

**GROWHT RESPONSE AND YIELD OF EDAMAME SOYBEAN PLANTS
(*Glycine max* L. Merrill.) USING RHIZOBIUM INOCULATION AND NPK
FERTILIZER**

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ABSTRACT

Edamame soybeans are vegetable soybeans that contain protein, isoflavones and antioxidants. The research aims to examine whether there is a real difference between the control and the combination of treatments, to examine the interaction between rhizobium inoculation and NPK fertilizer, and to determine the best dose of rhizobium inoculation and NPK fertilizer dose. The research was a field experiment using a Complete Randomized Block Design with two factors and one control. The first factor is rhizobium inoculation at 10 g/kg seeds, 15 g/kg seeds, and 20 g/kg seeds. The second factor is NPK fertilizer 150 kg/ha, 250 kg/ha, and 350 kg/ha. Control, without rhizobium inoculation treatment and NPK fertilizer. The experimental results were analyzed using 5% ANOVA, then continued with DMRT, and the Orthogonal Contrast test at 5% level. The results showed that there was an interaction between rhizobium inoculation treatment and NPK fertilizer on plant height 35 DAP, plant height 49 DAP, and the number of effective root nodules. Rhizobium inoculation at a dose of 10 g/kg seed gave good results on the wet stover weight parameter, and was not significantly different from a dose of 15 g/kg seed on the parameters of plant height at 21 DAP, number of pods per plant, pod weight per plot, and pod weight per hectare. NPK fertilizer at a dose of 150 kg/ha gives good results at plant height parameters of 21 DAP.

Keywords: Edamame soybean, Rhizobium inoculation, NPK fertilizer