Optimization Plant Spacing and Chicken Manure Application to Tunggak Peas Production (Vigna unguiculata)

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ABSTRACT

The development of food raw material innovations that can become new food processing innovations in meeting one of the important sectors of society's need to suppress import values that are not balanced with domestic production. Increased production of cowpea cultivation on marginal land can be diversified into food raw materials in Indonesia. By providing the right dose of chicken manure com This research aims to determine the effect of plant spacing and dose of chicken manure on tunggak peas production. This research was conducted for 5 months from October 2020 to February 2021. The entire series of activities was carried out in Sumberkalong Village, Wonosari District, Bondowoso Regency. This reasearch used a factorial randomized block design (RBD) with 2 factors, its plant spacing and chicken manure dose with 9 treatment combinations and 3 replications. Plant spacing factor consists 3 levels, it's 40cm x 10cm, 40cm x 20cm, and 40cm x 30cm. Meanwhile chicken manure dose factor consists of 3 levels, its 0 tonnes / ha, 3 tonnes / ha, and 5 tonnes / ha. The research data analyzed using ANOVA and further tested using DMRT 5%. The results showed that the dose of chicken manure had no effect on cowpea production on all parameters observed. While the spacing treatment had an effect on plant height at 35 days after planting, number of pods every sample plant, pod wet weight every sample plant, pod dry weight every sample plant, and dry seed weight every sample plant. The best treatment was at a spacing of 40cm x 20cm with a yield every plant of 24.78 grams. There was no interaction effect between plant spacing and dose of chicken manure on all observation parameters.

Keywords : Tunggak Peas, Plant Spacing, and Chicken Manure