

**APPLICATION OF BANANA PEEL WASTE POC AND MAIN MACRO
NUTRIENTS IN CORN PLANTS (*Zea mays* L.)**

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ABSTRACT

Corn production in Jember Regency decreased by 12.76% from 2017 to 2020. One of the efforts to increase corn productivity is the application of organic and inorganic fertilizers in a balanced manner. This study aims to analyze banana peel waste POC and main macro nutrients on corn plant growth. This research was conducted from November 2023 to January 2024 at the farm of Jember State Polytechnic. Translated with DeepL.com (free version). This research was designed using a Factorial Randomized Group Design (RGD) with two factors and three replications. The first factor is the concentration of banana peel waste POC with 4 levels namely 0ml/l, 50ml/l, 100ml/l, and 150ml/l, while the second factor is the dose of main macro nutrients using NPK 15-15-15 fertilizer with 3 levels namely 100kg/ha, 200kg/ha, and 300kg/ha. The results showed that the interaction of banana peel waste POC with main macro nutrients at 100 ml/l and 300 kg/ha had a significant effect on the number of leaves (13.22 strands), and at 100 ml/l and 200 kg/ha had a significant effect on leaf width (8.50 cm). The application of banana peel waste POC can provide macro and micro nutrients that can complement the nutrients contained in inorganic fertilizers so as to stimulate plant vegetative growth, especially in leaves. Furthermore, the main macro nutrient dose of 200 kg/ha gave the best results on leaf length (83.68 cm), at a dose of 300 kg/ha had a significant effect on the number of leaves (12.81 strands), besides that at a dose of 300 kg/ha gave the best results on corn plant height (184.96 cm), stem diameter (2.87 cm), leaf length near the cob (78.78), leaf width near the cob (6.93 cm) and panicle length (37.10 cm) but the dose of 200 kg/ha gave results that were not significantly different. From these results, the provision of main macro nutrients has a major influence on the vegetative growth of corn plants.

Keywords: Essential nutrients, glutinous corn, liquid organic fertilizer, nutrient balance