

# **The Use of Hot Water and H<sub>2</sub>SO<sub>4</sub> on Breaking Dormancy, Germination and Growth of Sea Sengon Seeds (*Paraserianthes falcataria* L)**

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## **ABSTRACT**

Sengon has a seed coat that is difficult to penetrate by water because it is impermeable so that sengon seeds experience dormancy. The purpose of the study was to obtain the best treatment in breaking seed dormancy on the germination and growth of sengon laut seedlings. The study used a completely randomised design (CRD) consisting of 9 treatments consisting of kontrol, soaking in hot water 60° C 24 hours, hot water 60° C 48 hours, hot water 80° C 24 hours, hot water 80° C 48 hours, H<sub>2</sub>SO<sub>4</sub> 60% for 25 minutes, H<sub>2</sub>SO<sub>4</sub> 60% for 15 minutes, H<sub>2</sub>SO<sub>4</sub> 80% for 25 minutes, H<sub>2</sub>SO<sub>4</sub> 80% for 15 minutes with three replications, so there were 27 experimental units. The results showed that the scarification treatment had a significant effect compared to the kontrol on all germination parameters. Soaking in hot water at 60°C for 24 hours affected the vigour index, germination and maximum growth potential of sengon laut seedlings. Soaking in sulfuric acid (H<sub>2</sub>SO<sub>4</sub>) at 80% concentration for 25 minutes and 15 minutes was equally good in affecting the vigour index, germination rate and maximum growth potential of sengon laut seedlings. Effective treatment in breaking dormancy with 60° C hot water immersion for 24 hours or Sulfuric Acid (H<sub>2</sub>SO<sub>4</sub>) with 80% concentration for 15 minutes.

**Key words:** Hot water, H<sub>2</sub>SO<sub>4</sub>, Dormancy, Sengon sea