

ABSTRACT

Tamarind is a multipurpose plant. This study aimed to determine the effect of concentration and duration of immersion in sulfuric acid (H₂SO₄) solution on the increase in viability and vigor of tamarind seeds (*Tamarindus indica* L.). This research was conducted at the Agroecotechnology Laboratory, Faculty of Agriculture, Malikussaleh University, Muara Batu District, North Aceh Regency, from March to April 2025. This study used a Randomized Block Design (RBD) consisted of two factors with three replicates. The first factor was concentration, which consists of 0%, 5%, 10%, and 15%. The second factor is the duration of immersion, which consists of 10 minutes, 20 minutes, and 30 minutes. The results showed that sulfuric acid concentration treatment had a significant effect on seed germination uniformity and a noticeable effect on seed germination speed and normal seedling dry weight. Immersion in sulfuric acid solution has a very significant effect on the dry weight of normal sprouts. There was no interaction between the two treatments on any of the observed variables.

Keywords: dormancy, seedlings, imbibition, and scarification