

THE EFFECT OF UREA FERTILIZER ON THE GROWTH OF ROBUSTA COFFEE SEEDLINGS (Coffea canephora Pierre ex A.Froehner) ON THE COMPOSITION OF PLANT MEDIA

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ABSTRACT

The increase in the area of robusta coffee in smallholder plantations has increased but has not been followed by an increase in production and productivity. The percentage of damaged plants in 2020 was 9.92%, in 2021 it was 10.0%, in 2022 it was 9.8% and in 2023 it was 9.4%. In order for old plants or damaged plants to decline, it is necessary to carry out rejuvenation. High-quality seedlings that are consistently available in sufficient quantities are essential for coffee regeneration. Good nurseries will produce high-quality seedlings. The procedure of selecting high-quality seedlings, planting media, and applying fertilizer starts from the production of healthy seedlings. The purpose of this study was to determine the effect of planting media composition on the growth of robusta coffee seedlings (*Coffea canephora* Pierre ex A. Froehner) and the effect of urea fertilizer application. This research was carried out from February to May 2024 at the Jember State Polytechnic innovation garden. In this study, a Group Random Design with 2 factors was used and repeated 3 times. The first factor is the composition of the soil:sand:fertilizer (M) planting medium of the cage which consists of 3 levels of treatment, namely (1:1:1) (M1), (2:1:1) (M2), (1:2:1) (M3). The second factor is the application of urea fertilizer (N) which consists of 4 levels, including 0.0 grams of urea/polybag (N0), 0.5 grams of urea/polybag (N1), 1.0 gram of urea/polybag (N2) and 1.5 grams of urea/polybag (N3). The data from the study was analyzed using ANOVA with a 5% BNT follow-up test. The results showed that the composition of the planting medium and the application of urea fertilizer had an interaction in the seedling height parameter at 4 MST and on the leaf count parameter at 8 MST and at the root length parameter at 12 MST.

Keywords: robusta coffee, nursery, planting media, urea fertilizer