THE EFFECT OF BAT GUANO FERTILIZER DOSES AND MORINGA LEAF LIQUID ORGANIC FERTILIZER CONCENTRATIONS ON THE GROWTH AND YIELD OF MUNG BEANS (Vigna radiata L.)

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ABSTRACT

The type and amount of fertilizer are one of the factors that determine the harvest. This study aims to determine the interaction, to determine the interaction between the administration of bat guano fertilizer and liquid organic fertilizer of moringa leaves, to determine the best dose of bat guano fertilizer on the growth and yield of mung bean plants, and to determine the best concentration of liquid organic fertilizer of moringa leaves on the growth and yield of mung bean plants. The study was conducted in Pakembinangun, Pakem District, Sleman Regency, Special Region of Yogyakarta. This study used a Randomized Complete Group Design (RAKL) with two factors and one control. The first factor is the dose of bat guano fertilizer consisting of 3 levels, namely 10, 20, and 30 g/plot. The second factor is the concentration of liquid organic fertilizer of moringa leaves consisting of 3 levels, namely 200 ml/l, 400 ml/l, and 600 ml/l. Data were analyzed using Analysis of Variance (ANOVA) at the 5% level and further tested with Duncan's Multiple Range Test (DMRT) at the 5% level and the Contras Orthogonal test. The results showed that there was an interaction between the dose of bat guano fertilizer and the concentration of liquid organic fertilizer of moringa leaves on the number of productive branches, the number of pods per clump, the weight of pods per clump, the weight of pods per plot, and the weight of seeds per clump. The dose of bat guano fertilizer of 30 grams/plot gave the best results in the parameters of plant height, number of leaves, number of productive branches, and pod weight per plot. The concentration of liquid organic fertilizer of moringa leaves of 400 ml/liter gave the best results in the parameters of the number of productive branches.

Keywords : dosage, concentration, moringa leaves, guano, green beans