

THE EFFECT OF VARIOUS METHODS OF DORMANCY BREAKING TO IMPROVE GROWTH OF SOURSOP SEEDS (*Annona muricata* L.)

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ABSTRACT

Soursop has a seed dormancy period so efforts to break seed dormancy are carried out using various dormancy breaking treatments and gibberellin. This research aims to determine the effect of mechanical scarification, chemical scarification and gibberellin solutions on growth of soursop seedlings. This research method used a Completely Randomized Design single factor with 3 replications consisting of control (without gibberellin treatment); one-sided sanding; one-sided sanding + gibberellin 200 ppm; room temperature water; room temperature water + gibberellin 200 ppm; KNO₃ concentration 0.4%; KNO₃ concentration 0.4% + gibberellin 200 ppm; H₂SO₄ concentration 10%; H₂SO₄ concentration 10% + gibberellin 200 ppm. Data were analyzed using analysis of variance 5% and followed by an orthogonal contrast. The results of the research showed that scarification treatment with gibberellin had a real effect and was better than the control in improving growth of soursop seedlings. The 10% H₂SO₄ with 200 ppm gibberellin treatment was significantly better on the parameters of plant height 20 and 30 days after planting, number of leaves, plant fresh weight, and plant dry weight.

Keywords: soursop, dormancy, scarification, gibberellin