

**B-101 : THE EFFECT OF FERTILIZER AND WATER ON THE  
GROWTH OF SOME EXOTIC AND INDIGENOUS TREE SPECIES  
GROWN ON REGOSOLS AT VANTHARUMOLAI**

*N Rabeendran, T Jaysingham\**; Div. Agric. Biology, Faculty of Agriculture,  
Dept. of Botany, Faculty of Science, Eastern University.

Four exotic (*Casuarina equisetifolia*, *Eucalyptus citriodora*, *Gmelina arborea*, *Tectona grandis*) and four indigenous (*Terminalia arjuna*, *Berrya cordifolia*, *Drypetes sepiaria* and *Azadirachta indica*) species were planted at Vantharumoolai, with a spacing of 3 m between plants in 20 m x 20 m plot; making 49 plants per plot. Each treatment was replicated 4 times. Each plot was subdivided into four sub plots consisting of 9 plants each, leaving border plants. The plots were watered regularly. Five months later the following water and fertilizer treatments were applied to each sub plot within a plot as follows +F+W, +F-W, -F+W, -F-W (F : Fertilizer, W: Water, + : add, - : do not add).

Height and mortality were recorded 3, 6 and 9 months after treatment and the data were subjected to statistical analysis. Significant differences (P0.05) in growth rate of species were observed at 3, and 9 months whereas significant variation in mortality of species were observed at 3, 6, 9 months after treatments.

*E.citriodora* and *C.equisetifolia* showed significantly higher relative growth rate per month than the other tested species at 3 and 9 months after imposing treatments. *E.citriodora* and *G.arborea* showed significantly (P0.05) higher mortality than the other species at 3 and 6 months after sub treatments while *D.sepiaria*, *G.arborea*, *E.citriodora* showed significantly (P0.05) higher mortality at 9 months after treatment.

Only *G.arborea* responded significantly to the application of water (P0.05).