

## **Growth and Yield Response of Shallot Plants (*Allium ascalonicum* L.) to Cow Manure Fertilizer with Arbuscular Mycorrhiza (MA) in Coastal Sand Land**

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### **ABSTRACT**

Shallots are a spice vegetable with a fairly high level of consumption in Indonesia. The use of cow manure fertilizer and arbuscular mycorrhiza is expected to increase the fertility of coastal sand land and increase shallot production. The research aims to determine the best dose of cow manure fertilizer and the dose of arbuscular mycorrhiza for the growth and yield of shallot plants. Research was carried out in Cangkring Hamlet, Poncosari Village, Srandakan District, Bantul Regency, Yogyakarta Special Region. The field experiment was arranged in a Complete Randomized Block Design (CRBD) which consisted of one factor of cow dung fertilizer dose with levels of 10 tons/ha, 15 tons/ha, and 20 tons/ha, and arbuscular mycorrhiza dose with levels of 3 tons/ha, 6 tons/ha, and 9 tons/ha. The research data were analyzed using ANOVA at 5% level and followed by DMRT at 5% level. Research shows there is a real effect on the treatment of 15 tons/ha of cow dung fertilizer with 6 tons/ha of arbuscular mycorrhiza and the treatment of 20 tons/ha of cow dung fertilizer with 3 tons/ha of arbuscular mycorrhiza on the parameters of plant height, number of leaves, number of tillers, number of tubers, tuber diameter, fresh weight of tubers per plant, and weight of dried tubers per plant. All treatment doses of cow dung fertilizer with arbuscular mycorrhiza gave good results on the parameters of fresh weight of tubers per plot, weight of dried tubers per plot, and weight of tubers per hectare of shallot plants.

**Kata Kunci** : Shallot, Cow Manure Fertilizer, Arbuscular Mycorrhiza, Coastal Sand Land.