Project profile

Project Title: Assessing growth and physiological variations like photosynthesis in fast growing tree species for improving yield

Project code: IFGTB/PBT/RP4/37/ICFRE/1992-2001

Principal Investigator - Dr. K. Gurumurthi

Project period: 2001-2002

Findings:

A total of 106 superior clones of Casuarina equisetifolia and 33 clones of Eucalyptus tereticornis and E. camaldulensis were selected using multi trait index selection method. Superiority and genetic divergence of these materials were investigated. Physiological and morphological studies have been carried out to characterize the clones and to determine the interclonal variation. Morphological descriptors were developed for selected clones of Casuarina. Variations in photosynthesis under stressed conditions were studied in Eucalyptus. Studies revealed that photosynthesis can be effectively used as a physiological criteria for rapid screening. of salt tolerant clones. Studies on water use efficiency were also undertaken. Studies on various wood quality were carried out and .characterized the clones for pulp and solid wood products. 5 clones were found promising for paper manufacturing. Ninety-nine clones of Casuarina equisetifolia were screened for salinity tolerance at Tiruchirapalli, Tamil Nadu and identified clones tolerant to salinity. Casuarina frankia compatibility was also studied.