



***Bertholletia excelsa***

**Family: Lecythidaceae**

**Brazil-Nut Tree**

**Other Common Names:** Castana del Maranon (Colombia), Juvia, Yubia (Venezuela), Brazilnoot (Surinam), Castanha verdadeira, Castanheiro (Brazil).

**Distribution:** Common throughout the Amazon region of Brazil, Venezuela, Colombia, and Peru. In Venezuela also found in the forests of the upper Orinoco and Rio Negro. Reaches its best development on well-drained clay or sandy clay soils.

**The Tree:** One of the largest trees of the Amazon region. Diameters occasionally reach 12 ft, and heights up to 160 ft; excellent form. The tree is highly valued for its seeds, the Brazil nuts of commerce.

**The Wood:**

**General Characteristics:** Heartwood is uniform pinkish brown becoming light chestnut brown after exposure to light. Sapwood is about 2 to 4 in. thick, pale yellowish brown, sharply demarcated from heartwood. Texture rather coarse to medium; luster medium; grain typically interlocked; odor and taste not distinctive.

**Weight:** Basic specific gravity (ovendry weight/green volume) averages 0.59. Air-dry density 44 pcf.

**Mechanical Properties:** (2-in. standard)

| Moisture content (%) | Bending strength (Psi) | Modulus of elasticity (1,000 psi) | Maximum crushing strength (Psi) |
|----------------------|------------------------|-----------------------------------|---------------------------------|
| Green (74)           | 9,740                  | 1,610                             | 4,530                           |
| 12%                  | 14,680                 | 1,760                             | 6,890                           |

Janka side hardness 940 lb green and 1,150 lb air dry. Forest Products Laboratory toughness average for green and dry material is 143 in.-lb (5/8-in. specimen).

**Drying and Shrinkage:** The wood air-dries rapidly with very little degrade. Warp and checking are slight with a minimum of case-hardening. No kiln-drying data available. Shrinkage green to ovendry: radial 3.9%; tangential 8.3%; volumetric 11.2%. Has a very low rate of moisture absorption.

**Working Properties:** The wood is moderately difficult to work, glues readily, and finishes smoothly. Exudations of gum tend to clog saws in cutting green material. Moderately easy to cut into smooth tight veneer of uniform thickness.

**Durability:** Laboratory tests indicate heartwood is very durable to durable in resistance to white-rot and brown-rot fungi. The wood displays good weathering characteristics.

**Preservation:** Low rates of moisture absorption suggest a poor response to preservation treatments.

**Uses:** Boat and ship decking, steam-bending applications, railroad ties, exterior construction, tanks, flooring, furniture, and cabinet stock. If free of gum, split and tension wood, should be suitable for interior decorative panels.

**Additional Reading:** (56), (74)

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