



Welcome to the 5th birthday edition of the ANU Forestry Market Report.

We at ANU Forestry take the opportunity of this significant milestone to thank our associates and supporters: Australian Forest Growers; the RIRDC/ Land & Water Australia/ FWPRDC Joint Venture Agroforestry Program; Private Forestry Council Victoria; AFFA; the partner organisations in Plantations for Australia, The 2020 Vision; ABARE; Farmwood Australia Co-operative Society Ltd; and others who have helped the project in various ways.

Over the life of the project, the need for forest products market information has been reiterated in various national and industry fora, implying the importance of the project.

We look forward to continuing to work with you on this project.

Wood based panels — consumption continues to rise

This report starts with a lead article on consumption of wood based panels in Australia. It next presents trends in prices of radiata pine logs, and current prices of firewood and stumpage for firewood trees.

Consumption of wood based panels

Wood based panels are products such as plywood, particleboard, medium density fibreboard (MDF), and hardboard. Production of the panels utilises pulplogs, veneer logs and sawmill residue; and the cost of wood is an important part of total cost of production of the panels. Forest growers producing logs therefore have a stake in demand for wood based panels.

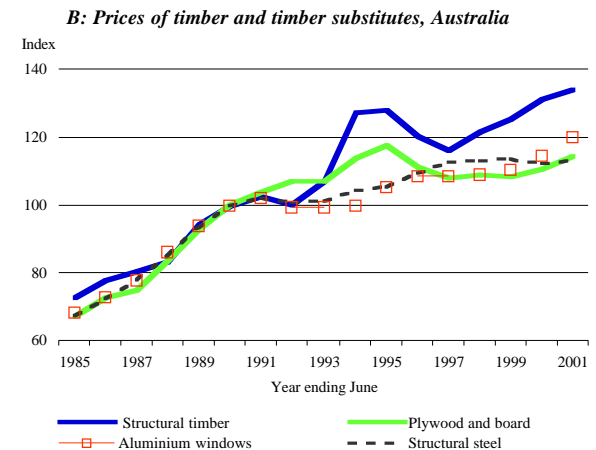
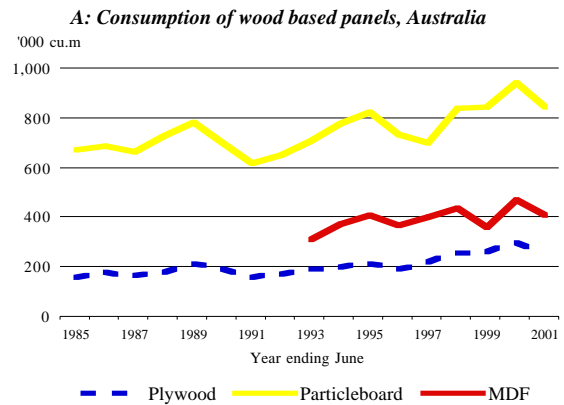
In many uses, wood based panels can substitute for sawnwood. Non-wood materials such as aluminium, steel, concrete and plastics can similarly substitute for sawnwood.

Because of the substitutability, consumption of sawnwood is linked with consumption of the substitutes. Hence, to more fully understand sawnwood consumption, it is important also to look at consumption of the substitutes.

Instead of dealing with all substitutes of sawnwood, this article deals only with wood based panels, in particular with plywood, particleboard and MDF. In so doing it extends the discussion of sawnwood consumption presented in ANU Forestry Market Report Number 19.

ABARE data in that Report showed that during the 17-year period of 1984-85 to 2000-01, apparent consumption of sawnwood averaged 4.4 million cubic metres a year. A trend analysis of the data revealed sawnwood consumption did not have a statistically meaningful rising trend. In contrast, consumption of plywood, particleboard and MDF have rising trends (figure A). The average annual rise in consumption of plywood was 3.1 per cent, particleboard 1.6 per cent and MDF 2.8 per cent.

As a proportion of sawnwood consumption, total consumption of the three panels was 28 per cent in 1992-93, rising to 35 per cent in 2000-01.



Thus, while being driven by broadly similar factors (eg those associated with construction of new dwellings), consumption of sawnwood did not rise but consumption of wood based panels rose absolutely and proportionately to sawnwood. What then explains this change? A number of factors are involved. A discussion of three key ones follows.

First, some wood based panels can be less expensive than sawnwood, and Australian Bureau of Statistics data in figure B suggest that their price advantage has improved over the years. The figure

shows that in the 1990s the price of plywood and boards did not rise as much as did the price of structural timber. Thus, in effect, the price of plywood and boards fell relative to the price of timber. (Figure B also shows that prices of some non-wood substitutes, eg aluminium windows and structural steel, fell relative to the price of timber.)

In the Canberra-Queanbeyan region, current average price per square metre of tongue and grooved flooring radiata pine timber is about \$21.46 and of particleboard \$11.57. It is clear that particleboard can be a highly inexpensive substitute for timber, at least in some uses.

