

Growing tropical tree planting stock in root trainers: Cell volume, seedling density and growing media

Sanjay Singh¹, N. P. S. Nain² and S. P. Tripathi²

¹*Botany, Silviculture and NWFP Division, Institute of Forest Productivity, Aranyodaya, NH-23, Lalgutwa, Ranchi- 835303, India;*

²*Tropical Forest Research Institute, P. O. - RFRC, Jabalpur- 482021*

ABSTRACT

The influence of root trainer cell volume and seedling density, and composition of growing media was examined in relation to morphological, biomass and seedling quality parameters of four-month old planting stock of three tropical broadleaved tree species viz., *Acacia catechu*, *Azadiractha indica* and *Pongamia pinnata*. The study revealed that a cell volume of 90 cm³ was not sufficient for proper seedling growth of *A. catechu* and *A. indica*. However, clear-cut superiority of 300 cm³ cell volume was evident only in the case of *A. indica*. It appeared that root trainer pots of 150 cm³ cell volume were suitable for growth of planting stock of *A. catechu* and *P. pinnata* and 300 cm³ cell volume for *A. indica*. Significant differences in the growth of planting stocks were observed among growing media treatments. Overall the tree species exhibited fast growth and high biomass as well as favorable seeding quality in growing media containing 80% compost with either sand (*A. catechu* and *A. indica*) or soil (*P. pinnata*) than the other treatments having 50%, 60% or 100% compost.

Keywords: biomass, height and root collar diameter, hiko pots, seedling quality