

**B-105 : SPACING GUIDELINES OF SOME SELECTED FOREST
TREE SPECIES FOR THE HANTANA HILLS**

*S J Samarasinghe, I A U N Gunatilleke, C V S Gunatilleke, P M S Ashton**
*Dept. of Botany, University of Peradeniya, *Yale University, U S A.*

Four broad-leaved forest tree species (*Albizia falcataria*, = *Peresereanthes falcataria*, *Alstonia macrophylla*, *Michelia champaca*, and *Swietenia macrophylla*) commonly grown in Kandy district were surveyed to construct spacing guidelines for their establishment in plantations in the Hantana Watershed Catchment Area. Tree measurements taken were diameter at breast height (DBH), crown width (CW), total height, height to the lowest part of the live crown, and crown class (dominant, co-dominant, intermediate, overtopped).

The above parameters were sampled in three stand densities (open, partial dense, dense). A minimum of twenty individuals per species representing a range of size classes were selected from each stand density.

Growth models were constructed from DBH and OW data to create spacing and thinning guidelines for plantation establishment. Our results show that each species uses growing space differently under contrasting stand densities and size classes. These guidelines are appropriate for species that are being introduced into new plantations, that have not passed through successive rotations under intensive management.

Maximum crown widths elucidated by these models can be used to evaluate appropriate planting of successional compatible tree species in mixed species-plantations.

This work was funded by Norwegian Agency for Development Co- operation (NORAD) and locally administered by Ministry of Environment and Parliamentary affairs (NORAD 200/09).