



***Azadirachta spp.***

**Family: Meliaceae**

**Neem**

**Maranggo**

**Other Common Names:** Ranggaii (Sabah), Sentang (Malaya), Ranggu (Sarawak), Tamaka (Burma).

**Distribution:** Throughout the Indo-Malayan regions, well distributed in lowland forests. Extensively planted as an ornamental and for shade in gardens and along roadsides in the tropics.

**The Tree:** With a clear cylindrical trunk about 20 to 45 ft in length; diameters of 3 to 5 ft; bole is sometimes fluted.

**The Wood:**

**General Characteristics:** Heartwood reddish brown, darkening on exposure; sapwood straw colored to pale red, not sharply demarcated. Texture moderately coarse; grain interlocked; dull to somewhat lustrous; has a faint cedary odor when fresh which fades on drying, no distinctive taste.

**Weight:** Basic specific gravity (ovendry weight/green volume) 0.52; air-dry density 40 pcf.

**Mechanical Properties:** (First set of data based on the 2-cm standard, the second set on the 2-in. standard.)

Moisture content (%)	Bending strength (Psi)	Modulus of elasticity (1,000 psi)	Maximum crushing strength (Psi)
Green (70)	11,000	1,120	5,300
12%	14,300	1,270	7,370
12% (47)	11,480	1,009	6,680

Janka side hardness 1,220 lb for green material and 1,460 lb at 12% moisture content.

**Drying and Shrinkage:** The timber is reported to season well with little or no degrade. Kiln schedule T2-D4 is suggested for 4/4 stock and T2-D3 for 8/4. Shrinkage green to air dry: radial 2.2%; tangential 4.3%; volumetric 6.5%. Movement in service is rated as small.

**Working Properties:** Works well with hand and machine tools; a fine smooth finish is produced.

**Durability:** *A. excelsa* reported not resistant to decay while *A. indica* is rated as durable to moderately durable.

**Preservation:** Heartwood is not treatable but sapwood absorption is good using a pressure-vacuum system.

**Uses:** Veneer and plywood, furniture and cabinetwork, joinery, carving.

**Additional Reading:** (9), (47), (70)

9. Burgess, P. F. 1966. Timbers of Sabah. Sabah For. Rec. No. 6.

47. Pearson, R. S., and H. P. Brown. 1932. Commercial timbers of India. Gov. of India Central Publ. Br., Calcutta.

70. United Kingdom: For. Prod. Res. Lab. 1968. Report on two consignments of Neem (*Azadirachta indica*) from the Republic of the Sudan. FPRL consignment Nos. 1307 and 1374. Reports on Overseas Timbers, Princes Risborough Lab. No. 11.

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