



Sydney blue gum (*Eucalyptus saligna*) for sawlogs in the 450-650 mm rainfall zone

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Sydney blue gum sawlog plot, Dinninup.

Sydney blue gum is a large eucalypt that occurs naturally in tall open coastal forests, northward from around Bateman's Bay in NSW to southern Queensland.

It is suited to a wide range of soils yet grows best on well draining sandy gravel to loamy clays and alluvial flats. The species can tolerate light frosts, however will not grow well in areas of waterlogging, salinity or heavy clay.

Its fairly shallow surface roots do not tolerate dry sites but will grow well in areas with greater than 550 mm annual rainfall.

Growth rates

Sydney blue gum grows fast. Data from a 12 year-old belt planting in the 550 mm annual rainfall area of Dinninup, WA (stocking density 125 trees/ha) estimated a total volume of 69.5 m³/ha and a Mean Annual Increment (MAI) of 5.8 m³/ha/yr.

Data from an 8.5 year-old plantation in the 450–500 mm annual rainfall area of Chittering Valley (106 trees/ha estimated a total volume of 90.3 m³/ha and an MAI of 10.1 m³/ha/yr.

Sawlogs with a diameter of 45–50 cm can be produced within 20–25 years under 550–650 mm annual rainfall, provided trees are widely spaced (final stocking of 150 trees/ha).

Provenances

Research over the last 10 years has shown that the growth rate and form of Sydney blue gum in lower rainfall areas (<600 mm) do not vary much between provenances (seed from different localities). But there is some variation in higher rainfall areas (>600 mm). Research is continuing to find provenances and trees with superior growth and form.

Important Disclaimer

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Wood properties

Sydney blue gum has a hard, dark pink to red-brown heartwood that is only moderately durable. The sapwood is pale and susceptible to lyctid borers. The texture is moderately coarse and even, and the grain is straight or slightly interlocked. Gum veins are common.

The mean air dry density of mature wood (at 12% moisture content) is 850 kg/m³. Rapidly grown plantation timber can have density as low as 500-600 kg/m³.

Establishment costs

An example of establishment costs is given in Table 1. Site preparation and on-going control costs are based on contract rates outlined in 'Eucalypts for High-grade Timber in the Medium Rainfall Zone of WA'.

Table 1. Example of establishment costs for eucalypts

Year	Type of cost	\$/ha
0	Site preparation – ripping, mounding and weed control	150
0	Seedlings – 35 cents each, planting density 1000/ha	350
0	Protection – fencing, parrot traps and rabbit control	400
1	2 nd year – weed and insect control	50
2-5	On-going parrot and insect control	100
Total		1,050

Wood uses

Sydney blue gum is an appearance grade (highest quality) hardwood timber commonly used for general construction, flooring, panelling, boat building and heavy furniture. It is suitable for indoor and outdoor furniture, bench tops, tables, cupboards, doors and as craftwood. It is rated as acceptable for fibre composite and paper, but not preferred because of its low pulp yield and low paper tensile strength.

Management requirements

Eucalypts grown for high-quality timber need to be pruned to produce wood that is free of knots, which adversely affect timber recovery and grade. Slow growing or poorly formed trees should be removed. See Treenotes No. 1 'Growing eucalypts for high-grade sawlogs', No. 3 'Thinning for sawlogs' and No. 4 'Pruning trees for sawlogs'.

The risk of damage to young trees from ring-necked parrots, commonly known as twenty-eights or Port Lincoln parrots, is high in many districts. The birds ringbark stems near the growing tips and damage the main leaders which leads to development of multiple stems. Parrot control is therefore crucial as mentioned in TreeNote No. 26.



Milling of Sydney blue gum with a portable sawmill

Production

Returns vary according to volume per hectare, price per cubic metre of log and haulage distance to the mill. It has been estimated that average sawlog volume for Sydney blue gum in the 550 mm rainfall area is 180 m³/ha at 20 years, for a regime involving 150 trees/ha.

The price expected for high-grade pruned eucalypt logs is uncertain but is likely to be \$30-90/m³ stumpage. The current average stumpage for category 1 hardwood sawlogs in Australia is \$60/m³.

Further information

Farmnote 59/2004. Spotted gum (*Corymbia maculata*) for sawlogs in the 450–650 mm rainfall zone. Department of Agriculture, Western Australia.

Farmnote 60/2004. Sugar gum (*Eucalyptus saligna*) for sawlogs in the 450–650 mm rainfall zone. Department of Agriculture, Western Australia.

TreeNote No. 1 'Growing eucalypts for high grade sawlogs'. Department of Conservation and Land Management and Department of Agriculture, Western Australia.

TreeNote No. 3 'Thinning for sawlogs'. Department of Conservation and Land Management and Department of Agriculture, Western Australia.

TreeNote No. 4 'Pruning trees for sawlogs'. Department of Conservation and Land Management and Department of Agriculture, Western Australia.

TreeNote No. 26 'Parrot damage in agroforestry'. Department of Conservation and Land Management and Department of Agriculture, Western Australia.

'Eucalypts for High-Grade Timber in the Medium Rainfall Zone of WA – a feasibility study for a new industry,' by R. Moore. (2001). Department of Conservation and Land Management.

Australian Low Rainfall Tree Improvement Group (ALRTIG) website at <http://www.ffp.csiro.au/alrtig/>