Aplikasi Biochar Sekam Padi dan Pupuk Kandang Ayam terhadap Pertumbuhan dan Hasil Umbi Bibit Bawang Merah (*Allium ascalonicum* L.),

Application of Rice Husk Biochar and Chicken Manure on the Growth and Yield of Shallot Bulbs (*Allium ascalonicum* L.)
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ABSTRACT

This study aimed to determine the effects of rice husk biochar, chicken manure, and their interaction on the growth and yield of shallot seed bulbs (Allium ascalonicum L.). The research was conducted from August to October 2024 in Mangaran Village, Ajung District, Jember Regency. A factorial Randomized Complete Block Design (RCBD) was employed with two factors, namely rice husk biochar doses (10, 20, and 30 tons ha^{-1}) and chicken manure doses (15, 25, and 35 tons ha^{-1}). Data were analyzed using analysis of variance (ANOVA) followed by Duncan's Multiple Range Test (DMRT) at the 5% significance level. The results showed that rice husk biochar significantly affected the growth and yield of shallot seed bulbs, whereas chicken manure had no significant effect on all observed parameters. The application of 20 tons ha^{-1} rice husk biochar produced the best results, with plant height of 35.46 cm at 45 days after planting, 31.73 leaves per plant, and 8.22 bulbs per clump. The interaction between rice husk biochar and chicken manure significantly affected fresh bulb weight per clump, dry bulb weight per clump, and bulb yield per plot. The combination of 20 tons ha^{-1} rice husk biochar and 35 tons ha^{-1} chicken manure resulted in the highest fresh bulb weight per clump (48.47 g), dry bulb weight per clump (38.93 g), and bulb yield per plot (622.93 g). Based on the results, the application of 20 tons ha^{-1} rice husk biochar produced the best growth and yield of shallot seed bulbs. However, the application of 10 tons ha^{-1} rice husk biochar may also be recommended because it provided relatively good responses while requiring a lower amount of biochar.

Key Words: *Shallot, Biochar, Chicken Manure, Tuber Yield, Plant Growth.*