

# THE EFFECT OF AQUASORB ON SOME MORPHO-PHYSIOLOGICAL PARAMETERS OF THE PLANTS UNDER THE PEDOCLIMATICAL CONDITIONS FROM MOLDAVIAN PLATEAU

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## Abstract

The study aimed to outline the influence of hydrogel (Aquasorb) on some morpho-physiological parameters of the plants (number of grains per cob pods per plant, average height and chlorophyll content in leaves) for maize and soybean crops. Aquasorb is a copolymer of acrylamide and potassium acrylate that has the ability to absorb water and to release it progressively in the plant according to their needs. The experiment was bifactorial, AxB type, being located under the pedoclimatic conditions of the Moldavian Plateau from Ezareni Farm (47°5'- 47°10' N lat. 27°28'-27°33' E long.). The experimental field had a slope of 3-4 % with a clay-loamy texture of cambic chernozem soil. The soil had a medium content of N and P and good content of K, slightly acid pH and 2.5 – 3.0 % humus content. The experimented factors were the crop (maize and soybean) and hydrogel doses with three graduations (V<sub>1</sub>- control variant, not treated; V<sub>2</sub>- soil was treated with 15 kg ha<sup>-1</sup> Aquasorb; V<sub>3</sub> – soil was treated with 30 kg ha<sup>-1</sup> Aquasorb). The hydrogel was incorporated with a disk harrow at 15 cm depth, during seedbed preparation, in spring. The results outlined that the plants height registered large differences on treated variants compared with the control one especially at 30 days after their sprung up, which shows that the hydrogel provide a good start in plant vegetation and implicitly many advantages in the fight against weeding. The average content of chlorophyll in leaves was increased in hydrogel treated variants; depending on the Aquasorb dose. The values varied between 1.5 to 2.9 CCI (chlorophyll content index) for maize and between 1.2-1.9 CCI for soybean.

**Key words:** hydrogel, Aquasorb, morpho- physiological parameters, maize, soybean