



Gymnocladus dioicus

Family: Leguminosae

Kentucky Coffeetree

The genus *Gymnocladus* is represented by four species native to North America [1] and Asia [3]. The word *gymnocladus* comes from the Greek—naked branch—referring to the few stout twigs, which are conspicuous year round. The word *dioicus* relates to dioecious, meaning there are male and female trees.

Gymnocladus dioicus- American coffee bean, American mahogany, chicot, chico du Canada, chicot tree, coffeebean, coffeebean-tree, coffeenut, coffeetree, dead tree, geweihbaum, Kentucky mahogany, mahogany, mahogany-bean, nettle-tree, nicker-tree, stump tree.

Distribution

From central New York and southern Ontario west to southern Michigan, Minnesota and South Dakota south to central Kansas, southern Oklahoma east to Arkansas, Mississippi, Tennessee, Kentucky, Virginia and Pennsylvania.

The Tree

The Kentucky coffeetree is medium size, reaching 100 ft (30 m) tall and 3 ft (1 m) in diameter. The trunk commonly divides into 3 or 4 stems, about 15 ft (4.5 m) from the ground. The tree has deciduous leaves that are bipinnately compound. It produces white to lavender flowers in large clusters (terminal racemes). The tree produces bean-like pods that are hard and woody when mature and contain several seeds surrounded in sweet, greenish pulp. It grows in deep rich soils in bottom lands, in association with sweetgum, tupelo, oaks and hickories. For about 6 months of the year, the tree lies dormant, leading to the name Dead Tree or Stump Tree.

The Wood

General

The wood of Kentucky coffeetree is ring porous, resembling ash, honeylocust or sassafras. Its sapwood is narrow and yellowish white, while the heartwood is light red to reddish brown. The wood has no characteristic odor or taste. It is hard and heavy, with a coarse, straight grain.

Mechanical Properties (2-inch standard)

	Specific gravity	MOE x10 ⁶ lbf/in ²	MOR lbf/in ²	Compression		WML ^a in-lbf/in ³	Hardness lbf	Shear lbf/in ²
				Parallel lbf/in ²	Perpendicular lbf/in ²			
Green	0.53	1.00	7,320	3,360	870	–	1,080	1,360
Dry	0.60	1.42	10,500	6,600	1,470	–	1,390	1,780

^aWML = Work to maximum load.
Reference (90).

Drying and Shrinkage

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	7.6	5.9	2.4
Radial	4.1	3.3	1.2
Volumetric	11.9	9.6	4.0
Reference (90).			

Kiln Drying Schedule: No information available at this time.

Working Properties: Kentucky coffeetree works without difficulty and finishes to a smooth surface.

Durability: Very resistant to heartwood decay, especially in contact with the soil.

Preservation: No information available at this time.

Uses: Cabinets, railroad ties, fence posts and rails, general construction, railway sleepers, bridge timbers, sills, interior finish, fuel. The seeds were used by the pioneers as a coffee substitute ("coffeetree").

Toxicity: No information available at this time.

Additional Reading and References Cited (in parentheses)

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