Second, use of wood based panels in some applications results in substantial savings on labour cost. For example, consider a case of laying a 110 square metre floor on joists in a simple house in the Canberra-Queanbeyan region. The floor is to have a carpet cover on the base of either radiata pine top-nailed timber or particleboard. Approximate cost of labour is \$2,280 to lay the pine timber floor and \$1,640 to lay particleboard floor. The labour cost for particleboard is low as it takes less labour to lay it.

When the cost of flooring particleboard or pine timber is added to their respective labour costs, the total cost of the 110 square metre floor comes to \$4,640 for the pine timber floor and \$2,915 for particleboard floor. The costs estimates are broad orders of magnitudes but they illustrate the considerable cost savings by using particleboard in this case.

Third, both the quality and variety of some wood based panels have improved over time, which lifts the demand for them. For example, besides standard

particleboard, specialised termite, fire and moisture resistant, and tongue and grooved flooring particleboards are now available.

These and other factors jointly explain why consumption of wood based panels has been rising absolutely and proportionately to sawnwood. It is not surprising that, over the years, increasing volumes of wood based panels are being used in furniture, joinery, floors, doors, packaging, mouldings, construction, and a huge variety of other applications.

Australia is a net importer of plywood. The net import volume was 91,000 cubic metres in 2000-01; Indonesia, Malaysia and New Zealand were the main suppliers. But in particleboard and MDF, Australia is a net exporter. In particular, net exports of MDF have increased spectacularly, rising from 3,000 cubic metres in 1992-93 to 300, 000 cubic metres in 2000-01, and the volume is set to rise further. Main export markets are Japan, Korea, China and Taiwan, where according to a Jaakko Poyry report, the quality of MDF made in Australia and New Zealand from radiata pine fibre has earned a high reputation.

Main points

- Consumption of sawnwood and of wood based panels and other substitutes are linked.
- Consumption of wood based panels has increased partly at the expense of sawnwood consumption because, in many uses, they are a less expensive substitute for sawnwood.
- Australia is a net importer of plywood but it is a net exporter of particleboard and MDF, with export volumes of MDF rising rapidly.

Market trends

New Zealand radiata pine log prices

NZ is a leading world producer and exporter of radiata pine logs. Hence, for Australian radiata pine growers, the NZ export and domestic log market prices are a window on the world market situation.

The NZ Ministry of Agriculture and Forestry collects the NZ price data from major NZ log suppliers and releases them quarterly as a range for each grade of logs. Export prices are per Japanese Agricultural Standard (JAS) cubic metre on a free on board (FOB) basis. Domestic prices are per tonne delivered at mill door. The prices are indicative. For more information on the NZ prices, see ANU Forestry Market Report Number 17.

The prices were originally in NZ dollars. They have been converted here into Australian dollars, using the exchange rates published by Reserve Bank of Australia. Average exchange rate for the March quarter 2002 was NZ\$1.2207 = \$1.00.

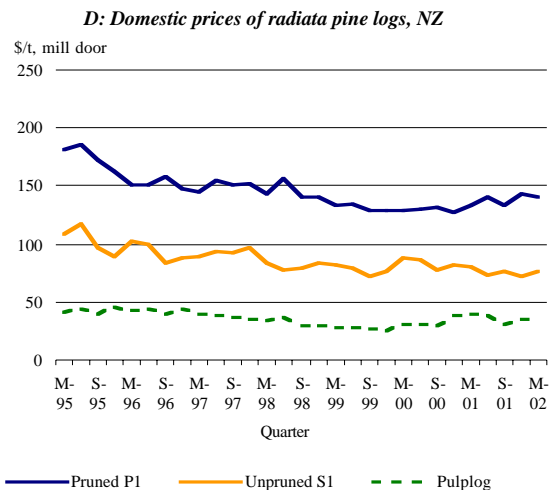
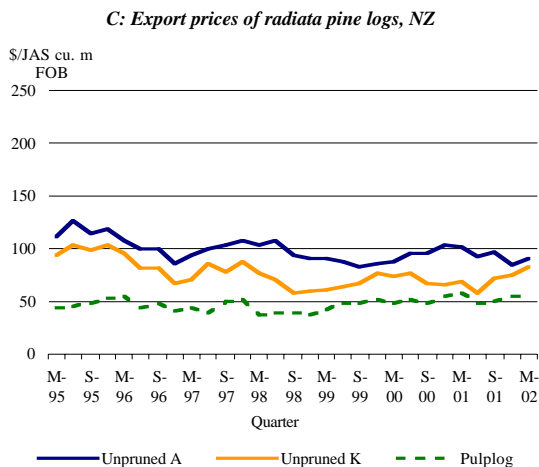
Table 1 gives the March quarter 2002 prices. The numbers in brackets in the table are small end diameters (SED) of logs. SED and other features of a log jointly determine its grade. More information on the NZ log grades is available from U.N. Bhati. His contact details are at the end of the report.

