

# TECHNICAL NOTES

U.S. DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

STATE OFFICE

STILLWATER, OKLAHOMA 74074

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## PLANT SCIENCE TECHNICAL REFERENCES - FOR IN SERVICE USE ONLY

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Woodland OK-3

July 18, 1972

### Re: Major Wood-Producing Tree Species in Oklahoma

The following is an alphabetical listing of the major wood-producing tree species occurring in Oklahoma. Shown for each species are its primary uses and brief comments concerning the species.

#### ASHES

Green ash  
(*F. pennsylvanica*)

Factory lumber and small dimension, . Most important for long handles, implement stock, athletic goods, and paneling. Some face veneer.\*\*\*On wet sites commonly develops swollen (pumpkin) butts which are brash and can be used only for trim and furniture stock. Outstandingly clear, but occasionally very crooked or short-boled or- lowest sites.

White ash  
(*F. americana*)

Same uses as green ash. \*\*\* Consistently of good form and texture except on driest sites, where it is brash. Runs exceptionally well to upper grades.

BASSWOOD  
(*Tilia* spp.)

Factory lumber and commercial Veneer--farm gates. Pulpwood.\*\*\*

BIRCH, RIVER  
(*Betula nigra*)

Commercial and package Veneers. Rarely for lumber and then mostly by box factories. Pulpwood.\*\*\*Short-lived, second- or third-rate tree.

CEDARS  
Eastern redcedar  
(*Juniperus Virginiana*)

Standard lumber and small dimension for chests, cabinets, novelties, and specialties--pencil stock, posts.\*\*\* Common old-field tree. Valuable source of bird food.

CHERRY, BLACK  
(*Prunus serotina*)

Generally, very valuable for standard lumber and :Face veneer. Most important for furniture.\*\*\*Wilted leaves are poisonous to livestock. Fruit valuable for wildlife.

AREA AND DISTRICT CONSERVATIONISTS

COTTONWOODS Eastern cottonwood (Populus deltoides)	Factory and box lumber. Package and commercial veneer. Pulpwood. Highly prized for high proportions of clear good; light and tough. One of few premium package woods.*** Fastest, growing tree in North America.
CYPRESS Baldcypress (Taxodium distichum var. distichum).	Highly prized for durability and working qualities. Factory and structural lumber, piling. Boat and tank stock from top grades of lumber. ***Sappy second growth not durable but has superior working qualities and knots are small and sound.
DOGWOOD, FLOWERING (Cornus florida)	Specialties, primarily shuttle blocks.***Prized as ornamental. Large proportion of stems too crooked for commercial uses.
ELMS American elm (Ulmus americana)	Factory lumber, slack cooperage, and bending stock, Commercial and package veneer. Has been good staple utility species but acceptability now depreciated partly by practice of mixing in winged elm. Good second- rate tree. Tendency towards poor form. Epicormic twigs common, otherwise exceptionally clear.
Cedar elm (U. crassifolia).	Local-use lumber. Sparingly for factory lumber and heavily high-graded. Pallets. Extremely hard wood, so cannot be used with other elm. ***Third-rate tree. Severe epicormic branching degrades upper logs. Fluted, odd- shaped stems are common.
Slippery elm (U. rubra)	Similar uses to American elm but dark brownish-red color complicates furniture use. Better grain and texture than American elm. Favored for farm use, gates, cribs, corrals, wagon stock. * * Second-rate tree. Tendency to limbiness. Poor form, epicormic branching on dry sites.
Winged elm (U. alata)	Sparingly for local-use and factory lumber; generally severely high-graded for latter and used to adulterate soft elm stocks. Not preferred for package and veneer use. Acceptable for ties.***Small tree. Stunted and gnarled on poor, dry sites, but elsewhere of very good form.
GUMS, TUPELOS Sweetgum (Liquidambar styraciflua) .	Face, commercial, and box veneer. Factory lumber and small dimension for furniture and interior trim. Crossties, slack cooperage. Is principal hardwood pulping species. *** Most widely distributed and broadest utility of any southern hardwood species. Subject to epicormic branching when drastically released, especially on poor sites.
Black tupelo (Nyssa sylvatica var. sylvatica).	Rather low value because of tendency to warp, but can be excellent when large enough for quartersawing. Standard and box lumber, ties, and pulpwood. Practically no veneer. * * * Commonly grows with white oaks, winged elm, and hickory. On poorer sites, ties end cordwood only.

