ANU FORESTRY

Firewood market

Market Report 16 **June 2001**

Primarily for small-scale forest growers

• Supported by the Joint Venture Agroforestry Program, Private Forestry Council Victoria, AFFA, the 2020 Vision, ABARE, and Farmwood Australia Co-operative Society Ltd

• In association with Australian Forest Growers

This report presents a profile of firewood consumption and prices, and stumpage for trees sold as firewood in Australia.

Firewood consumption

A recent CSIRO study by Don Driscoll and his colleagues gives the latest information on use of firewood in Australia. It estimated firewood consumption by Australian households in 1999-2000 at around 5 million tonnes. When industrial firewood was included, the total annual consumption was 6–7 million (partly dry) tonnes.

Firewood consumption compares with Australian hardwood chip exports of 3.6 million 'bone dry' tonnes or 7 million 'green' tonnes in the same year. Regardless, many dismiss firewood use in Australia as insignificant, confirming a remark by Julian Wall (who has also closely studied the industry) that firewood is the 'forgotten forestry' in Australia.

According to the CSIRO study, New South Wales and Victoria together account for more than 50 per cent of the total firewood consumption by households (figure A).

Nationally, one fourth of the households use firewood. Tasmania is, however, the most distinctive State, where two thirds of households use firewood (figure B).

Average annual consumption among firewood-using households ranges from 1.3 tonnes in Queensland to 5.8 tonnes in Tasmania, with the national average of 3 tonnes.

Sixty-three per cent of Australian households are located in capital cities. But they account for only one third of the total firewood consumption. On average, firewood-using households in the cities burned smaller quantities (2.2 tonnes a year) than households in the rest of each State (3.7 tonnes a year). So, most of the consumption occurs outside the capital cities.

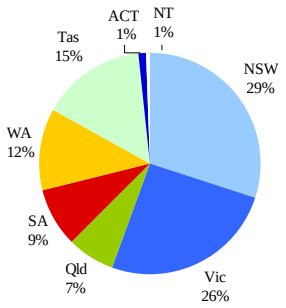
Sources of firewood

The CSIRO study found that on average, Australian households bought half of the total firewood they consumed. Of the total quantity bought, 60 per cent was bought from small collectors or suppliers, 24 per cent from established firewood merchants, and 10 per cent from friends and relatives.

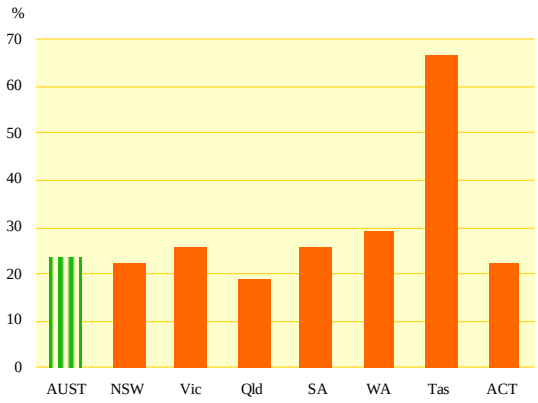
Households collected the other half of the firewood they consumed. Eighty-four per cent of the collected quantity came from their own or other private land, and 10 per cent from State forests.

Most of the locations from where firewood was harvested were coastal and inland forests, riverine forests, or woodlands. The CSIRO study noted that firewood harvesting in dry forests and woodlands was at rates well above a sustainable level, and that it impacted adversely on the whole spectrum of ecosystems. Firewood collection is therefore a cause of ecological concern. The concern has prompted Australian governments to consider a national approach to firewood collection and use.

: Shares of States/Territories in the total firewood used by Australian households



: Percentage of households using firewood, by State/Territory



The national approach may lead to changes in future, such as (a) restricting the collection of firewood from specific native forests and remnant vegetation areas that provide critical habitat for threatened species, and (b) encouraging the production of firewood from planted trees.

Only a few studies have compared the profitability of firewood plantations with conventional farming enterprises. Their findings suggest that firewood plantations were profitable only under limited situations. This may, however, change in future due to economic and technological changes, and changes to government policy.

