

APPLICATION OF BIO-FERTILIZER AND PHOTOSYNTHETIC BACTERIA ON THE GROWTH AND YIELD OF BEAN

(Phaseolus vulgaris L.)

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ABSTRACT

Beans are a vegetable that is rich in nutrients, is in great demand, and is in high demand. The research aims to determine the combination of biological fertilizer dosage and PSB concentration that is appropriate for the growth and yield of bean plants. The experimental method used was a Complete Randomized Block Design (RAKL) with two factors and one control treatment. The first factor is the dosage of biological fertilizer with three levels, namely 6, 9 and 12 g/plant. The second factor is the PSB concentration with three levels, namely 10, 20, and 30ml/L. The research data was processed using ANOVA analysis of variance and continued with the Duncan Multiple Range Test at a test level of 5% and the Orthogonal Contrast further test. The research results showed that there was an interaction between biological fertilizer treatment and PSB on plant height at 28 DAP, 35 DAP, 42 DAP, number of pods per plant, pod weight per plant, pod weight per plot, and weight per hectare. The combination of B2P2, B1P3, and B3P3 treatments can provide the best results for the growth and yield of bean plants. Biofertilizer doses of 9 g/plant and 12 g/plant gave the best results on the number of flower bunches. PSB concentrations of 20 ml/L and 30 ml/L gave the best results at 21 HST plant height and number of flower bunches.

Keywords: Bean, Bio Fertilizer, Photosynthetic Bacteria.