



Maclura pomifera

Family: Moraceae

Osage Orange

The genus *Maclura* contains about 12 species native to: North America [1], with the rest in tropical America and Africa. The genus name *maclura* is after William Maclure (1763-1840), and American geologist, while the species epithet *pomifera* means bearing pomes or apples, in allusion to the large, spherical fruits.

Maclura pomifera-Bodare Us, Bodark, Bodeck, Bodock, Bois d'arc, Bowwood, Geelhout, Hedge, Hedge Apple, Hedge-plant, Horse Apple, Maclura, Mock Orange, Naranjo Chino, Osage, Osage Apple-tree, Rootwood, Wild Orange, Yellow-wood.

Distribution

Native to Arkansas, Oklahoma and Texas, but since escaped and naturalized throughout the eastern and north western US.

The Tree

Osage Orange is a medium size tree with thorns which grows in bottom lands. It attains a height of 60 feet and a diameter of 3 feet. The bark has an orange cast and was used in making kaki dye during W.W.I. It produces large spherical fruits the size of large grapefruits in the fall.

The Wood

General

The sapwood of Osage Orange is narrow and light yellow, while the heartwood is golden to bright orange, which darkens upon exposure. The heartwood can also contain red streaks. It has no characteristic odor or taste. The wood is very hard, heavy, tough, resilient and takes a high luster. It is ring porous and commonly confused with black locust (*Robinia pseudoacacia*).

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	0.76	1.33	13,700	5,810	2,260	37.9	2,040	–
Dry	0.85	–	–	–	–	–	–	–

^aWML = Work to maximum load.
Reference (59).

Drying and Shrinkage

Type of shrinkage	Percentage of shrinkage (green to final moisture content)		
	0% MC	6% MC	20% MC
Tangential	–	–	–
Radial	–	–	–
Volumetric	9.2	7.4	3.1

The wood of Osage Orange seasons well and thereafter, maintains dimensional stability well.
Reference: (90).

Kiln Drying Schedules^a

Condition	Stock				
	4/4, 5/4, 6/4	8/4	10/4	12/4	16/4
Standard	T6-A2	T3-A1	–	–	–

^aReferences (6, 86).

Working Properties: Osage Orange is difficult to work due to its hardness. It holds glue and screws well, but is difficult to nail.

Durability: Osage Orange is considered one of the most durable woods in North America.

Preservation: No information available at this time.

Uses: Fuel wood, fence posts, game calls, smoking pipes, artificial limbs, crutches, insulator pins, wheel rims & hubs of farm wagons, railroad ties, treenails, machinery parts, archery, bows (Native Americans), dye from roots, planted for windrows and hedges.

Toxicity: The sap can cause dermatitis (105)

Additional Reading and References Cited (in parentheses)

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