

**THE EFFECT OF VARIOUS COMBINATIONS OF GROWING MEDIA
AND AMINO ACIDS ON THE GRPWTH OF ARABICA COFFEE (*Coffea
arabica* L.) SEEDLINGS
IN THE TRANSITION PHASE**

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ABSTRACK

Growing media and the application of biostimulants such as amino acids are important factors in supporting the growth of coffee seedlings during the transition phase, which is a critical stage after seedlings are removed from the nursery and transferred to larger planting media. This study aimed to determine the effect of various combinations of growing media and amino acid concentrations on the growth of Arabica coffee (*Coffea arabica* L.) seedlings during the transition phase. The research was conducted at the Field Laboratory of Jember State Polytechnic from January to April 2025 using a two-factor factorial Randomized Block Design (RBD). The first factor was growing media consisting of soil + sand + filter cake (2:1:1), soil + sand + coffee husk compost (2:1:1), and soil + sand + goat manure (2:1:1). The second factor was amino acid concentration, namely 0%, 5%, 10%, and 15%. Each treatment was replicated three times, resulting in 36 experimental units with a total of 108 plants. The observed parameters included number of leaves, plant height, stem diameter, root volume, fresh weight, and dry weight. The data were analyzed using the F-test and followed by Duncan's Multiple Range Test (DMRT) at a 5% significance level when significant differences were found. The results showed that the combinations of growing media had no significant effect on all observed parameters. Amino acid treatment had a significant effect on plant height and number of leaves, with the best concentration at 15%. The interaction between growing media and amino acids significantly affected only stem diameter, with the best combination found in soil + sand + coffee husk compost with 10% amino acids. The application of 15% amino acids is recommended to improve the growth of Arabica coffee seedlings during the transition phase.

Keywords: Growing media, amino acids, Arabica coffee, transition phase.