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## Pecan



Pecan (*Carya illinoensis*) is one of the better-known pecan hickories. Besides the commercial edible nut that it produces, the pecan provides food for wildlife. Pecans are an excellent multipurpose tree for home landscaping. They provide a source of nuts, furniture-grade wood, and esthetic value.

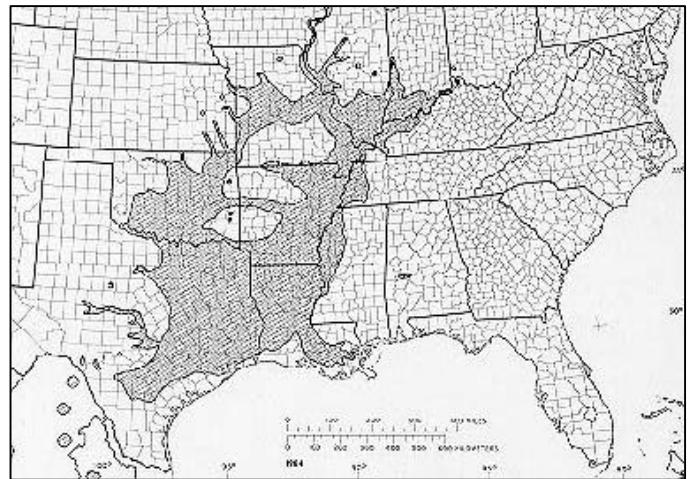
Pecan is distinguished from other hickories by its thin-shelled nuts with sweet kernels. Nuts are typically elliptic to oblong in shape, round in cross-section, and have smooth, brown shells with prominent black markings, especially near the apex. Husks are typically about 4 mm thick and are at least slightly raised at the sutures.



### Natural habitat

The tallest-growing of all native hickories, pecan begins bearing fruit at approximately 20 years of age, with the best rate of production coming from old pecan trees. Americans Indians used the pecan long before European explorers arrived.

Commercially, the pecan is one of the most important native nut tree in North America. The once overlooked wood has in recent years achieved new prominence as fine furniture, wall paneling, and architectural interior wood.



### Native range of pecan

Electronic source: Peterson. 1990.

Pecan grows principally in the lower Mississippi Valley. Within this region it extends westward to eastern Kansas and central Texas, eastward to western Mississippi and western Tennessee. Sparse occurrence has been reported along the

eastern margin of its range from southwestern Ohio to Kentucky and Alabama. Pecan also grows locally throughout northeastern and central Mexico.



## Cultivation

Pecan trees prefer light to medium textured soils, pH 5.5-6.0, but can be grown on soils with higher clay content and slightly higher pH. Soil depth should be several feet, with the water table below the root zone during the growing season. Pecans are native to floodplains and river-bottoms, and require large amounts of water. Irrigation has been shown to increase yields even in the humid southeastern US, and is essential for western orchards.

Pecans perform equally well in arid and humid climates, provided with adequate soil water. Disease pressure is worse in humid climates, as for most horticultural crops.

Grafting is the most popular method of propagation. Rootstocks are often “whip-and-tongue” grafted (a type of apical grafting) in February or March using 1 year old scions. Patch-budding is the most common budding technique. This is usually done in late summer using buds from current season's wood; buds are forced the following spring. (Reiger 2000)



## Harvest, storage, and processing

Pecans are mature and ready to harvest anytime after the shuck begins to open. It is easier to wait and harvest nuts by shaking or thrashing branches after shucks are wide open and partially dried. However, the longer you wait, the more pecans that may be lost to predators. Squirrels, crows, blue jays, wild turkeys, raccoons and deer can cause serious yield reduction.

Nuts harvested early in the season have high moisture content and need to be dried before storage. Dry them in the shell in thin layers on elevated screens or hang them in small mesh bags in a well-ventilated area at room temperature out of direct sunlight. Within 2 weeks the nutmeats should be dry enough to snap when bent, an indication they are ready for storage or immediate use.

To retain nutmeat quality, store pecans in the freezer. Pecans retain good quality for up to 6 months in the refrigerator, but the freezer ensures much better quality when storing shelled pecans. Pecans readily absorb odors from almost any material, including other fruits and vegetables, so be careful to protect them from possible contaminating odors. (Lipe et al.)



## Marketing

A few nut companies specialize in selling nuts from trees that grow wild, rather than the specially bred papershell pecans grown

commercially in the Southeastern United States. The papershell pecans are larger, but many feel that the wild pecans have a sweeter flavor and a higher oil content. (Thomas and Schumann 1993)



## Conservation and management concerns

The use of nut-bearing crops as part of an agroforestry management plan results in little or no tillage and provides a permanent cover during both growing and dormant seasons. It also means that there would be a reduction in fuel consumed in plowing and tilling, a reduction in pesticides, and a reduction of soil compaction. Finally, any type of tree cultivation has tremendous potential to reduce the buildup of carbon dioxide. Pecan trees require a minimum permanent spacing area of 50 square feet. (Thomas and Schumann 1993)



## Medicinal properties and non-food uses

As an astringent, pecans are folk remedies for blood ailments, dyspepsia, fever, flu, hepatitis, leucorrhea, malaria, and stomachache. Pecan oil is used in drugs, essential oils, and cosmetics. Leaves and fruits contain juglone, which is allelopathic and fungitoxic. It has been reported that it contains another fungitoxic substance, linalool (Reiger 2000).

The ground shells are used as plywood filler. (Thomas and Schumann 1993) Pecan shells

as an organic component of container potting media have been experimented on. (Wang and Polorny 1989) Spirit of the Old West is proud to offer a good selection of Pecan Shell Figurines which are carved out of a mixture of crushed pecan shells and resin which results in a beautifully handcrafted figurine.



## References and information resources

*(You may be able to find some of these or other publications in your local library. Another valuable resource is your local cooperative extension office.)*

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## Electronic resources

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*This fact sheet was written and prepared by Soumitri Das, Laura Shillington, and Tom Hammett at the College of Natural Resources, Virginia Tech, Blacksburg, Virginia.*



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*This is part of a series of fact sheets on non-timber forest products. The full set of fact sheets is available at the Non-timber Forest Products website: <http://www.sfp.forprod.vt.edu/>*

*Please give us your comments on this fact sheet and suggestions for future fact sheets. Direct your comments to Tom Hammett, Department of Wood Science and Forest Products, 210 Cheatham Hall (0323), Virginia Tech, Blacksburg VA 24061. Phone: (540)-231-2716. E-mail: [himal@vt.edu](mailto:himal@vt.edu).*

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