

Pengaruh Pemberian Pupuk MKP dan Boron Terhadap Produksi dan Mutu Benih Kacang Panjang KP-22 (*Vigna sinensis* L.). The Effect of MKP and Boron Fertilizer Application on The Production and Quality of KP-22 Long Bean Seeds (*Vigna sinensis* L.). *Supervaisor* Maria Azizah, SP.Msi

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ABSTRACT

*This study aimed to determine the effect of MKP fertilizer Mono Kalium Phosphate (MKP) and Boron fertilizer, as well as their interaction, on the yield and seed quality of long bean variety KP-22 (*Vigna sinensis* L.). The experiment was conducted in Umbulrejo Village, Umbulsari District, Jember Regency, using a two-factorial Randomized Block Design (RBD). The first factor was MKP fertilizer dosage (0, 15, and 20 g/L), and the second factor was Boron fertilizer dosage (0, 2, and 3 g/L), resulting in nine treatment combinations, each replicated three times. The observed parameters included the number of flowers, number of pods, flower drop rate, number and weight of seeds per plant, weight per plot, seed yield per hectare, germination rate, growth uniformity, vigor index, and weight of 1000 seeds. The results showed that MKP fertilizer had a significant effect on the number of flowers, number of pods, seed weight and number per plant, and also reduced flower drop rate. The single application of Boron fertilizer had a significant effect only on reducing flower drop. The interaction between MKP and Boron significantly affected flower drop rate and growth uniformity, but had no significant effect on seed yield per hectare or physiological quality such as germination rate, vigor index, and 1000-seed weight. The 15 g/L MKP dosage produced the best results, with no significant difference compared to 20 g/L. A lower Boron dosage (<2 g/L) is recommended to prevent potential toxicity in plants.*

Keywords: long bean, MKP, Boron, seed production, and seed quality