

8. ANALYSING THE GROWTH PERFORMANCE OF SHOREA SEEDLINGS TRANSPLANTED AT DIFFERENT ALTITUDES USING ANOVA TECHNIQUE

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The relative growth performance of seven species of Shorea (*S. affinis*, *S. cordifolia*, *S. disticha*, *S. gardneri*, *S. megistophylla*, *S. trapezifolia* and *S. worthingtonii*) were studied in 3 shade houses located at three altitudinally different sites, viz., Indikada mukalana (125m), Sinharaja field station (580m) and Suriyakanda (1060m). The experiment was carried out from 1989 to 1991. For each of the 21 treatments (3 sites 7 species) 4 replicates, each of 12 seedlings were assigned and they were arranged in a randomized design inside each shade house, under controlled conditions. Eight growth parameters were measured after two years of growth.

For each growth parameter the best two-way ANOVA model with site and species (including interactions) as using statistical techniques fit independent variables. In each of these models significant interactions were found. Therefore, pairwise comparisons between treatment combinations were done by using the Tukey's studentized range test. According to these comparisons the final conclusions were made on the growth performance of each species in each site.