THE EFFECT OF ADDING FILTER CAKE COMPOST AS A GROWING MEDIUM ON THE GROWTH OF LIBERICA COFFEA CUTTINGS (Coffea Liberica)

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ABSTRACT

Liberica coffee (Coffea liberica) is one of Indonesia's plantation commodities with high export potential. This study aimed to determine the effect of adding sugarcane filter cake (blotong) as a planting medium on the growth of Liberica coffee cuttings and to identify the best planting medium composition. The study employed a non-factorial Randomized Complete Block Design (RCBD) with four treatments: M1 (topsoil), M2 (topsoil + sand, 1:1), M3 (topsoil + sand + sugarcane filter cake, 1:1:1), and M4 (topsoil + sand + sugarcane filter cake, 1:1:2), with six replications for each treatment. The observed parameters included the percentage of successful cuttings, shoot height, number of nodes, number of leaf pairs, and the longest root length. The data were analyzed using Analysis of Variance (ANOVA), followed by the Least Significant Difference (LSD) test at the 5% significance level when significant differences were detected. The results showed that the planting media produced different responses to the growth of Liberica coffee cuttings. Analysis of variance indicated that the treatments had a highly significant effect on the number of nodes (F-value 6.895 > F-table at the 5% significance level), whereas no significant effect was observed on the longest root length. The LSD test revealed that treatment M1 produced the highest average number of nodes (1.72 nodes), which was significantly different from the other treatments. In addition, treatment M1 also produced the highest average number of leaf pairs (1.83 pairs).

Keywords*: sugarcane filter cake (blotong), Liberica coffee, planting medium, stem cuttings, vegetative growth.*