Figures C and D show trends in the export and domestic prices for selected grades of logs up to the March quarter. The trend line for each grade is based on the middle points of its quarterly price range.

1: NZ radiata pine log prices: March quarter 2002

Export, FOB	\$/JAS cu. m
Pruned peeler (300+ mm)	175-188
Unpruned A grade (200-340 mm)	86-96
Unpruned J grade (200-260 mm)	80-89
Unpruned K grade (200-260 mm)	75-93
Pulplog (100+ mm)	53-59
Domestic, mill door	\$/t
P1 pruned (400+ mm)	125-156
P2 pruned (300-399 mm)	81-131
S1 unpruned (400+ mm)	70-82
S2 unpruned (300-399 mm)	71-77
L1 & L2 unpruned (300+ mm)	50-61
S3 & L3 pruned/ unpruned (200-299 mm)	41-66
Pulplog (100 mm)	29-42

Source: NZ Ministry of Agriculture and Forestry.



Firewood prices and stumpage

As discussed in Market Report Number 16, Australia uses five to seven million tonnes of firewood a year. This almost equals the annual quantity of Australian hardwood chip exports.

Firewood is Australia's 'forgotten forestry' product. Yet it is a valuable product for many growers and consumers.

Unless stated otherwise, table 2 shows retail prices of air dry firewood, picked up by buyers from merchants' yards during April to early May 2002. The data were gathered from selected locations in major firewood-using States and the ACT. Knowledgeable local persons and ANU Forestry collected the data from two or more established

firewood merchants in each location. Where possible, they also collected data on stumpage received by landholders for trees sold as firewood and the primary sources of firewood trees.

The information summarised in the table is indicative because the limited resources did not allow the use of a statistically more rigorous method of data collection. Nonetheless it presents a useful national profile of firewood prices and stumpage.

Itinerant and occasional sellers usually sell firewood at lower prices than do established merchants. The prices in the table, which are for established merchants, are therefore likely to be in the middle to upper end of the price range.

2: Indicative prices of firewood at merchants' yards, and stumpage for firewood trees: April – early May 2002

Location	Price	Firewood species	Stumpage, comments
Armidale, NSW	\$110/t	Mixed box, stringybark, ironbark	
South-east, NSW	\$85–\$100/t \$120/t	Mixed hardwoods Red woods	\$11/t; source: public and private forests
Canberra– Queanbeyan, ACT–NSW	\$160–\$165/t \$140/t	Mixed hardwood: grey, yellow and red box, ironbark, red gum Softwood (radiata pine)	\$5–\$15/t, average \$10/t; source: inland NSW Source: ACT Forests
Ballarat, Vic	\$79–\$80/cu. m \$70/cu. m	Red gum, red/ yellow box, ironbark Sugar gum	\$5–\$10/cu. m, measured as split, stacked and dry billets. Source: private land
Benalla, Vic	\$120/t	Mostly red gum and box species	Royalty \$7.70–\$12.10/cu. m; concession \$3.85–\$6.05/cu. m; depending on species; single merchant
Geelong, Vic	\$70–\$80/cu. m \$78/cu. m \$70/cu. m	Red gum Red box Sugar gum	Stumpage, as for Ballarat
Mildura, Vic	\$60–\$66/cu. m	Red gum	

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Location	Price	Firewood species	Stumpage, comments
Melbourne, Vic	\$160–\$185/t \$162–\$180/t	Yellow box, sugar gum Red gum	Sugar gum from plantations sold at a higher price
Latrobe Valley, Vic	\$55–\$70/cu. m \$86–\$94/cu. m	Messmate, stringybark, peppermint River red gum	\$20/ cu. m, felled, cut to 30 cm lengths
Albany, WA	\$60–\$80/cu. m	Blue gum	The price varies with volume; plantation product, 30 km from Albany; single merchant
Bunbury, WA	\$90/t	Jarrah	\$16/cu. m; private property
Busselton, WA	\$85/t	Jarrah	Price for delivered. Gross stumpage varies \$14.40 – \$17.43/cu. m, by dry/ green and region. Source: public forests
Perth, WA	\$135–\$150/t	Jarrah	
Adelaide, SA	\$170–\$192/t	Predominantly red gum; other species SA blue gum, yellow box, grey box, she oak	Price same for the species; delivery charge \$7/t; source: mostly NSW
Adelaide–Adelaide Hill, SA	\$135–\$192/t	Red gum, pink gum, blue gum, sugar gum, and mallee stumps and roots	
Devonport, Tas.	\$50/cu. m	Eucalypt and wattle species	\$5–\$8/cu. m
Launceston, Tas.	\$45/cu. m \$49.50/ cu. m	Eucalypt and wattle species Peppermint and gum species	\$5/cu. m \$5–\$10/cu. m
Hobart, Tas.	\$45/cu. m	Eucalypt and wattle species	\$5–\$6/cu. m

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