
**STUDIES ON DORMANCY AND GERMINATION DYNAMICS OF
Macaranga peltata(KANDA),
AN EARLY SUCCESSIONAL SPECIES**

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Macaranga peltata is one of the most widely occurring early successional woody species, specially in low country wet zone. Although *Macaranga* spreads profusely by seeds, the seed biology and germination behavior has not been studied. According to the preliminary studies, it was revealed that, the germinability of freshly isolated seeds is very low. Therefore this work was undertaken to understand the germination behavior and measures to enhance seed germination of *Macaranga*. The study was conducted during May-July, 2000, at the faculty of Agriculture, University of Ruhuna, Mapalana, kamburupitiya, Sri Lanka.

Three treatments used, i.e. mechanical scarification using sand papers (T₁), Chemical scarification using H₂SO₄ acid (T₂) and hormone treatment using GA (T₃), with the control. Fully ripened seeds were harvested and thoroughly washed to remove the peel and air-dried for one day. Dried seeds were treated as indicated above and placed in petri dishes containing sand media and allowed to germinate. Three replications were used for each treatment and percentage of germination was recorded at 7,14,21 and 28 days after planting.

Germination of *Macaranga* seeds started after 14-21 days in control by after seven days in treated seeds. Mechanical and chemical scarifications were not effecting in increasing the percentage of germination significantly. But the gibberelic acid treatment has made a tremendous important in the percentage of germination and at the same time resulted in significant reduction it time taken for germination. Although scarification treatments may have improved permeability of seed coat, it has not contributed to the germinability of seeds, the significant impact made by GA treatment both in increasing and accelerating the germination probably reveals that there exists a dormancy in *Macaranga* seeds which is of physiological or metabolic in nature GA treatment of more effectively at higher concentration: (20mm) was capable of breaking the dormancy and thus enhanced germination.

Keywords: *Macaranga peltata*, Seed germination, dormancy, gibberalic acid