



Agathis spp.

Family: Araucariaceae

Kauri

Other Common Names: Dakua makadre (Fiji), Kauri pine (New Zealand), Bindang (Sarawak), Menghilan (Sabah), Damar minyak (Malaya), Tolong (Brunei), Almaciga (Philippines).

Distribution: Widely distributed in Indochina, Malaysia, Indonesia, Philippines, and extending to New Guinea, New Zealand, and Fiji. Found from sea level to high altitudes.

The Tree: Varies with species but may reach a height of 200 ft with trunk diameters of 5 to 7 ft, sometimes reaching 10 ft and more. Boles are straight, cylindrical, without buttresses, and clear for long lengths.

The Wood:

General Characteristics: Heartwood pale cream, golden brown, to dark reddish or yellowish brown if resinous; usually not distinct from the sapwood. Lustrous; grain mainly straight; texture fine and uniform; generally without distinctive odor or tastes (*A. australis* has a faint pleasant odor).

Weight: Basic specific gravity (ovendry weight/green volume) 0.41 to 0.47; air- dry density 30 to 36 pcf.

Mechanical Properties: (First two sets of data based on the 2-in. standard, the third set on the 2-cm standard.)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
Green (34)	6,600	1,330	2,840
12%	11,750	1,650	5,900
Green (15)	7,790	1,570	3,370
12%	13,070	1,890	5,600
Green (35)	8,570	1,400	4,040
12%	13,600	1,600	6,900

Side hardness 480 to 760 lb for green material and 700 to 870 lb at 12% moisture content.

Drying and Shrinkage: The timber is reported to season well with little or no degrade. Kiln schedule T7-B3 is suggested for 4/4 stock (*A. alba*) and kiln schedule T10-D5S for 4/4 stock (*A. australis* and *A. vitiensis*). Shrinkage green to ovendry: radial 4.2%; tangential 6.0% (*A. alba*).

Working Properties: The timber works easily with hand and machine tools, finishes with a clean smooth surface; good nailing and screwing properties; good veneer peeling characteristics; paints and polishes well; easy to glue.

Durability: Generally reported to be nondurable and vulnerable to termite attack; prone to blue stain. Heartwood of *A. australis* is moderately durable in ground contact.

Preservation: Usually treatable by standard preservation techniques.

Uses: Vats and tanks, patternmaking, millwork, boatbuilding, furniture components, face veneers, shingles, pencil slats. Trees are tapped for its copal used in varnishes and lacquers (*A. alba*).

Additional Reading: (15), (34), (35), (65)

15. Entrican, A. R., revised by J. S. Reid. 1949. The properties and uses of Kauri (*Agathis australis*). Inform. Ser. N.Z. For. Serv. No. 7.

34. Lauricio, F. M., and S. B. Bellosillo. 1966. The mechanical and related properties of Philippine woods. *The Lumberman* 12(5):66 +A-H.

35. Lavers, G. M. 1967. The strength properties of timbers. For. Prod. Res. Bull. No. 50. H. M. Stationery Office. London.

65. United Kingdom: Dep. Sci. Ind. Res. 1957. A handbook of softwoods. H. M. Stationery Office. London.

From: Chudnoff, Martin. 1984. *Tropical Timbers of the World*. USDA Forest Service. Ag. Handbook No. 607.