- HACKBERRY AND SUGARBERRY  
(*Celtis occidentalis* and *C. laevigata*). Factory lumber. Particularly valued for light-colored furniture. Some commercial and package veneer, slack cooperage, and recently, pulpwood. \*\*\*Best quality and form as well as growth from stands originating in open.
- HICKORIES  
(*Carya* spp. )  
Also see pecans. Striking-tool handles, implement parts, athletic goods, and other specialties cut mostly from bolts but partly from thick lumber. Sparingly used for factory lumber, often with pecan. Some crossties and charcoal. \*\*\*Only best material commonly used. No distinction made between species except through average quality and texture. *C. cordiformis*, "bitternut," is poorest; usually avoided. High proportion of heartwood and slow growth lower salability for specialty uses.
- HOLLY, AMERICAN  
(*Ilex opaca*). Decorative foliage and fruit. Special cabinet work in trifling amounts--from small dimension cut from short logs and bolts. A very little lumber is mixed in with other light-colored species.\*\*\*Stems at maturity are usually small, short, and limby.
- LOCUSTS
- Black locust  
(*Robinia pseudoacacia*) The naturally durable wood is used for posts.\*\*\* Minor species.
- Honeylocust  
(*Gleditsia triacanthos*). Local-use lumber, posts, and occasionally factory lumber and ties.\*\*\* Tendency to ring shake and heart check in large, old trees. Seed pods are excellent mast. Not especially durable.
- MAGNOLIAS AND BAYS
- Cucumbertree  
(*Magnolia acuminata*). Factory lumber.\*\*\*Occurs only in Leflore and McCurtain counties.
- MAPLES
- Boxelder  
(*Acer negundo*). Rarely used. Some lumber, crating, and pulpwood. Lumber included with soft maple or other soft, light-colored utility wood. Matures when young and small. Very poor form prevalent. Practically a weed tree. Turkey, bird, and squirrel food.
- Red maple  
(*A. rubrum*). Factory lumber. Some commercial and package veneer. Pulpwood. \*\*\*Scattered occurrence and poor form have limited its use. Grade of lumber generally is better than indicated on surface of log.
- Silver maple  
(*A. saccharinum*). Factory lumber. Substituted for hard maple when texture not too important and if relatively free of spot worm. Pulpwood. \*\*\*Good second-rate tree.

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Sugar maple ( <i>A. saccharum</i> ).	Factory lumber. Not important in South.
MULBERRY, RED ( <i>Morus rubra</i> ).	Fence posts.*** A small understory tree, practically never of saw-timber size.
OAKS	
Black oak ( <i>Quercus velutina</i> ). epicormic	Factory lumber, ties, and timbers. Wood texture very good. Often very poor tree, but best trees on best sites equivalent to cherrybark oak. Subject to branching when drastically released, especially on poor sites.
Bur oak ( <i>Q. macrocarpa</i> ).	Ties and timbers, factory lumber, tight cooperage. Generally higher equality than overcup oak because free from insects. Hard, strong, durable wood; excellent farm-use species. Second-rate commercially because of roughness; much upland growth nearly worthless because of short rough boles.
Cherrybark oak ( <i>Q. falcata</i> var. <i>pagodaefolia</i> ).	Face veneer, factory lumber, cooperage, crossties. ***Best red oak.
Chinkapin oak ( <i>Q. muehlenbergii</i> ).	A white oak equal in utility and value to <i>Q. alba</i> .
Northern red oak ( <i>Q. rubra</i> )	Face veneer, factory lumber, cooperage, ties and timbers. Equivalent to cherrybark oak. Wood of excellent texture and working properties. Lumber-grade yield very high.
Overcup oak ( <i>Q. lyrata</i> ).	Utility varies extremely with site and fire damage. At best nearly equivalent to white oak. Frequently worthless for factory lumber because of insects and stain. Checking during seasoning prevents general use for ties and timbers.
Pin oak ( <i>Q. palustris</i> )	Local-use lumber and fuel. Some ties and timbers but tends to check excessively. The worst of the oaks for persistent, small body limbs, and therefore generally worthless for factory lumber. Varies by locality and stocking, though, and is occasionally high-graded for factory lumber.
Post oak ( <i>Q. stellata</i> var. <i>stellata</i> )	Factory lumber is high-graded from best sites. Good tie and timber species. ***Third-rate tree. Natural pruning of upper stem is slow, trees generally short. Poorest of the white oaks.
Shumard oak ( <i>Q. shumardii</i> )	Face veneer, factory lumber, cooperage, crossties. ***Similar to cherrybark oak in quality and utility. Almost indistinguishable from the scarlet oak.
Southern red oak ( <i>Q. falcata</i> var. <i>falcata</i> )	Ties and timbers. Pest trees on good sites produce excellent factory lumber, comparable to northern red oak.*** Second-rate tree on all but best upland sites because of tendency to shortness and roughness and insect and stain damage. Good wood texture for all uses. Dries well.

