

**Efforts to Increase Edamame Soybean (*Glycine max* L. Merrill)
Production by Giving Mycorrhizal Biofertilizer
and Various Doses of P Fertilizer**
Supervised by Jumiatus SP, MP

Muhammad Jibrani Lazuardi Hidayatullah
*Food Crop Production Technology Study Program
Department of Agriculture Production*

ABSTRACT

Edamame is a commodity that the international market is interested in, its productivity of 10-12 tons/ha is not sufficient. The low productivity of edamame is due to soil fertility and the availability of P elements. The Research on efforts to increase the production of edamame soybeans by giving Mycorrhiza biofertilizer and various doses of P fertilizer to edamame soybean production, carried out in Ramban Village, Jember Regency in February-April 2021. This research using Factorial Randomized Complete Block Design (RCBD) with two factors, namely the dose of mycorrhizal biological fertilizer and the dose of P fertilizer, 9 treatment combinations, and 3 replications. Mycorrhizal application consisted of 3 levels (0 gr/plot), (10gr/plot), (20 gr/plot), P fertilizer application consisted of 3 levels (10 gr/plot), (12.5 gr/plot), (15 gr/plot). Data were analyzed using ANOVA and further tested using DMRT 5%. The results showed a significantly different interaction on the weight of pods filled 1 and 2 with mycorrhizal and P fertilization. Mycorrhizal application was significantly different in plant height, number of branches, root length, number of pods per sample on branches and per main node, weight of wet pods per plots and per sample, weight of wet pods 1 and 2, significantly different on weight of wet pods filled 3. P fertilization was very significantly different in weight of wet pods per plot, per sample, weight of wet pods filled 1 and 2, significantly different on number of branches, weight of wet pods 3 and root length. The administration of Mycorrhizae 10 grams/plot and P 125 Kg/Ha fertilizer interacted and significantly affected the weight of pods filled 1 with an average of 173.78 grams and weight of pods filled 2 an average of 340.78 grams.

Keywords: edamame, mycorrhizae, SP-36