



Effect of Pre Seed Treatment and Growing Media on Germination Parameters of *Gmelina arborea* Roxb.

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Abstract: The comparative performance of pre-sowing treatments and growing media to improve the seed germination of *Gmelina arborea* Roxb. by soaking seeds in water and gibberellic acid (GA₃) solutions (100 and 200 ppm) for varying periods (12 and 36 hours) followed by sowing in different media (standard nursery media [(soil : sand : vermicompost :: 2:1:1), coco peat and white sand) for a period of 30 days on germination parameters. The germination was initiated early in P₄ (seeds treated with GA₃ solution @ 200 ppm) from 6.5 day, reached peak at 12.17 days and ceased within 25.75 days. Further, maximum germination percent (73.13%), mean daily germination (2.85), peak value of germination (0.979), germination value (2.8) and high germination energy (35.83) was in pre-treatment P₄. Similarly, germination was initiated early in standard nursery. The higher values of germination percent mean daily germination, peak value, germination value, germination energy and germination rate index and minimum mean germination time (13.91 days) was with standard nursery media. The estimates of the seed germination indicated higher values of all observed germination parameters by recorded seeds with GA₃ solutions and then sowing treated seeds in standard nursery media for production of quality seedlings.

Keywords: *Gmelina arborea*, Germination, Pre-sowing treatments, Growing media, GA₃
