

**GROWTH AND YIELD OF MUNG BEAN PLANTS
(*Vigna radiata* L.) WITH APPLICATION OF MYCORRHIZA AND
GUANO BIOLOGICAL FERTILIZER**

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ABSTRACT

Guano fertilizer and mycorrhizal biofertilizer can help supply and increase the absorption of P elements to increase the yield of mung bean plants. The research aims to determine the most appropriate interaction between mycorrhizal biofertilizer and guano fertilizer for the growth and yield of mung beans, determine the best dose of mycorrhizal biofertilizer and guano fertilizer for the growth and yield of mung bean plants. The research was carried out in Kauman, Suruh, Semarang Regency, Central Java in February-April 2024. The research experimental method was a field experiment using RAKL with two factors $(3 \times 3) + 1$, namely mycorrhizal biofertilizer and guano fertilizer as well as urea, KCl, SP-36. The doses of mycorrhizal biofertilizer used were 10 g/plant, 15 g/plant, and 20 g/plant, and the doses of guano fertilizer were 5 tons/ha, 10 tons/ha, and 15 tons/ha, each treatment combination was repeated 3 times. The observation results were analyzed using ANOVA then the DMRT followed by the orthogonal contrast difference test with a level of 5%. The results showed that the combination of mycorrhizal biofertilizer and guano fertilizer treatment was higher than the control in the number of pods/plant parameters. There was no interaction on all parameters between mycorrhizal biofertilizer and guano fertilizer. Mycorrhizal biofertilizer at a dose of 20 g/plant gave the best results on root nodules and S/R ratio. Guano fertilizer dosage of 15 tonnes/ha is best for S/R ratio, age at start of flowering, age at maturity of pods, number of pods/plant and weight of pods/ha.

Key words: *Vigna radiata* L., mycorrhizal biofertilizer, guano fertilizer.