



Wood Supplies
Native Forests
and
Plantations

Wood Supplies – Native Forests Versus Plantations

In general terms, plantations are intensively managed stands of trees of either native or exotic species, planted or sown primarily for timber production.

The global demand for wood is still overwhelmingly met from native forests. Until recently, this was also the case in Australia. Since the mid-1990s, maturing softwood plantations have become the major source of Australia's sawn timber as the native forest hardwood harvest has declined. Native forest and plantation sawn timber products do not generally compete because the end uses are quite different. However, by 2010 the volume of fibre sourced from hardwood plantations (mostly Blue Gum) is expected to have exceeded native forest production.



Different products and markets

Native forests used for timber production are generally grown for 80–120 years before harvest. They produce slow-grown, decorative and naturally durable hardwood timbers for a variety of interior and exterior uses. Where there are accessible markets, low quality logs are chipped for use in making paper products. Off-cuts from sawlog processing are also chipped, or sold as firewood or just burnt as waste. The growth habits of Australian eucalypts are such that harvesting often yields more low quality woodchip material than higher grade logs suitable sawn timber.

Softwood plantations produce a wide range of products for a variety of uses. They are generally grown for 30–35 years before final harvest, but are also thinned at least twice during this period. Softwood timber has lower strength and durability, and lacks the wide range of colours and features of native forest hardwood timbers. Due to these characteristics and its ready availability, softwood timber has progressively replaced native forest hardwood in traditional low value uses such as house framing. It is also used extensively in outdoor applications but needs to be chemically treated to give it sufficient durability. The softwood plantation estate expanded dramatically from the 1960s–80s, but has grown slowly since then.

Hardwood plantations in Australia are mostly grown on short 10–15 year rotations specifically for fibre (woodchips) for use in paper manufacture. Since 1995, the area of hardwood plantations has grown by over 400 per cent – mostly due to the growth of managed investment schemes which are popular with investors seeking to minimise tax liabilities. In 2003, only 17 per cent (or 107,000 ha) of Australia's hardwood plantations were planned for growth over the longer timeframe required to produce sawn products, and 62 per cent of these were less than 8 years old.

Both in terms of growth rate and timber quality, Victoria's most productive native forests are the Mountain Ash and Alpine Ash forests which grow in high rainfall mountain regions. Their timber has a straight even grain, even colour and high strength and is suited to uses such as windows, doors, staircases, handrails, flooring, parquetry, cabinet doors, bench tops, mouldings, furniture, commercial shop fit-out, veneer, glue laminated products and high strength structural beams. The main competitor in these markets is imported hardwoods from tropical rainforests, not softwood or hardwood plantation timber.

Australia's plantations and native forests – differences and similarities



		Plantation		Native Forest
		Softwood	Hardwood	Hardwood
Available Area		990,000 ha (in 2005)	740,000 ha (in 2005)	11,400,000 ha (in 2003)*
Species		Mostly Radiata Pine	Mostly Blue Gum	Wide variety – mostly eucalypts
Round log production (2005/06)		14.3 million m ³	3.8 million m ³	8.9 million m ³
Products		Sawn timber, fibre, roundwood	Mostly fibre, some fuelwood & sawn timber	Hardwood sawn timber, fibre, roundwood, fuelwood
Comparative productivity		X 5.0 +	X 5.0 +	1.0
Wood production status		Relatively stable	Increasing	Declining
Wood durability		Low	Low- Moderate	Moderate – High
Final harvest		30–35 yrs	10–15 yrs (fibre) 25+ yrs (other)	80–120 yrs
Management	Initial Establish	Planted	Planted	Natural / Seeded
	Land Cost	Moderate – High	Moderate – High	Nil (public land)
	Total Cost	High	Moderate – High	Low
Vulnerability to fire / disease		High	Moderate – High	Low

Can plantation-grown hardwoods replace native forest hardwoods?

There are public misconceptions that native forests are harvested primarily for woodchips and that the huge area of short rotation fibre plantations (mostly Blue Gum) established since the mid-1990s has removed the need to harvest native forests. However, native forests are harvested primarily for sawn timber with wood chips as a by-product. To replace native hardwoods would require a substantial area of hardwood plantation grown on long rotations to produce sawlogs. Recent research

shows that it is possible to grow good quality hardwood sawn timber in fast-grown plantations. However, the area of hardwood plantation being grown for this purpose is currently small. Much of it is being grown in small farm forestry lots with variable standards of management and more than 50 per cent of it has been planted during the last decade. It is at least 20 years away from harvesting.



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