APPLICATION OF LIQUID SILICA FERTILIZER ON THE GROWTH AND YIELD OF VARIOUS SWEET CORN GENOTYPE (*Zea mays* var. *saccharata* Strut.)

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ABSTRACT

Sweet corn (*Zea mays* var. *saccharata* Strut.) is one of the vegetable commodities belonging to the Graminae family. The application of liquid silica fertilizer has proven to be beneficial for plants. The objective of this research was to investigate the growth and yield of sweet corn with the application of different doses of liquid silica fertilizer. The research method employed was a Randomized Complete Block Design (RCBD) 2 factors and 3 replications. The first factor consisted of sweet corn genotypes CG11, 2B11, and Sweet Boy. The second factor was the dose of liquid silica fertilizer with 4 levels: 0 l/ha, 6 l/ha, 9 l/ha, and 12 l/ha. The data were analyzed using analysis of variance (ANOVA), DMRT test at 5% level and trend comparison. The research results indicated that the interaction between the 2B11 treatment and a dose of 12 l/ha of liquid silica fertilizer could increase plant height and the number of leaves at 2 weeks after planting (2 WAP), as well as the weight of cobs without husks on plant. The 2B11 significantly outperformed Sweet Boy in terms of stem diameter, the number of leaves at 4 WAP, and cob weight with husks on plant. The CG11 significantly outperformed Sweet Boy in cob weight without husks on plant. The optimal dose of liquid silica fertilizer, which is 6,52 l/ha, can increase the plant height at 2 WAP in Sweet Boy which is 42,24 cm. The anatomical appearance of CG11 stem showed a higher transport tissue compared to Sweet Boy.

Keywords: Sweet Corn, Genotype, Liquid Silica Fertilizer