

EFFECT OF VARIOUS TYPES OF PLANTING MEDIA AND AMINO ACIDS ON THE GROWTH OF ARABIC COFFEE BOTTOMS (*Coffea arabika* L.)

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ABSTRACT

Planting media is one of the important factors in coffee cultivation, in addition to planting media, amino acids can be given to stimulate the growth of coffee seedlings. This study aims to determine the effect of using various types of planting media, amino acids, and the interaction between the two on the growth of Arabica coffee seedlings (*Coffea arabica* L.). This research was conducted from July 2024 to January 2025 in the field laboratory, Jember State Polytechnic. Factorial Randomized Block Design (RAK) is the research methodology used in this study, with planting media as the first factor and amino acids as the second factor. The planting media used in this study was a mixture of media consisting of P1: topsoil, sand, sugarcane blotong fertilizer (2:1:1); P2: topsoil, sand, coffee skin compost fertilizer (2:1:1); P3: topsoil, sand, goat manure (2:1:1). The amino acids used consisted of U0: 0%; U1: 3%; U2: 4% and U3: 5%. This study had a total of 180 experimental units. Observation data if there are any significant differences, then continued with the average difference test according to the Duncan method at 1% and 5% levels. Observation variables include: number of leaves (pairs), plant height (cm), stem diameter (mm), root volume (ml), plant wet weight (g), and plant dry weight (g). The results of the research showed that the planting media treatment had a significant effect on the parameters of plant height, plant wet weight and plant dry weight with the planting media of soil, sand and goat manure having the best treatment. Amino acid treatment had a significant effect on leaf number parameters. The recommended amino acid treatment was found in treatment A1 with a concentration of 2%. There was no interaction between the treatments of various planting media and amino acids on all observation parameters.

Keywords: Amino acids, Arabica coffee, growing media