Firewood prices and stumpage

Firewood prices are of interest to both firewood consumers and growers. The price information reported here refers to air dry firewood, picked up by buyers from merchants' yards in April 2001. The data were gathered from selected locations in major firewood-using States and the ACT. Knowledgeable local persons collected the data for this report from two or more established firewood merchants. Where possible, they also collected data on stumpage received by landholders for trees sold as firewood. Table 1

summarises the information. It is, however, only indicative of the situation because the limited resources did not allow the use of a statistically more rigorous method of data collection. Nonetheless it reveals 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 table 1, which are for established merchants, are therefore likely to be in the middle to upper end of the price range. Prices in the table may also differ from those at other times. For example the prices in April 2001 were higher than a year ago. This was largely due to the substantial rise in prices of automotive fuels during the period (which raised the costs of harvesting and transporting firewood) and the introduction of the goods and services tax from 1 July 2000. Prices also vary by season. For example, the prices in the Canberra region in winter can be up to 25 per cent higher than in summer.

Nominal prices of firewood in the Canberra region rose between 55 and 75 per cent over the past ten years, and they are expected to rise even faster in future, partly because firewood will have to be obtained from increasingly distant places. Even now some of the firewood in the region comes from over 400 km away.

Current stumpage for trees sold as firewood varies very widely (table 1). In 1997, a study in Victoria stated that for firewood plantation to be worth farmers' consideration required a net return upwards of $30 a tonne. This supports the view of industry sources that most current stumpage around Australia is not high enough to attract landholders to establish firewood plantations to a significant extent.

Several factors influence the purchase of firewood by firewood-using households. They include timely supply, reliability of quantity and quality of wood, consistency, convenience, absence of contamination, and the price.

The profile of the firewood market reveals that despite continuing as a major forest product, firewood remains a forgotten forest product in Australia. Enormous gaps exist in knowledge on production, use, environmental impacts, and economics of firewood. Filling the information gaps will enable Australia to benefit most from the industry.

1: Indicative prices of firewood at merchants' yards, and stumpage for firewood trees: April 2001

Location	Price	Firewood species	Stumpage, comments
Armidale, NSW	$80/t	Stringybark	Typically $2–$5/t
	$105/t	Ironbark	As above
South-east, NSW	$60/t	Silvertop ash, blackbutt, grey box, peppermint mix	Up to $10/t; highly variable
	$80/t	The above species, and stringybark, red ironbark, woollybutt, bloodwood; an equal mix of red and white woods	$10–$11/t; salvage material, State forests
Canberra–Queanbeyan, ACT–NSW	$150–$160/t	Mixed loads of hardwood and softwood (radiata pine) species	$5/t
	$165/t	Only hardwood, predominantly box species	$6–$8/t to $11–12/t; higher rate for State forests
Latrobe Valley, Vic.	$58–$66/cu. m	Messmate, stringybark, peppermint	$7/cu. m; green
	$79–$88/cu. m	Red gum	$25/cu. m; felled, green, cut into 60 cm (2 feet) lengths
Benalla, Vic.	$71.50/cu. m	Red gum, box species	$5–$10/ cu. m
Ballarat–Geelong, Vic.	$65/cu. m	Sugar gum	$5/cu.m green
	$70–79/cu. m	Box species, red gum	$10/cu. m dry
Mildura, Vic.	$60/ cu. m	River red gum, mallee, pink/black box	$5–$12/cu. m
Albany, WA	$150–$158/t	Jarrah	Up to $25/t; farmers, who need to get rid of wood, give it away free
Bunbury–Busselton, WA	$85/t	Predominantly jarrah, but some mixed she-oak, white gum and marri	$15–$20/t; State and private forests
	$90/t	Jarrah	Mill/ yard gate price $45/t
Perth, WA	$115–$137/t	Jarrah	
Murray Bridge, SA	$137.50/t	Red gum, SA blue gum, mallee roots	$5–$25/t
Adelaide Hills, SA	$165/t	Red gum, SA blue gum, mallee roots	$5–$25/t
Adelaide, SA	$172–$182/t	Red gum, cut mallee	
	$190/t	Mallee stumps	
Devonport, Tas.	$40/t	Eucalypt and wattle species	$4–6/t
Launceston, Tas.	$70/t	Eucalypt and wattle species	$6–8/t
Hobart, Tas.	$100/t	Denser, slow growing, wood species	$6–8/t

Note: The new feature on price trends for selected products, introduced in the last report, has been held back due to lack of space in this report.

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