

***Eucalyptus* AND *Acacia* SPECIES AND FUTURE STRATEGIES FOR IMPROVEMENT IN THE UP COUNTRY OF SRI LANKA**

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Most of the arable lands in up country are used for tea and some other cash crops like vegetables. The land available for commercial reforestation is marginal and degraded. However, commercially valuable tree species like *Eucalyptus* and *Acacia* are planted in the tea plantations as an additional income source; to produce a significant timber and fuel wood production.

Naturally available tree species cannot be cultivated commercially due to their slow growth and poor timber quality. Furthermore, *Michelia champaca*, *Cedrella toona* and *Artocarpus heterophyllus* that are localised to up country show slow growth and are therefore very difficult to plant as commercial trees.

Fast growing *Eucalyptus* and *Acacia* species have been introduced to up country in the 1800s. *E. grandis* and *E. microcorys* species are planted in the up country in large-scale industrial plantations and in the farmlands. Hence they produce significant production for the timber market. *Acacia* species are not planted widely in this zone but there will be a high potential for the species *A. melanoxylon* in the future as a furniture timber tree.

Genetic improvement of *Eucalyptus* started in 1980s. *E. grandis*, *E. microcorys*, *E. cloeziana* and *E. wrophylla* have shown promising growth in the species trials. Provenances of *E. grandis* from northern Queensland and provenances of *E. microcorys* from northern New South Wales have performed well. Broad range provenances of *A. melanoxylon* trial have been established in the recent past.

A long term breeding programme for *E. grandis* was formulated in 1994. The first generation progeny trial was established in 1995 in the upcountry intermediate zone. Hence, it is proposed to convert that to a seedling seed orchard in the future. Two seed production areas for each species were established in two different climatic zones, Up country intermediate and wet zone for immediate seed requirements.

Present activities of tree improvement in the up country and future improvement strategies and plans will be discussed.