

STUDIES ON HIGH DENSITY PLANTING OF  
FAST GROWING FUEL WOOD TREES

S. P. Birari, M. W. Joshi, and B. B. Jadhav  
Botany Department  
College of Agriculture, Dapoli.  
Maharashtra, India

To study the growth performance of fast growing fuel wood trees grown under different plant densities, the four species viz. Casuarina equisetifolia (Suru), Dalbergia sissoo (Shisoo), Acacia auriculiformis (Australian babhul) and Leucaena leucocephala (Subabhul) were planted in main plots by adopting 1 x 1 m and 2 x 2 m spacings as subplots in split plot design with four replications during kharif (monsoon) 1982. The hilly lateritic soil was having 30-35% slope. It was low in organic matter and macroelements with acidic in reaction (5.8 pH). An average rainfall was 3500 mm receiving from 15th June to 15th September with high humidity and warmer temperatures. Fertilizers @ 100 kg N, 25 kg P205 and 25 kg K20/ha were applied during first year and thereafter this dose was increased by same rate every year and after fifth year; fertilizers @ 500 kg N, 125 kg P205 and 125 kg K20/ha were applied in two splits, first after the onset of monsoon and second at last week of August when the intensity of rain was low.

The maximum growth in relation to height and dbh was observed in Acacia auriculiformis (608 cm in 1 x 1 m spacings and 574 cm in 2 x 2 m spacings) followed by Leucaena leucocephala. The growth of Leucaena was slow up to 21 months after planting. The growth of Dalbergia sissoo was least as compared to other species.

Planting these fast growing fuel wood trees in closer spacing showed more height than by planting at wider spacing, except after 58 months of planting the Casuarina equisetifolia at wider spacing took the lead in height over planting at closer spacing.

All the species showed maximum AGR of height and dbh between 22-33 and 46-57 months after planting, respectively. The wider spacing showed increase in AGR of dbh at later stages of growth, where as closer spacing showed decrease in AGR of dbh from 34-45 months after planting onwards.

Casuarina equisetifolia, Acacia auriculiformis and Leucaena leucocephala are suitable as fast growing fuel wood trees to be planted by adopting closer spacings under the heavy rainfall conditions of Konkan region of India.