

# GRANADILLO

**Botanical name:** *Platymiscium* cf. *yucatanum*, Family Fabaceae-Faboideae.

**Geographic distribution:** Mexico, endemic species of the Yucatan peninsula.

**Other names:** Chulul, grenadillo, subin`ché, hormiguillo (MX)

**CITES protection status:** Not protected.

**Background:** Endemic species to the Yucatan peninsula, including Chiapas, Belize and the Petén region (Guatemala). The wood is considered of high commercial value but with limited availability (log exports to China and Japan). It is considered a critically endangered species by local authorities (Society of Ejidal Forest Producers of Quintana Roo).

**Wood characteristics:** Heartwood of purplish-brown color with pronounced streaks. Sapwood of yellowish-cream color, 3-4 cm wide. Growth ring boundaries microscopically distinct, marked by very fine bands of marginal parenchyma. Pronounced grain, medium texture, interlocked grain. Freshly worked wood has a pleasant sweet odor.

Physical Properties		
Green weight [kg/m³]	1247	
Air-dry density (12% MC) [g/cm³]	0.98	
Shrinkage radial        [%] tangential [%]	Total*	Normal**
	3.7	1.1
	5.9	1.7
Differential swelling [%/%]	radial: 0.28 tangential: 0.42	
Dimensional stability	very good	
Mechanical Properties		
Compressive strength (parallel, 12% MC)[N/mm²]	75–82–88	
Bending strength (12% MC) [N/mm²]	129–154–179	
Modulus of elasticity (bending, 12% MC) [N/mm²]	14078–15488–16898	
Impact resistance (10% MC) [kJ/m²]	68–81–94	
Shear strength (12% MC) [N/mm²]	15–18–21	
JANKA hardness (side, 12% MC) [kN]	12–16–20	
BRINELL hardness (side, 12% MC) [N/mm²]	44–57–69	

\*Green to dry (0% moisture); \*\*Green to 12% moisture

**Workability:** Due to its high density, it is difficult to work with hand tools, however it shows very good workability in all machining operations with tools equipped with tungsten carbide or stellite reinforced edges. Excellent behavior in mortising and molding, while planing may show minimal defects due to interlocked grain, with the problem being more pronounced in knot areas, good in drilling, good for gluing with common white glue. Pre-drilling is essential for screwing.

**Drying:** Low permeability wood, however air drying is moderately slow with few noticeable defects such as warping, cracking (ends) and cupping, practically free of residual internal stresses after drying. For drying, the US T2-B2 program is recommended.

**Natural durability:** Heartwood very resistant to decay fungi (class 1 according to ASTM D 2017-71 and EN 350-1), suitable for outdoor use in ground contact. It also has a reputation for being termite-resistant.

**Uses:** Fine cabinetry, decorative sliced veneers, musical instruments (marimbas, guitars), parquet, flooring strips, engineered flooring, workbench and kitchen countertops, watch cases, urns, crafts, carved and turned objects.

## **Bibliography**

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- Vester, H.F.M. y Navarro Martínez, A. 2007. Árboles maderables de Quintana Roo. Fichas ecológicas. CONACYT y Colegio de la Frontera Sur, Chetumal, Q. Roo. 139 pp.



*Platymiscium* cf. *yucatanum*. Cross-section (approx. 12x magnification).



*Platymiscium* cf. *yucatanum*. Surface: radial face; natural size.