THE EFFECT APPLICATION OF FUNGI *Arbuscular Mycorrhizal* ON A MIXTURE OF AMB-0K MEDIA WITH BEACH SAND ON THE GROWTH OF TOBACCO PLANTS (*Nicotiana tabacum* L.) KASTURI VARIETY

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ABSTRACT

Tobacco plants (Nicotiana tabacum L.) are plantation commodities that have a strategic role in the national economy. However, the availability of agricultural land is decreasing with the orientation of development and land conversion. The use of marginal land such as beach sand can be used as a medium for plant cultivation, beach sand has a sandran texture, dominated by the sand fraction (91%) which has larger macro pores so that it binds, provides water and low nutrients. Efforts to overcome the characteristics of beach sand are by applying AMB-0K compost fertilizer which can be used as an alternative in beach sand processing. In addition, the addition of Arbuscular Mycorrhizal Fungi (FMA) is needed in beach sand to increase and improve the nutrient cycle of plants on beach sand through hyphae tissue. The purpose of this study is to determine the optimal dose of Arbuscular Mycorrhizal Fungi (FMA) used for the growth of tobacco plants (Nicotiana tabacum L.) of kasturi varieties on beach sand media. This research was conducted in June-December 2024 at the innovation garden of the Jember State Polytechnic. The research method used was a Non-Factorial Group Random Design (RAKNF) using 5 treatments, including (control using fertilizer according to the SOP for tobacco fertilization, P1 fertilizer according to SOP for tobacco fertilization and FMA 5g, P2 fertilizer according to SOP for tobacco fertilization and FMA 10g, P3 fertilizer according to SOP for tobacco fertilization and FMA 15g, and P4 fertilizer according to SOP for tobacco fertilization and FMA 20g). The dose of 20g in the P4 treatment gave better results in plant height of 80.50 cm, the number of leaves was 20, lower leaf area 1146,519 cm², and mycorrhizal infection was 93.33%.

Keywords: *Arbuscular Mycorrhizal Fungi, AMB-0K Compost, Kasturi Tobacco*