Effect of Kascing Fertilizer and ZPT Dekamon on the Growth of Cocoa Seedlings (Theobroma cacao L) of ICCRI 08H Variety

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ABSTRACT

This study investigates the impact of applying kascing fertilizer and ZPT Dekamon on the growth of cocoa seedlings (Theobroma cacao L.) of the ICCRI 08 H variety. Despite being a key plantation crop in Indonesia, cocoa's productivity remains low due to less-than-optimal seedling practices. As an organic fertilizer, kascing is rich in nutrients and enhances plant development through microbial activity. ZPT Dekamon, a cytokinin-based plant growth regulator, promotes cell division, reduces flower drop, and stimulates new shoot formation. The experiment was conducted using a factorial randomized group design (RAK) with two variables: kascing fertilizer doses (0, 100, 200, and 300 g/polybag) and ZPT Dekamon concentrations (0, 2, 4, and 6 ml/L). Observations were made on plant height, stem diameter, number of leaves, and dry weight at 30, 60, 90, and 120 days after planting (HST). Results indicated that kascing significantly influenced stem diameter at 30 and 60 HST, but had no significant impact on other growth parameters. Conversely, ZPT Dekamon significantly affected stem diameter at 90 and 120 HST. The interaction between both treatments only showed a significant effect on stem diameter. The most effective treatment combination was 300 g of kascing fertilizer with 2 ml/L of ZPT Dekamon.

Keywords: *Cocoa, cascing fertilizer, ZPT Dekamon, ICCRI 08 H clone, seed growth*