

# Hardwood Plantation Field Tour

By Cliff Raddatz PFSQ

The sixth annual field tour by DPI& F Forestry Research was well received by over 40 participants representing a wide spectrum of the timber industry including State and Federal Research and Development Agencies, Universities, wood processors and growers. It was pleasing to see a Councillor Representative from the Gayndah Shire Council.

Dr David Lee of DPI&F Forestry Research led the presenters and took the tour to a number of Spotted gum and Gympie messmate provenance trials / seed orchards. The tour included the Maryborough region forestry reserves at Tiaro, St Mary and North Aramara and then out to the South Burnett to look at species / provenance trials and nutritional trials. Finally the tour completed with inspections in the Kilcoy / Woodford area.

## Highlights of the tour included:

- Expectations of commercial quantities of improved seed with a high resistance to *Ramularia* shoot blight are expected by 2010 or earlier. Selections on *Ramularia* resistance across provenances as well as on vigour and form are continuing. The Queensland provenances showing the best resistance are all around the Gympie area including, Woondum, Wolvi, Home, Brooyar and Curra. New South Wales provenances showing good resistance include, Grange, Richmond Range and Cherry Tree.



- The *Corymbia* hybrid trial (cadagi x spotted gum) at the DPI Forestry plantation block at Coolabunia created the most interest and excitement among the group. Across the trials and selection blocks the performance of the hybrids has been generally better than the parental species with some specific clones out performing others. Work is continuing to select and establish clonal trials of these hybrids in 2005. The apparent resistance to *Ramularia*, frost, erinose mite, sooty mould by these hybrids and generally the ability of perform well at this site and other sites will give the industry the ability to extend the plantation estate into areas which would at present be considered marginal.

- Dr Tim Smith showed the group the effects of loss of apical dominance that occurred in blackbutt grown on Krasnozem soils through Boron deficiency. This experiment adds further evidence to the contention that Boron is naturally deficient in Krasnozem soils and applications of Boron can improve tree form through greater apical dominance of stems.

- Dr Simon Lawson gave an insight into the work being carried out by the DPI Forestry Research Entomology Section through monthly field inspections of the plantation estate on the spread and damage caused by the erinose mite. Results from observations on a number of taxa trials agree with anecdotal evidence from operational plantings that would suggest that the Woondum provenance of *Corymbia* is the most susceptible to mite damage.

· The species trial at Tingoora highlighted the excellent growth that can be achieved on the red soils in the Kingaroy region with adequate soil moisture. This trial is believed to be sited on underground aquifers giving the trees unlimited soil moisture. These are common in the area. Growth rates of the 3.3 year old stand have averaged 3 – 4 cm DBH and 2.6 – 4.2 metres in height per year over most species planted. These growth rates were achieved in an area with an annual rainfall of 800 -900 mm per year but the rainfall over the 3 years since planting was well below average.

· Mr Matt Armstrong gave an informative talk on the results from research under the Innovative Forest Products Program. Some findings include:

1. Density values of wood from trees 10-15 years old have commonly been two-thirds to three quarters that of published values for mature trees.
2. Shrinkage for timber derived from young trees is lower than that published for mature material.
3. Growth stress is not the significant cause of concern it was initially expected to be.
4. The denser species, such as spotted gum and western white gum, at older ages (30+), commonly fail glue bond tests.
5. Generally the plantation timber seasoned well even at very young ages. Based on the findings it can be said with more confidence that for a range of Queensland hardwood plantation species assessed, their fundamental wood properties are going to be similar at age 25-30 years of age to their regrowth counterparts.

Dr Lee in his summation made the assertion that people attending the tour can have confidence that the industry was moving forward in overcoming past and present problems in species selection, site matching, genetic improvement, disease resistance and product utilisation. He suggested a need for all sectors of industry to get behind the effort by the DPI&F, Forest Research team.

This years tour was informative, educational and a great opportunity to network with many industry representatives. D.P.I&F Forestry Research were extremely professional in their organisation and presentation. I highly recommend this tour to people who are contemplating a plantation or have an interest in the future of the timber industry.



*Spotted Gum Age 3.3 years at Tingoora*