

# Mora



<b>Scientific Name:</b>	Mora excelsa
<b>Family:</b>	Caesalpiniaceae
<b>Other Names:</b>	Nato, Nato rojo (Columbia), Mora de Guayana (Venezuela), Morabukea, Mora (Guyana), Moraboekea (Suriname), Pracuuba (Brazil)



## The Tree

Usually grows 100-120 feet high and 1-3 feet in diameter with clear boles 60 feet or more above very large buttresses that may extend 15 feet up the trunk. Trees of *M. excelsa* grow from 160-200 feet high and 4 feet in diameter are reported.

## The Wood

**General Characteristics:** Colour ranges from yellowish red brown, reddish brown or dark red with paler streaks. Sapwood is 2-6 inches wide with a yellowish to pale brown colour. The texture moderately fine to somewhat coarse and has a harsh feel. Luster is medium to high. The grain is straight and often interlocked. It has an astringent taste and a slightly sour odour.

**Weight:** Basic specific gravity (ovendry weight/green volume) 0.76 to 0.84; air dry density 59 to 65 pcf.

**Drying and Shrinkage:** Drying reports are variable, generally rated moderately difficult to season; a slow rate of drying and careful stacking are suggested to keep warp and other degrade to a minimum. Boxed heart pieces tend to split. Kiln schedule T2-C2 is suggested for 4/4 stock and T2-C1 for 8/4. Shrinkage from green over dry radial 6.9%; tangential 9.8%; volumetric 18.8%.

**Working Properties:** This wood is moderately difficult to work but yields smooth surfaces in sawing, planing, turning or boring unless interlocked grain is present then there may be considerate 'pick up' and chipped grain.

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

Moisture Content (%)	Bending Strength (psi)	Modules of Elasticity (1000 psi)	Maximum Crushing Strength (psi)
Green (75)	12,630	2,330	6,400
12%	22,100	2,960	11,840
Green (42)	13,600	2,150	7,150
12%	24,400	2,790	12,700

Janka side hardness 1450 lb. for green material and 2300 lb. at 12% moisture content. Forest Products Laboratories toughness average for green and dry material is 228 in-lb. (5/8-in specimen)

**Durability:** Material from Suriname and Guyana is rated durable to very durable in resistance to brown rot and white rot fungi. Service life varies from 15-20 years in ground contact is reported. *M. gonggrijpii* is rated very resistant to dry-wood termites and *M. excelsa* is considerably less resistant and does not resist marine borers.

**Distribution:** *M. excelsa*: Widely distributed in the Guianas and in the Orinoco Delta of Venezuela. They are dominant on river levees and flood plains forming dense stands.

*M. Gonggrijpii*: Restricted to Guyana and Suriname, a dominant species best adapted to hillsides on heavy clay soils.

**Preservation:** Sapwood responds readily to preservative treatments, heartwood resist to impregnation, penetration is very shallow and absorption is low.

**Uses:** Best suited for heavy construction such as jetties and foreshore work. It is particularly suitable for sleepers, wagon bottoms, and for both traditional and Mosaic flooring along with shipbuilding. In addition it can also be used for railroad cross ties and high quality charcoal wood.

## References

- Chundnoff, Martin (1984), "Tropical Timbers of the World." USDA Forest Service Ag. Handbook No.607.

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