Pengaruh Konsentrasi dan Lama Perendaman KNO_3 Terhadap Viabilitas dan Vigor Benih Kopi Arabika (*Coffea arabica* L.), *(Effect of Concentration and Soaking Time KNO_3 on Viability and Vigor of Arabica Coffee Seeds (Coffea arabica L.)* Supervised by : Ir. M. Bintoro, MP.

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ABSTRACT

The Arabica Coffee (Coffea arabica L.) is one of export commodiators that can seduce the economy of the people in Indonesia. Reenforcement of the coffee is one of the seed that is experiencing dormant and impermeable toward water. The one way to overcome this problem is by applying potassium nitrate (KNO_3) application. The purpose of this research is to find out the influence of concentration, long time soaked, the interaction of concentration and long time soaked to viability and vigor of the Arabica coffee seeds. This research started on August 2019 until September 2019 in the green house State Polytechnic of Jember, Jember District, East Java. The experimental design used was a Factorial Complete Randomized Design (CRD) with 2 factors and 3 replications. The first factor is concentration (K) consisting of control (K_0), 0.25% (K_1), 0.50% (K_2), and 0.75% (K_3). The second factor is the duration of soaked (L) consisting of 12 hours (L_1), 24 hours (L_2) and 36 hours (L_3). The data will be analyzed using Analysis of Variance (ANOVA) and further tested with the Least Significant Difference (LSD) level of 5%. The results showed the KNO_3 soaking time treatment had a very significant effect on seed water uptake with the highest yield being Arabica coffee seeds soaked for 36 hours (L_3), that is 0.99 grams. The KNO_3 concentration treatment had a very significant effect on germination, growth speed and simultaneously grows with the highest yields soaked Arabica coffee seeds with a concentration of 0.50% (K_2) with each yield of 90.00%, 4.72% / etmal and 38.89%. The interaction between concentration treatment and the duration of KNO_3 soaked did not effect all parameters.

Key words : *Arabica Coffee, Concentration, Long time soaked of KNO_3*