

***RESPONSE OF PEG (Polyethylene Glycol) INVIGORATION AND
SEED SOAKING TIME ON THE GROWTH AND YIELD OF SWEET
MAIZE (Zea mays saccharata Sturt)***

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ABSTRACT

The high sugar content in sweet corn is developed by a recessive mutation, which genetically regulates the process of converting sugar into starch. This condition causes corn seeds to have weak germination and vigor. Thus, the seed invigoration technique using PEG 6000 is recommended. This research examines the response of PEG 6000 concentration and seed soaking time on the growth and yield of sweet corn plants. This research was conducted at the Jember State Polytechnic from July to November 2024. A Completely Randomized Design (CRD) was used in the laboratory test while in the field test, a Randomized Block Design (RBD) with two factors was used. The first factor was the concentration of PEG 6000, namely concentrations of 5%, 10%, and 15%. The second factor was the soaking time, namely 6 hours, 9 hours, and 12 hours. The data obtained were analyzed using ANOVA and continued with the DMRT test at a 5% level. The research results showed an interaction between PEG concentration and soaking time on the parameters of germination and the number of leaves at 21 DAP. Separately, PEG concentration treatment had a significant effect on the parameters of plant height at 14 DAP and leaf number at 21 DAT. Meanwhile, the soaking time treatment had a real influence on the leaf number parameters at 42 DAP.

Keywords: *sugar corn, osmopriming, macrogol*