

Effect of dormancy breaking treatments on the seed germination of *Pterocarpus marsupium* Roxb. (Gammalu)

The pretreatment to promote germination is important for the seeds having hard fruit cover and seed coats. Therefore an experiment was conducted to increase the seed germination of *Pterocarpus marsupium* Roxb., a forest tree having important medicinal and timber values. The location of the experiment was 995 m height from mean sea level and the mean temperature during the experimental period was 26 0C.

The fruit of *Pterocarpus marsupium* has a hard fruit cover and glistening seed coat indicating dormancy characteristics. The experiment was designed to activate the seed germination of *Pterocarpus marsupium* by breaking the dormancy. The treatments used were high temperature treatment with three levels; 30 0C, 35 0C and 40 0C for 02 h duration, three levels of low

temperature treatment at -10°C for 01 day, 02 days and 03 days, three levels of acid treatment with 0.1N HNO_3 for 12 h, 24 h and 48 h and soaking in water treatment in three levels for 12 h, 24 hours and 48 h. The control with no treatment was included in the experiment. The experimental design was Completely Randomized Design (CRD).

All the treatments showed higher percentage of germination than that of control. Soaking in water highly facilitated the seed germination of *Pterocarpus marsupium*. A significantly higher germination showed by soaking in water treatment for 24 h. The result of the experiment proved that soaking in water for 24 h is the best seed dormancy breaking treatment for *Pterocarpus marsupium*.