

GROWTH AND PRODUCTION RESPONSE OF MUNG BEAN (*Vigna radiata* L.) TO NITROGEN FERTILIZER AND BANANA TUBER LIQUID FERTILIZER

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ABSTRACT

Indonesian green bean production tends to decline yearly due to excessive use of synthetic fertilizers which leads to degradation of land fertility. Therefore, it is necessary to reduce dependence on synthetic fertilizers through the use of organic fertilizers by utilizing available materials such as liquid organic fertilizer made from banana tuber waste. This research aimed to examine the effect of urea fertilizer dosage and concentration of banana tuber liquid fertilizer on the growth and yield of green beans. This research was held in the research field of Politeknik Negeri Jember from October to December 2024. The study used a Randomized Block Design with two factors. The first factor was urea fertilizer dosage consisting of control, 35 grams/plot, and 45 grams/plot. The second factor was the concentration of Banana tuber liquid fertilizer which consists of the control, 70 ml/l, 80 ml/l, and 90 ml/l. The results indicated that the combination of the dose of urea fertilizer and Banana tuber liquid fertilizer only had a significant effect on stem diameter. Separately, urea dosage treatment only had a notable effect on the number of pods per plot while the concentration of Banana tuber liquid fertilizer on the number of pods per sample, dry seed weight per plot, and weight of 100 seeds per plot.

Keywords: *Banana waste, green fertilizer, mung bean*