

**APPLICATION OF LIQUID ORGANIC FERTILIZER AND VARIOUS
MANURE TO INCREASE GROWTH AND PRODUCTION
OF MAIZE (*Zea mays* L.)**

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ABSTRACT

When chemical fertilizers are used continuously without organic fertilizers added, soil fertility declines and plant productivity is lowered. One crucial element in raising plant yield is the application of organic fertilizers. The purpose of this study is to investigate how maize growth and yield are affected by solid organic fertilizer (manure) and liquid organic fertilizer (Jakaba). The study was carried out in Bondowoso Regency's Kejayan Village, Pujer District. A Factorial Randomized Block Design with two factors and three replications was used to design the experiment. The concentration of Jakaba, which came in four different levels (0 ml.l⁻¹ as control, 50 ml.l⁻¹, 100 ml.l⁻¹, and 150 ml.l⁻¹) was the first consideration. The type of manure, which included goat, chicken, and cow manure, was the second. The results showed that there was a significant interaction between cow manure and 150 ml.l⁻¹ Jakaba on the cob weight without husks (254.1 g) and dry seeds weight (167.6 g). The application of cow manure had a significant effect on plant height (205.6 cm), cob diameter (5.29 cm), cob weight (357.3 g), and 100 seed weight (45.2 g), while the application of 150 Jakaba 150 ml.l⁻¹ had a significant effect on plant height (209.3 cm) and root weight (195.5 g). The growth and productivity of maize can be directly increased by using liquid and solid organic fertilizers appropriately.

Keywords: *soil degradation, POC jakaba, organic fertilizer*