

## ABSTRACT

### THE EFFECT OF SCARIFICATION COMBINED WITH SEED IMMERSION IN H<sub>2</sub>SO<sub>4</sub>, HCl AND GA<sub>3</sub> SOLUTION TO SUGAR PALM (*Arenga Pinnata* Merr.) VIABILITY

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Sugar palm (*Arenga Pinnata* Merr.) is one of the commodities with a high economic prospects. But the development of sugar palm is hampered by seed dormancy. The research was aimed to determine the effect of scarification combined with H<sub>2</sub>SO<sub>4</sub>, HCl and GA<sub>3</sub> to the viability of palm seed, in order to increase the productivity of sugar palm plants. This research used a Simple Randomized Block Design (RBD) with 10 treatments: A = scarification; B = scarification + HCl 0.2%; C = scarification + HCl 0.3%; D = scarification + HCl 0.4%; E = scarification + H<sub>2</sub>SO<sub>4</sub> 0.5%; F = scarification + H<sub>2</sub>SO<sub>4</sub> 1%; G = scarification + H<sub>2</sub>SO<sub>4</sub> 1.5%; H = scarification + GA<sub>3</sub> 250 ppm; I = scarification + GA<sub>3</sub> 300 ppm; and J = scarification + GA<sub>3</sub> 350 ppm, and repeated 3 times. The parameters observed were percentage of germination, vigor index, germination time, embryo axis length and sprout dry weight. The results showed that the best of viability of sugar palm seeds were found in sugar palm seeds treated with scarification+300 ppm GA<sub>3</sub>, with germination percentage of 91,11%.

Key words: Dormancy, viability, sugar palm