

STIMULATION OF THE DEVELOPMENT OF JUVENILE SHOOTS
ON FOUR YEAR OLD TREES OF PINUS CARIBAEA VAR. HONDURENSIS

R. J. Haines, S. M. Walker and T. R. Copley
Forestry Research Centre
Gympie, Queensland, Australia

Treatments comprising decapitation at "high", "medium" and "low" levels within the crown, combined with heavy pruning of all remaining branches, were applied to unpruned but vigorous edge trees chosen in plantations aged one, four and eight years. Shoots which developed in response to these treatments were collected separately according to level in the crown, assessed morphologically, and set as cuttings.

All decapitation treatments and crown levels were characterized by the development of a significant proportion of shoots with well elongated primary needles, the type of shoot which, if produced on a young hedged seedling, would be expected to root very well.

The rooting of shoots from the lowermost level on the pruned four year old trees (83%) did not differ significantly from that of shoots from the pruned one year old trees. The rooting of shoots from other treatments on the four and eight year old trees was significantly lower.

Continuing studies, which include investigation of stool bed and field performance, are aimed at defining the feasibility of the multiplication, testing and mass propagation of phenotypes selected at age four.

FLOWERING OF GRAFTED RAMETS OF PINUS CARIBAEA VAR.
HONDURENSIS IN NORTHERN QUEENSLAND, AUSTRALIA

R. J. Haines, R. R. Woolaston and D. G. Nikies
Forestry Research Centre
Gympie, Queensland, Australia

The seed cones initiated in the third to sixth years after grafting were counted on each of 266 ramets representing 16 clones in a seed orchard situated at Kennedy, in northern Queensland. There was a rapid increase in the number of flowers produced between the fourth and fifth years after grafting, a typical pattern for P. caribaea var. hondurensis in Queensland. Clonal repeatabilities, and genetic correlations from one season to the next, were generally high.

The planning and design of P. caribaea var. hondurensis orchards in Queensland thus incorporate an expected five year interval between grafting and initiation of the first major crop of seed cones. Orchard strategies aimed at an earlier production of the same total seed requirement would involve the grafting of considerably larger numbers of ramets per clone, and the exclusion of some selected clones.