCI higher) and with more seeds/cob (25,1 more seeds).

Key words: lignohumate, humic fertilizer, maize, morphological properties