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Swamp white oak ( <i>Q. bicolor</i> )	A high-class white oak of good value but too scarce to be marketed alone. Face veneer, tight cooperage, factory lumber, and ties, etc.
Water oak ( <i>Q. nigra</i> )	Factory lumber. Ties and timbers. Poor to medium values. A very good second-rate tree on the best sites. Knotty, grubby, bark-pocketed, and stained on poor sites. May check excessively in drying. Subject to epicormic branching when drastically released, especially on poor sites.
White oak ( <i>Q. alba</i> )	Prized for both commercial and farm use. Face veneer, tight cooperage, factory lumber, ties, and timbers.***Sometimes subject to excessive epicormic branching on poor sites or when crowded.
Willow oak ( <i>A. Phellos</i> )	Factory lumber. Ties and timbers, especially from high terrace and "pin oak flat" stands. Rapid growth and relatively high utility on appropriate sites. Tendency to check excessively detracts from utility. Subject to epicormic branching when drastically released, especially on poor sites.
OSAGE-ORANGE ( <i>Maclura pomifera</i> )	Very durable wood. Fence posts and small poles. Too small for lumber ties and timber but welcomed for specialties such as insulator pins and archery bows. ***Minor local species; widely planted and naturalized in spots. Principal handicap is crookedness.
PECANS Pecan ( <i>Carya illinoensis</i> )	Standard lumber and a little commercial and face veneer. Turns into furniture, flooring and trim, and implement and vehicle parts. Sometimes mixed with hickory but not quite hard and tough enough for most hickory specialties. ***Good second-class species--perhaps risk of roundheaded borer in flooring and trim is only bar to first class rating.
PERSIMMON, COMMON ( <i>Diospyros virginiana</i> )	Marketing difficult due to scattered distribution of trees and localized specialty manufacture. Shuttle blocks, golf club heads from white or cream-colored sapwood. Black - heartwood valueless because of excessive checking. Good, self-pruning tree. Little heartwood develops on favorable sites. On dry old fields, a small ill-formed weed along with sassafras.
PINES	
Loblolly pine ( <i>Pinus taeda</i> ).	Structural lumber, posts, poles, pulpwood.***
Shortleaf pine ( <i>Pinus echinata</i> )	Structural lumber, posts, poles and pulpwood.***
SASSAFRAS ( <i>Sassafras albidum</i> ).	Boat lumber, rarely interior trim (mostly custom work), posts. No established market as standard factory lumber. Sparse, scattered supply makes it negligible in commerce, though the lumber is light, durable, straight grained, easy to work and bend, and of excellent appearance.

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SYCAMORE, AMERICAN  
(Platanus  
occidentalis).

Commercial and package veneer, occasionally factory lumber. Box  
Lumber. Specialties such as butcher blocks. Fair values.  
\*\*\*Clean, clear boles, but very large tree and likely to be  
wind-shaken. Withstands drought much better than cottonwood and  
willow and will grow on higher sites and coarser soils.

WALNUT

Black walnut  
(Juglans nigra).

Most valuable native species for face veneer and factory lumber.  
Gun stocks and other specialties.\*\*\* Often bought by the tree,  
stump and all. Where quality is satisfactory, is sought out  
truckload by truckload over wide radius. Single trees are sold  
occasionally. Expert middlemen needed, though.

WILLOWS

Black willow  
(Salix nigra).

Factory lumber, commercial and package veneer, box lumber.  
Interior trim from the red heartwood.

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REFERENCE: Agriculture Handbook No. 181, U. S. Department of Agriculture,  
Forest Service

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