THE EFFECT OF LIQUID ORGANIC FERTILIZER (POC) RICE WASHING WASTE AND ZPT EXTRACT ON THE GROWTH OF CACAO SEEDLINGS (Theobroma cacao L.*)*

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ABSTRAK

Cocoa (Theobroma cacao L.*) is an important export commodity in Indonesia that contributes significantly to the country's foreign exchange. However, cocoa production experienced a significant decline in 2017–2020, so efforts are needed to increase productivity, especially through good nurseries and proper fertilization. Liquid organic fertilizer (POC) from rice washing water contains vitamin B1 and minerals, while mung bean sprout extract contains phytohormones that function as alternative growth regulators (ZPT). This study examined the effect of POC and sprout extract on the growth of cocoa seedlings. The study was conducted at the Jember State Polytechnic in September 2024 – January 2025 using a factorial Randomized Block Design (RAK) with two factors: POC P0 0%, P1 25%, P2 50% and ZPT sprout extract R0 0%, R1 20%, R2 40%). There were 9 treatment combinations with 3 replications and 5 samples per replication. The results of this study indicate that POC significantly affects plant height and stem diameter, with the best results at a concentration of 25% (38.66 cm at 120 HST, 0.59 cm at 90 HST). ZPT sprout extract increases the number of leaves and dry weight of shoots, optimal at 20% (6.42 strands at 60 HST, 7.79 grams at 120 HST). However, there was no significant interaction between POC and ZPT on all parameters observed.*

Keywords: Cocoa nursery, rice water washing POC, sprout extract ZPT