Synergy between Vermicompost and P Fertilizer on the Growth and Production of Green Bean (*Vigna radiata* L.)

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ABSTRACT

Green beans (Vigna radiata L.) is a plant that belongs to the legume tribe and is commonly developed in the tropics. Green beans are also a commodity that is in demand by various countries. However, judging from the annual production has decreased. This decrease in production is due to no unbalanced fertilization. One of the efforts that can be done to increase the production of green beans is to combine organic fertilizers and inorganic fertilizers such as vermicompost fertilizer and P fertilizer. This study aims to determine the synergy between vermicompost fertilizer and P fertilizer on green bean crop production. T*his research was carried out in Jln. Danau Toba, Sumbersari Village, Sumbersari District, Jember regency, East Java which was carried out from October to December 2022. This study uses a random Design Group (RAK) factorial with 3 replications and 2 treatment factors, the first factor is vermicompost fertilizer with 4 treatment levels, namely K0: without vermicompost fertilizer K1: 2400 grams/plot, K2: 3600 grams/plot, K3: 4800 grams/plot with the second factor is Sp-26 fertilizer with 3 treatment levels, namely P1: 42 grams/plot, P2: 51 grams/plot, P3: 60 grams/plot. From the results of vermicompost research showed significantly different results on the parameters of plant height with an average of 24.82 cm. While P fertilizer showed significantly different results on dry seed weight persmpel with an average of 10.92 grams. The interaction of vermicompost and P fertilizer showed significantly different results in variable weight of 100 seeds. The use of a combination of vermicompost treatment 10 tons / ha and fertilizer P 242 kg / ha is the best combination to be applied to planting land.*

Keywords: green beans, P fertilizer and Vermicompost