

**EFFECT OF PLANTING MEDIA AND COCONUT WATER
CONCENTRATION ON THE GROWTH OF ROBUSTA COFFEE
SEEDLING (*Coffea canephora* L.)**

Supervisor: Eva Rosdiana, S.P., M.P.

Bagas Pramana Mei Saputra
bagaspramana41@gmail.com
Coffee Plantation Management Study Program
Department of Agricultural Production

ABSTRACT

Robusta coffee is one of the commodities extensively cultivated by coffee farmers. In 2021, robusta coffee production in Jember amounted to 11,827 tons. One method to enhance coffee production is by improving seedling cultivation practices. Coffee cultivation must consider factors such as the choice of planting media. The use of suitable planting media can result in superior seed or seedling quality, along with the use of coconut water plant growth regulators (ZPT) to further enhance coffee seedling quality. The research was conducted from February to April 2024 at the innovation garden of Jember State Polytechnic. The study employed a Randomized Complete Block Design (RCBD). The first factor was planting media with 4 treatment levels: P1 = topsoil: rice husk charcoal: cow manure (1:1:1), P2 = topsoil: rice husk charcoal: manure fertilizer (1:1:2), P3 = topsoil: rice husk charcoal: manure fertilizer (1:2:1), and P4 = topsoil: rice husk charcoal: manure fertilizer (2:1:1). The second factor was coconut water concentration with 3 treatment levels: C0 (control), C1 (20% concentration of coconut water), and C2 (40% concentration of coconut water). Parameters observed in the study included seedling height, stem diameter, leaf count, wet weight of seedlings, root length, and dry weight of seedlings. The data from the study were analyzed using ANOVA with a post-hoc BNJ test at a 5% significance level. Coconut water concentration significantly differed across all parameters. Treatment C2 exhibited significantly different average plant height (11.35 cm), stem diameter (2.22 cm), 8 leaves, wet weight of seedlings (4.21 grams), root length (17.51 cm), and dry weight of seedlings (1.41 grams).

Keywords: *Robusta, Coconut Water, Rice Husk Charcoal, Planting Media*