

## Workhorse Tree

By Susan Camp

Which native North American deciduous tree is a member of the mulberry family, bears an inedible fruit named after a tropical citrus fruit, and has a long history of use as a thorny hedgerow on American farms and ranches? If you said Osage orange, you would be correct.

Osage orange (*Maclura pomifera*) is a unique tree, native only to a small region of eastern Texas, southeastern Oklahoma, and southwestern Arkansas. Its common name derives from its home ground on Osage tribal lands and the fruit's superficial resemblance to the orange.

Osage orange has naturalized throughout most of the 48 contiguous states, but is not considered native to those areas. The USDA Natural Resources Conservation Service Connecticut defines a naturalized plant as one that "does not need human help to reproduce and maintain itself over time in an area where it is not native." A naturalized plant can become invasive, and osage orange reproduces quickly on abandoned fields and pastures, where it can override the growth of native vegetation. It has primarily spread east of the Mississippi River, except for northern New England.

Osage orange grows to a height of 35 to 60 feet, with a spread of similar size. It grows well in USDA Hardiness Zones 4 through 9, in full sun to part shade, preferring rich bottomland soil; it is, however, tolerant of clay soil. Osage orange also is air pollution and drought tolerant. The oval, dark green leaves change to translucent yellow in the fall. Few serious diseases or insect pests affect osage orange.

Osage orange is dioecious, meaning that both a female and a male tree must be planted nearby for the female to develop fruit. The unusual, pale green flowers, which hang from a central head, appear in May or June. They mature in September or October into a 4 to 5 inch globular fruit composed of hundreds of small drupes. Both male and male trees can produce fruit, but only female fruit contain seeds. The fruit is yellowish-green, with a warty appearance. It contains a milky, latex sap that can cause skin irritation in susceptible individuals. Osage orange trees create a litter problem when the fruit drops, and the odor from the rotting male flowers is unpleasant.

Known by several common names, including hedge apple and horse apple, Osage orange was used by the Osage Indians to make bows. Early French settlers called the tree Bois d'Arc, meaning bow-wood; in some regions, it is known as bodark, from the French name, which could lead to the topic for another article on the confusion between regional common names!

The dense, heavy wood is orange-colored with yellow sapwood. Besides bow-making, it has been used since the early 1800's for fence posts, tool handles, and mine timbers. It is considered rot-resistant for 20 to 25 years. The most important use of Osage orange before the invention of

barbed wire was as planted hedgerows on the prairies. The trees grow quickly, sending out many suckers that form an almost impenetrable barrier to keep livestock in and unwanted predators out. The sharp thorns that sprout from the twig axils form an added deterrent and provide safe habitat for birds and small mammals.

Osage oranges have long been thought to repel insects, but testing by Iowa State University toxicologists demonstrated that although the fruit contains chemical compounds that repel insects, the amounts are too low to be of any practical use. The dried fruit is sometimes used in floral arrangements. A yellow dye can be extracted from the wood.

The Missouri Botanical Garden article “*Maclura pomifera*” provides basic information on Osage orange. The USDA Natural Resources Conservation Service Plant Fact Sheet “Osage Orange” contains information on the tree’s invasiveness status and the University of Nebraska Lincoln Extension article “Facts and Myths about Hedge Apples” discusses various uses of the fruit and wood.

Not a tree admired for its aesthetic value, Osage orange has a long history of practical uses in the American heartland.

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