

# **The Effect of Azolla Compost ( *Azolla pinnata* ) and NPK Fertilizer on the Growth and Production of Corn Plants ( *Zea mays L.* )**

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## **ABSTRACT**

*Indonesia's corn production is experiencing an annual decline due to land degradation caused by excessive use of chemical fertilizers. Therefore, the use of organic fertilizer in corn production is necessary. This research examines the application of Azolla fertilizer on the growth and yield of corn plants. The field experiment was conducted at Jember State Polytechnic from October 2023 to February 2024 using a Randomized Block Design with two factors and three replications. The first factor was the dose of Azolla compost consisting of 0 tons/ha (Control), 2.5 tons/ha, and 3 tons /Ha. The second factor was the dose of NPK fertilizer, namely 150 kg/ha, 225 kg/ha, and 300 kg/ha. The results showed no interaction between the dose of Azolla fertilizer and NPK fertilizer on all observed parameters. Individually, the application of 3 tons/ha of Azolla fertilizer recorded the highest numbers for plant height (242.11 cm) and stem diameter (2.06 cm). Meanwhile, at a dose of 2.5 tons/ha NPK gave the best results in cob length (18.67 cm), cob diameter (4.75 cm), and dry cob weight per sample (247.48 g). Moreover, the NPK fertilizer dose of 225 kg/ha gave the highest yield in the number of leaves (15.48 pieces). It is suspected that nitrogen from Azolla and NPK fertilizers is sufficient to optimize the growth and yield of corn plants..*

**Keywords :** *Compound fertilizer, Organic, Sustainable agriculture*