

Title: Standardization of containerized nursery practices for selected forest tree species.

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Start and Completion dates: 1999 to 2004

Objectives:

Standardization of the optimum potting media, container type and sizes, fertilizer levels - organic and inorganic - for selected forest tree species under root trainer nursery conditions

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SUMMARY

Use of containers for raising nursery stock is common in India. Use of containerized seedlings was preferred to afforest degraded lands, mostly lacking in site conditions prerequisite for good survival of bare-root seedlings. Recently, research organizations, forest departments & corporations and private wood based industries have initiated experimentation and use of recently developed containers, mainly root trainers for tree seedling production. There was a need to standardize the container type and size and kind of potting media to be used for selected tree species commonly raised in the nurseries of South India and hence a project was carried out to fulfill the above-mentioned objectives. Different potting media formulations with different components in various ratios and amendments were tried out using different types of containers for *Acacia nilotica*, *Acacia leucophloea*, *Acacia auriculiformis*, *Albizia amara*, *Azadirachta indica*, *Pongamia pinnata*, *Dalbergia latifolia* and *Eucalyptus camaldulensis*. The recommendations of the nursery trials are given below

- Potting media sand: spent mushroom beds in the ratio of 1:4 with amendments followed by sand: spent mushroom beds in the ratio of 1:4 without any amendments are best suited for raising *Acacia nilotica* seedlings as they were found to have significant influence on most of the basic and derived quality parameters of *Acacia nilotica* seedlings.
- The best quality *Acacia leucophloea* seedlings can be produced using potting media containing sand: spent mushroom beds in the ratio of 1:4 with amendments followed by potting media containing sand: spent mushroom beds in the ratio of 1:4 without any amendments
- The potting media containing sand: spent mushroom beds in the ratio of 1:4 without any amendments followed by potting media (T10) sand: spent mushroom beds in the ratio of 1:4 with amendments are the best suited potting media for raising *Acacia auriculiformis* seedlings
- The potting media containing sand: spent mushroom beds in the ratio of 1:4 with amendments followed by (T3) red soil: weed compost: husk: coal granules in the ratio of

4:10:1:1 along with amendments is found to be best suited potting media for raising Neem seedlings.

- The potting media with sand: spent mushroom beds in the ratio of 1:4 without any amendments followed by potting media with sand: spent mushroom beds in the ratio of 1:4 with amendments are best suited for raising *Albizzia amara* seedlings.
- Potting media with red soil: sand: farmyard manure in the ratio of 1:2:2 with amendments followed by sand: vermicompost in the ratio of 1:4 without any amendments are found to be ideal for raising *Pongamia pinnata* seedlings.
- The potting media with sand: vermicompost in the ratio of 1:4 without any amendments followed by potting media with red soil: spent mushroom bed: husk: coal granules in the ratio of 4:10:1:1 are ideally suited for raising *Eucalyptus camaldulensis* seedlings.

With regard to the containers, while polybags was found to be ideally suited for most of the species tried, for *Acacia auriculiformis*, *Azadirachta indica* and *Dalbergia latifolia*, the 300 cc root trainers were found to be better suited for raising seedlings.