
STUDIES ON THE PROPAGATION OF RED SANDAL WOOD (*Pterocarpus santalinus* Linn. f), AN ENDANGERED MEDICINAL TREE SPECIES

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Red sandalwood is a tree species originated in India, which is highly prized for an array of medicinal and industrial uses, and thus being over exploited from their natural habitats. Since there is no systematic cultivation, at the face of increased exploitation red sandalwood has become an endangered species. The population size in Sri Lanka has limited only to just a few trees which were introduced from India. The number of seed bearing trees are limited further compelling to initiate a tree multiplication program.

At the wake of this situation, the current work was started to develop a rapid multiplication program for red sandalwood employing sexual and asexual means of propagation. After a through survey a cluster of four red sandal wood trees including two bearing trees were found to obtain seeds and vegetative material. Seeds fallen under the tree, which were collected daily and hand picked fully mature seeds were used for germination studies, Seeds were found extremely recalcitrant and lose viability within a week. Prior to germination, wings of the seeds were clipped and pre treated as follows; over night soaking mechanical removal of hard seed coat, gibberalic acid treatment. Eventhough, the tetrasolium test proved that seeds are viable (before germination), there were no signs of germination over a period of one month. Subsequently it was found that, seeds are not viable anymore, Seeds seem quiescent, not ready for germination and loose viability soon due to its recalcitrant nature.

Vegetative propagation is attempted via, air layering, stem cuttings and through tissue culture. Induction of root formation was tried with the application of auxins: NAA and IBA under mist propagation in sand medium. Double modal cuttings with a triplet of leaves were used in semi-hard wood type material, while the same without leaves was used in hard-wood. Callus formation and the formation of root primordia has started from 6-8 weeks after planting in semi-hard wood with leaves. In the hard wood, cut surface was completely covered with reddish-purple colour stain. There was no sing of the formation of callus or root primordia. Callus formation was obtained from leaf disks with auxins and cytokinins in woody plant (WP) medium

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