

GROWTH AND YIELD OF ONION PLANTS (*Allium ascalonicum* L.) AT VARIOUS DOSES OF RICE HUSK BIOCHAR AND COW MANURE

Research by: Putri Ruima
Supervised by: Ellen Rosyelina Sasmita

ABSTRACT

Shallot plants experienced a decrease in production due to low soil fertility. Efforts to increase shallot productivity are through intensive land management. This research aims to determine the growth response and yield of shallot plants at various doses of rice husk biochar and cow manure fertilizer. The research method used was field research with a RCBD with two factors + 1 control. The first factor was the dosage of rice husk biochar which consists of 3 levels, namely 10 tons/ha, 20 tons/ha, and 30 tons/ha. The second factor was the dose of cow manure fertilizer which consists of 3 levels, namely 10 tons/ha, 20 tons/ha, and 30 tons/ha. Data were analyzed using the ANOVA method at the 5% level and further tested with the DMRT at the 5% level. To compare the treatment with the control, an orthogonal contrast test was carried out. The results showed that the combination treatment with rice husk biochar and cow manure fertilizer didn't significantly different from the control treatment for all parameters. Combination of rice husk biochar and cow manure fertilizer had an interaction on the number of tillers aged 28, 42 and 56 DAP, number of tubers, wet weight of tubers per hill, and sun dry weight per hill. Treatment with a rice husk biochar dose of 1,92 kg/plot gave the best results at plant height parameters of 42 and 56 DAP, and number of leaves at 56 DAP. Treatment with a dose of cow manure fertilizer of 1,92 kg/plot gave the best results in the parameters of plant height at 14 and 28 DAP, number of tillers per hill at 42 and 56 DAP, number of tubers per hill, tuber diameter, wet weight of tubers per hill, and dry weight in the sun tubers per hill.

Keywords: shallots, rice husk biochar, cow manure