Penambahan Fungi Mikoriza Dalam Komposisi Media Tanam Terhadap Produksi dan Mutu Benih Tomat (*Solanum Lycopersicum*) Pada Kondisi Cekaman Kekeringan. *The Effectiveness of Adding Mycorrhizae to the Composition of Planting Media on the Production and quality of Tomato Seeds (Solanum Lycopersicum) Under Drought Stress Conditions. Elly Daru Ika Wilujeng, S.P., M.Si as chief counselor and Putri Santika S.T., M.sc as a member counselor*

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ABSTRACT

Tomatoes are a horticultural commodity with high demand in the market. The dynamics of environmental stress due to spontaneous global climate change threaten the tomato seed production process, significantly reducing seed yields. As an adaptive strategy, the application of arbuscular mycorrhizal fungi (AMF) and optimization of planting media composition are implemented to increase the efficiency of nutrient and water absorption. This study aims to evaluate the role of mycorrhizae in several planting media compositions, and watering intensity on tomato seed production under drought stress conditions. This study was conducted in the soil laboratory, the Plant laboratory, and the Seed Production Engineering laboratory, Jember State Polytechnic. The research design used was a factorial Randomized Block Design (RBD) with two factors. The first factor was the composition of the planting media, which consisted of soil without additional mycorrhizae (M1), soil with additional mycorrhizae (M2), soil with additional compost and mycorrhizae (M3), and soil with additional compost, burnt rice husks, and mycorrhizae (M4). The second factor was watering intensity, which consisted of daily (C1), every 2 days (C2), every 3 days (C3), and every 4 days (C4). Data were analyzed using ANOVA (Analysis of Variance). If the results showed significant or very significant differences, further testing was carried out using DMRT (Duncan Multiple Range Test) at an error level (α) = 5%. *The results showed that mycorrhizal application and planting medium composition had no significant effect on plant growth, but had a significant effect on tomato seed production..*

Key words: *Tomato seeds, Drought stress, Mycorrhiza, Media composition, El Niño*