

Effect of Eggshell Planting Media and Tempeh Wastewater on the Growth of Robusta Coffee Seedlings

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ABSTRACT

According to Indonesian Coffee Statistics data, Indonesia's coffee production in 2020 was 762.38 thousand tons. Coffee productivity in Indonesia can continue to increase with an important breeding process for growing coffee starting from the coffee nursery process. Eggshell media can be used as a planting medium because of its high CaCO_3 content. Tempe waste contains nitrogen (N), phosphorus (P), potassium (K) and other elements that can increase plant productivity. The research was conducted with the aim to determine the effect of eggshell planting media and tempe waste water on robusta coffee growth. The research was conducted from October to December 2023 at the seed technology laboratory nursery of Jember State Polytechnic. The research was conducted using a factorial Randomized Group Design with 2 factors. The first factor is the composition of eggshell planting media consisting of 4 levels, namely: P0 (Control), P1 (25 grams/polybag), P2 (50 grams/polybag), P3 (75 grams/polybag). The second factor is tempeh waste water which consists of 3 levels namely: N0 (Control), N1 (20 ml/polybag), N2 (40 ml/polybag), N3 (60 ml/polybag). The results of the study were the effect of eggshell planting media on robusta coffee growth significantly affected the stem diameter parameter. The effect of tempe waste water on robusta coffee growth has a significant effect on the stem diameter parameter, there is an interaction between the composition of eggshell planting media and tempe waste water, namely in the parameters of stem diameter and plant dry weight.

Keywords: Robusta Coffee, Eggshell, Tempeh Waste