

GROWTH AND YIELD OF EDAMAME SOYBEAN (*Glycine max* L. Merrill) ON VARIOUS SOURCES AND CONCENTRATIONS OF PLANT GROWTH PROMOTING RHIZOBACTERIA

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ABSTRACT

The process of improving land productivity for edamame requires the right source and concentration of RPTT. The research aims to examine the influence of various sources and concentrations of RPTT that provide the best growth and results. The research used a two-factor Complete Randomized Block Design (RAKL), the first factor was the source of RPTT, bamboo roots, putrimalu roots, alang-alang roots and the second factor was the concentration of 10 ml/L, 20m/L, 30ml/L with 3 repetitions. The data were analyzed by Analysis of Variance (ANOVA) at the 5% level and Duncan's Multiple Range Test (DMRT) at the 5% level. The results showed that the combination of RPTT bacterial sources of alang-alang roots with a concentration of 20 ml/L provided an interaction on the number of pods per plant. The source of RPTT bacteria was the roots of Putri Malu and the roots of Alang-alang which provided good growth in the number of branches aged 14 DAP, 28 DAP and fresh weight. When plants grow tall at 14 HST and 21 HST, the source of RPTT bacteria for the roots of Putri Malu is the appropriate treatment. An RPTT concentration of 10 ml/L produces the correct pod weight per plant. A concentration of 20 ml/L gave the best results at flowering age, number of branches at 14 DAP and 28 DAP. Concentration of 30 ml/L provides good growth and yield at flowering age, number of branches at 28 DAP, number of seeds per plant, pod weight per plant and fresh weight of fruit.

Keywords : Edamame, RPTT, bamboo root, putri malu root, alang-alang root