# ABSTRACT

Sweet corn (*Zea mays saccharata* L.) has a distinctive sweet taste and high sugar content, making it widely used as fresh food and processed products. One effort to increase sweet corn production is the use of appropriate varieties and nitrogen fertilizer application. This study aimed to determine the effects of several sweet corn varieties and different nitrogen fertilizer rates on the growth and yield of sweet corn. The study used a two-factor Randomized Complete Block Design (RCBD). The first factor was variety, consisting of V1: Bonanza, V2: Talenta, V3: Super Sweet, and V4: Exotic Pertiwi. The second factor was nitrogen fertilizer rate, consisting of N0: 0 kg Urea/ha, N1: 175 kg Urae/ha, and N2: 350 kg Urea/ha. The variety treatment significantly affected plant height at 14, 21, 28, 35, and 42 days after planting (DAP), stem diameter at 14, 21, 28, and 35 DAP, ear weight with husk, ear weight without husk, ear length with husk, ear length without husk, ear diameter with husk, ear diameter without husk, total soluble solids, and yield of 17.34 tons/ha. Exotic Pertiwi was the best-performing variety. Nitrogen treatment significantly affected plant height at 14 DAP, number of leaves at 28 DAP, ear diameter with husk, and total soluble solids. The nitrogen rate of 350 kg Urea/ha was the best treatment. An interaction between variety and nitrogen was observed in the number of leaves at 21 DAP, stem diameter at 28 and 35 DAP, and total dissolved solids. The best treatment combination was V1N2 (Bonanza + 350 kg Urea/ha).



**Keywords**: genetic, interaction, fertilization, production.