

Pengaruh Konsentrasi Giberellin (GA₃) dan Lama Perendaman Terhadap Pertumbuhan Bibit Kopi Arabika (*Coffea arabica L.*), *The Effect of Giberellin Concentration (GA₃) and Duration Soaking of Growth Arabica Coffee Seeds (Coffea arabica L.)*. Advisor by Ir. Sri Rahayu, MP.

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ABSTRACT

The need for Arabica coffee seeds is increasing but the procurement of Arabica coffee seeds is constrained by the time required in the process of germination of Arabica coffee seeds which is quite long so that it requires efforts to increase the procurement of Arabica coffee seeds. The purpose of this study was to determine the effect of the hormone Giberellin (GA₃) and the length of soaking on the growth of Arabica coffee seedlings. The research was conducted from September to December 2023 in Langsatan Hamlet, Sukamamur Village, Ajung District, Jember Regency. The design used was a Randomized Group Design (RAK) with 2 factors and 3 replications. The first factor is the concentration of Giberellin (GA₃) consisting of 4 levels, namely G1 (75 ppm), G2 (150 ppm), G3 (225 ppm) and G4 (300 ppm). The second factor is the length of immersion consisting of 4 levels, namely W1 (0.5 hours), W2 (1 hour), W3 (1.5 hours), and W4 (2 hours). Data were analyzed using ANOVA test and continued with DMRT (Duncan Multiple Range Test) test at 1% level. The results showed that the treatment of Giberellin (GA₃) concentration gave a very significant effect at level G4 (300 ppm) on the parameters of the first sprout appearance of 28.83 HST, leaf area parameter of 16.92 cm², significantly influenced the parameter of cotyledon rupture of 37.33 HST and level G3 (225 ppm) had a very significant effect on the parameter of wet stover weight of 1.54 grams. The treatment of soaking time showed a very significant effect at the W4 level (2 hours) on the parameters of the first root emergence at 19.75 HST, and leaf area at 16.92 cm². The interaction between the two treatments G2W4 (150 ppm and 2 hours) showed a very significant effect on the parameters of the first root emergence of 16.67 HST, and dry weight of 0.38 grams. The G4W3 treatment (300 ppm and 1.5 hours) showed a very significant effect on the parameter when the first sprouts appeared at 24.67 HST. The treatment of G3W1 (225 ppm and 0.5 hour) showed a significant effect on the wet stalk weight of 1.78 grams.

Key words: *Arabica Coffee, Giberellin (GA₃), Soaking Time*