

**THE EFFECT OF NATURAL INGREDIENTS FILTRATE WITH  
ADDITIONAL EM4 ON GROWTH OF ROBUSTA COFFEE  
CUTTING (*Coffea canephora Pierre ex A. Froehner*)  
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**ABSTRACT**

This research was conducted with the aim of knowing how the effect of natural ingredients filtrate with additional EM4 on growth of robusta coffee cutting (*Coffea canephora Pierre ex A. Froehner*). This research was conducted from Maret to Mei 2022 at the di at the PDP Sumber Wadung, Harjomulyo village, the district of Silo. This research used used a Non-Factorial Randomized with 9 treatments and 3 replications. The types of treatment include A1 : 10 ml EM4 (control), A2 : 2,5%, A3 : 5%, A4 : 7,5%, A5 : 10%, A6 : 12,5 %, A7 : 15%, A8 : 17,5%, and A9 : 20%. The observation parameters were shoot length (cm), leaf length (cm), root length (cm), and number of roots. The data from the research were analyzed by using ANOVA level 5% and if they showed a significant difference, it was continued with the further test of LSD (Least Significant Difference). This research gave significantly different results on the parameters of shoot length, and gave significantly different results were obtained on the parameters of the number of roots. The parameters of leaf length and root length, non-significant results were obtained. The concentration of natural ingredients filtrate that gives the best growth response on the parameter of observation of shoot length is at a concentration of A7 (15%).

**Keywords :** *Robusta coffee cutting, Natural plant growth regulators, EM4.*