

ABSTRACT

This research aims to determine the effect of several coffee varieties and soaking duration in onion extract solution on the germination of coffee seeds (*Coffea* sp). Physical dormancy caused by the hard seed coat is the main obstacle in the coffee germination process. Coffee seeds with hard seed coats that are difficult to germinate require treatment with natural growth regulator used is onion extract, to increase the success of seed growth. This study was conducted in reuleut timu village, north Aceh regency, from 3 months, from April 23 to June 21, 2025. The study used a Randomized Blok Design (RBW) with two factors: the first factor is coffee variety (Arabica, Robusta, Tim-tim), and the second factor is the soaking duration (0 hours, 3 hours, 6 hours, and 9 hours), with three replications. The observed parameters in this study are maximum growth potential, germination capacity, vigor index, growth uniformity, and growth rate. The results of the study showed that the robusta variety and 3-hours soaking duration provided the best results for the observed parameter of maximum growth potential. There was a combination between the two treatments for the parameters of germination capacity, vigor index, growth uniformity, and growth rate. These findings indicate that the application of onion extract soaking, along with varying soaking durations, has a significant impact on the germination of coffee seeds across different varieties.

Keyword: Coffee varieties, germination, shallots,