

**The Implementation of Banana Stem Liquid Organic
Fertilizer and NPK Fertilizer on the Growth and Yield
of Waxy Corn Plants (*Zea mays var. ceratina*)**

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ABSTRACT

Corn production in Jember has been declining annually due to soil degradation caused by the excessive use of synthetic fertilizers. Reducing fertilizer dosage and supplementing with liquid organic fertilizer made from banana stems is expected to offer a potential solution. This study aims to examine the response of corn plants to different concentrations of banana stem fertilizer and NPK dosages. The research was conducted from July to December 2024 using a randomized block design (RBD). The first factor was NPK dosage, consisting of 225 kg/ha, 200 kg/ha, and 175 kg/ha. The second factor was the concentration of banana stem fertilizer, consisting of control, 200 ml/l, 250 ml/l, and 300 ml/l. Observed parameters included plant height, number of leaves, stem diameter, cob diameter, cob length, dry cob weight, Brix level, and the weight of 100 seeds. The results showed an interaction effect, particularly on stem diameter, with the best result found in the 175 kg/ha + control treatment, yielding 1.96 cm. Moreover, it was concluded that the NPK dosage of 175 kg/ha produced the best results in plant height (156.12 cm), number of leaves (10.29), and cob diameter (52.7 mm).

Keywords: *Glutinous Corn, NPK, Banana Waste Liquid Organic Fertilize*