PRODUCTION RESEARCH OF PULUT CORN (Zea mays ceratina L.) ON HYDROGEL APPLICATIONS IN DROUGHTSTRESS CONDITIONS

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ABSTRACT

Waxy corn (*Zea mays ceratin* L.) is a food plant that can be a source of amylopectin. The low production (2 tons/hectare) of waxy corn has caused a lack of interest from farmers and consumers. Usually the cultivation of waxy corn is done during the transition from the rainy season to the dry season. The use of hydrogel is an innovation in optimizing waxy corn production in the dry season. This study aims to determine the effect of hydrogel dosage, watering intervals, and the interaction of these factors on the production of waxy corn during drought stress. This research was conducted from November 2022 to January 2023 at the Jember State Polytechnic Greenhouse Laboratory. This study used a completely randomized factorial design which consisted of two factors, namely, hydrogel dosage (0 g/polybag, 10 g/polybag, 15 g/polybag, and 20 g/polybag) and watering intervals (once 3 days, once 7 days, and once every 10 days). Data analysis used ANOVA followed by a follow-up test for LSD at 5% and 1%. The results showed that the use of hydrogel doses was significantly different to cob weight. The highest yield was shown by the hydrogel dose of 20 g/polybag (44.28 g), while the watering interval factor and the interaction of the two factors showed no significant effect.

Keywords : Waxy Corn, Drought Stress, Hydrogel.