

RESEARCH ON THE INFLUENCE OF GROWTH REGULATORS ON THE WATER REGIME OF SOYBEAN PLANTS IN THE CONTEXT OF CLIMATE CHANGE IN CENTRAL MOLDAVIA

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Abstract

Soybean is a globally valued and sought-after crop due to its high protein and oil content in the beans, as well as its ecological adaptability. Water is an indispensable component for plant life, and its absence is the most important abiotic factor negatively influencing the quality and quantity of agricultural yields. Analyzing the climatic conditions in Central Moldavia, there has been an observed increase in temperatures in recent years, coupled with a reduction in precipitation. This paper presents the results obtained from a bifactorial experiment aimed at determining the influence of growth regulators on the water regime of soybean plants in response to climate change, achieved through the application of different growth regulator treatments. The experiment was conducted in the experimental field of A.R.D.S. Secuieni in the year 2023. According to the determinations made, the rate of dehydration varied both according to the soybean variety and the applied treatment. In the first hour of dehydration, the percentage values of total water content ranged from 79.92 % (untreated Onix variety) to 92.79 % (Iris variety treated with Toprex), and after 24 hours, the values of total water content ranged from 25.69 % (Ziana variety treated with Moddus Evo) to 33.54 % (Iris variety treated with Toprex).

Key words: water, growth, drought, soybean