THE EFFECT OF PHOSPHATE FERTILIZER DOSES ON THE GROWTH AND YIELD OF THREE VARIETIES OF LONG BEANS (*Vigna sinensis* L.)

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ABSTRACT

Increased growth and yield of long bean plants can be increased through plant cultivation efforts, including fertilization and the use of superior long bean varieties. Phosphate fertilizer is really needed by plants during the formation of pods so that they become perfect in shape. This research aims to determine the interaction between several doses of phosphate fertilizer and several varieties of long beans. This research used a Complete Randomized Block Design (RAKL) consisting of 2 factors with 3 replications. The first factor is the dose of P fertilizer with 3 dose levels, namely: P fertilizer 150 kg/ha, P fertilizer 200 kg/ha, and P fertilizer 250 kg/ha. The second factor is the use of 3 varieties of long beans, namely: Pertiwi, Parade Tavi and Fagiola IPB. The results of the observations were analyzed using analysis of variance (ANOVA) then further tests were carried out using the Duncan's Multiple Range Test (DMRT) at a test level of 5%. The results showed that there was an interaction between the dose of phosphate fertilizer and the long bean variety on the parameters of number of leaves at 3 WAP and flowering age. The combination of P2V1 treatment (phosphate fertilizer dose of 250 kg/ha and Pertiwi variety) is the best treatment combination in increasing the growth and yield of long bean plants.

Key words : Long beans, Phosphate fertilizer, Variety