

Clonal Evaluation of *Casuarian Junghuhniana* Miq. for Growth, Stem Straightness and Wood Traits

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Abstract

A multilocation clonal testing conducted with of 10 clones of *C. Junghuhniana*, two clones of *C. equisetifolia*, one seedlot each species and a widely planted natural hybrid clone showed substantial variation for growth, stem straightness, wood density and pulp yield. The trials were conducted in three locations in Tamil Nadu State under contrasting soil and cultural conditions between 2009 and 2013. The design adopted was Randomized Complete Block Design with 4 to 5 ramets of each clone planted in 10 replications. Survival, growth (height and diameter) and stem straightness were assessed up to the age of four years. Clonal and seedling accessions differed significantly ($p < 0.001$) for all these characters. Two clones CJ9 and CJ12 were found to be superior to all other entries. These two clones showed a basic wood density of around 0.73 g cm^3 with each tree weighing around 113 kg. Screened pulp yield of CJ9 was 51.7% with a low kappa number of 17.1 compared to 50.6% with a high kappa number of 25 for the check clone. The clonal repeatability values ranged from 0.321 to 0.475 for height, 0.347 to 0.449 for diameter, and 0.345–0.525 for volume index. The two outstanding clones CJ 9 and CJ 12 are recommended for commercial planting.