Aplikasi Suhu Perendaman Terhadap Perkecambahan dan Pertumbuhan Bibit Tiga Varietas Kopi Arabika (*Coffea arabica* L). ***Application of Soaking Temperature on the germination and seedling growth of three varie ties of Arabica Seed* (*Coffea arabica* L). Supervisor:** Dr. Ir. Suharjono, MP. and Ari Wibowo, SP., M.Sc

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ABSTRACT

Arabica coffee seeds have a period of physical dormancy due to the impermeability of the seed coat to water and gases. This study aims to determine the effect of the best soaking temperature to break the dormancy period of three varieties of Arabica coffee seeds on germination and seedling growth. This research was conducted at the Green House Indonesia Coffe and Cocoa Research Institute in 02 November 2020 – 02 February 2021. The experimental design used was a Factorial Randomized Complete Block Design (RCBD) with two factors. Each factor consists of 4 and 3 levels which are repeated 3 times. The first factor is the temperature of the immersion water which consists of a temperature of 25^oC for three nights (S0), a temperature of 50^oC for 30 minutes (S1), a temperature of 75^oC for 30 minutes (S2), a temperature of 90^oC for 30 minutes. (S3). The second factor is Arabica coffee varieties consisting of (V1) Gayo 1, (V2) Sigararutang, (V3) Kartika 1. The data were analyzed using the F test (ANOVA) and further test (DMRT) with an error rate of 5%. The results showed that the immersion water temperature of 25^oC for 3 nights (S0) was very significantly different for all observation parameters. The treatment of the Sigarar utang Arabica coffee variety (V2) gave a significant effect on the observation parameters of simultaneous growth (48.67 %) the number of leaves (2.90 strands), and gave a very significant effect on the parameters of seed germination (49.67 %). The treatment of the Arabica Gayo 1 (V1) coffee seed variety had a significant effect on the observation parameters for seed height (6.26cm). The interaction temperature of 50^oC for 30 minutes and the Arabica Sigararutang coffee seed variety (S1V2) gave a very significant effect on the observed parameters of germination (98.67 %) and simultaneously growing (97.33%).

Key words: *Arabica Coffee, Dormancy breaking, Soaking Temperature*