ABSTRACT

THE EFFECT OF THE COMBINATION OF NPK FERTILIZER MEASURES AND GOAT MANURE FERMENTATION ORGANIC FERTILIZER MEASURES ON THE GROWTH AND PRODUCT OF KIDNEY BEAN (*Phaseolus vulgaris* L.)

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Kidney beans are a type of vegetable from the legume group. Indonesian people's demand and need for bean products tend to increase every year. One effort to increase productivity is by effective and efficient fertilization. This research aims to determine the effect of the combination of NPK fertilizer measures and goat manure fermentation organic fertilizer measures on the growth and product of kidney bean, as well as to determine whether the combination of NPK fertilizer measures and goat manure fermentation organic fertilizer measures which has a good effect on the growth and yield of kidney bean. The experiment was carried out at the Experimental Garden of the Faculty of Agriculture, Siliwangi University from March to June 2023. The research used a Completely Randomized Block Design repeated four times with treatment A= Without NPK fertilizer and without goat manure fermentation organic fertilizer, B= NPK fertilizer 300 kg/ha, C= NPK fertilizer 150 kg/ha+goat manure fermentation organic fertilizer 10 t/ha, D= NPK fertilizer 200 kg/ha+goat manure fermentation organic fertilizer 10 t/ha, E = NPK fertilizer 150 kg/ha+goat manure fermentation organic fertilizer 15 t/ha and F= NPK fertilizer 200 kg/ha+goat manure fermentation organic fertilizer 15 t/ha. Data were analyzed using variance and followed by Duncan's Multiple Range Test with a significance level of 5%. The results of the research showed that the combination of NPK fertilizer measures and goat manure fermentation organic fertilizer measures affected the growth and product of kidney bean. Giving a combination of NPK fertilizer 200 kg/ha+goat manure fermentation organic fertilizer 15 t/ha resulted in the highest vegetative growth (plant height and the number of trifoliates leaves), while giving a combination of NPK fertilizer 150 kg/ha+goat manure fermentation organic fertilizer 10 t/ha resulted in the highest pod length, number of pods per plant, pod weight per plant and pod yield per plot to hectare conversion.

Keywords: Measures, kidney bean, NPK fertilizer, goat manure fermentation organic fertilizer.