

GROWTH AND YIELD RESPONSE OF WINGED BEAN (*Psophocarpus tetragonolobus* L.) TO THE APPLICATION PLANTING DISTANCE AND DOSES OF *MONOSODIUM GLUTAMATE* (MSG)

By: Dhyana Ubhaya Pramesi
Supervised by: Heti Herastuti and Rina Srilestari

ABSTRACT

Winged bean plants have great potential to be developed as a type of legume vegetable, however decreasing soil fertility levels can cause a decrease in growth and yield of these plants, which requires adjusting plant spacing and adding the nutrient Monosodium Glutamate (MSG). The research aims to examine the interaction between planting distance and the dosage of Monosodium Glutamate (MSG), determining the best planting distance and dosage of Monosodium Glutamate (MSG) to increase the growth and yield of winged bean plants. The research method used was field research in a divided plot design with the main plot having a planting distance of 40x30 cm, 40x50 cm and 40x75 cm and sub-plots of Monosodium Glutamate at 3 g/plant, 6 g/plant and 9 g/plant. Data were analyzed using ANOVA at 5% level and continued with the DMRT test at 5% level. The research results showed that there was an interaction between the planting distance of 40x75 cm and the MSG dose of 3 g/plant on the number of fruits initially formed, fruit weight per plant, fruit weight per plot, and fruit weight per hectare. Planting distance of 40x75 cm gave the best results on the parameters of stem diameter of winged bean plants aged 21 and 49 DAP, percentage of flowers becoming fruit, fruit length and number of fruit. Monosodium Glutamate (MSG) at a dose of 3 g/plant gave the best results on the parameters of percentage of flowers becoming fruit and number of fruit per plant.

Keywords: Winged Bean, Monosodium Glutamate, Plant Spacing