

ABSTRACT

Annona muricata L. is a type of nutritious fruit plant and a traditional medicinal ingredient that has multiple benefits. The many benefits make this type of soursop plant more widely cultivated. However, the generative propagation of *Annona muricata* L. resulted in low germination and took a long time to germinate due to physical dormancy caused by the hard and slippery seed coat. The hard seed coat layer causes inhibition of water and gas absorption so that seed germination is difficult to occur. To break the dormancy period in soursop seeds, it is necessary to treat before planting one of them using chemical treatment. This study aims to determine the effect of GA₃ immersion time and H₂SO₄ concentration on soursop seedling growth. The study was conducted in Krueng Geukueh from April 20, 2021 to July 21, 2021. The study used a factorial randomized block design (RBD) with 3 replications. The first factor was the concentration of H₂SO₄ consisting of concentrations of 0% (K0), 65% (K1), 75% (K2), and 85% (K3). The second factor is the immersion time consisting of 0 hours (L0), 12 hours (L2), and 24 hours (L3). Parameters observed were maximum growth potential (%), germination capacity (%), growth speed (%), growth synchronously (%), and vigor index (%), seedling height, number of leaves, wet weight, dry weight. The best results at the concentration of H₂SO₄ (75%) with gibberellin immersion time (24 hours).

Keywords : *Annona muricata* L., GA₃, H₂SO₄, Immersion Time