



Starting Pecan Trees

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There are three major ways to establish a pecan tree: (1) plant pecan nuts directly in place in the orchard and topwork the resulting seedlings to the desired cultivar, (2) plant nursery seedlings in the orchard and topwork them to the desired cultivar, or (3) plant a grafted tree from the nursery of the desired cultivar. Each of these methods has its advantages and disadvantages.

Starting With Nuts

Starting trees directly from nuts involves the least expense, but it also requires two to four years for the tree to grow large enough to topwork. Starting trees from directly planted nuts may be successful in bottomland prone to flooding where transplanting nursery trees is unsuccessful.

Nuts for planting should be mature, well filled, and free of insect damage. Nuts from the Northern cultivars such as 'Giles' and 'Peruque' give cold-hardy rootstocks and are preferred, especially in northern Oklahoma. Seedlings of other cultivars give varying performance, but 'Apache' has proven satisfactory for southern Oklahoma. Nuts may be planted directly in the ground in the fall but these early planted nuts are prone to damage by mice and squirrels. It is generally more satisfactory to stratify the nuts, and then plant them in the spring.

Stratification is a cold, moist treatment that allows the pecan nut to grow normally and vigorously in the spring. Stratification effectively mimics the conditions that the nut would experience if buried in the ground over the winter. The two prime requirements for stratification are that the nuts stay moist (but not soggy), and cold (but not freezing).

For best results, after collecting the nuts in the fall, they should be soaked in aerated water for two days prior to stratification. Nuts are placed in a container and covered with tap water. An airstone connected to a small aquarium air pump is placed in the bottom of the container. The aeration is important, otherwise the nuts will soon use up the oxygen in the

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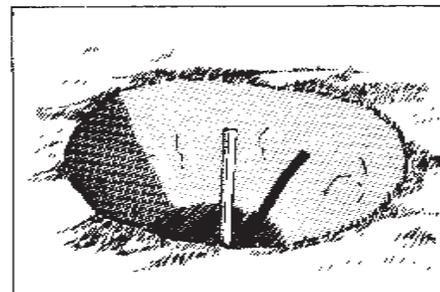
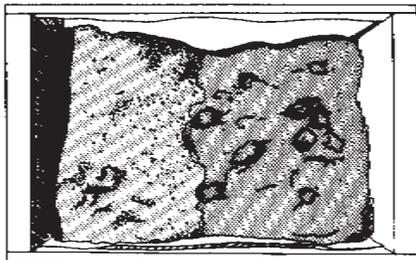
water and die. This pre-soaking treatment is not absolutely essential, but it helps ensure more uniform germination and growth in the spring.

After pre-soaking, the nuts should be packed in a moist material in a container that has drainage holes. Alternate 2-inch layers of packing material with a layer of nuts and top off with 2 inches of the packing material. Moist sand or sawdust are traditional packing materials and work well, but moist vermiculite, because it is sterile, can reduce the number of nuts that rot during stratification. The container should be kept cold, preferably between 36°F and 42°F for three months. Suitable sites for storing the container are: (1) loosely wrapped in a plastic bag (not sealed tightly) in the household refrigerator, (2) buried under soil or mulch on the north side of a building, or (3) in an unheated building protected from both warm temperatures and extreme cold. It is important that the nuts not be allowed to dry out and that they be protected from warm temperatures, otherwise the stratification process will be delayed or even reversed.

Nuts are planted outside in February or March, but not before their three months stratification is completed. Nuts are planted 3 inches deep in hills of three directly where the tree is wanted. The hills should be marked with a stake so you can find the seedlings later. Thin to one tree per hill after the first year. Control weeds and provide irrigation for best growth. Seedlings will grow very slowly the first two or three years, but will develop a taproot and extensive root system during this time.

Starting With Seedling Trees

The seedling trees can be bought from a nursery or can be grown from stratified nuts planted in a nursery block (plant



3 inches deep and 10 inches apart within the row) or in small containers. The seedling trees are planted in place and usually are allowed to grow in the orchard for at least one year before being topworked. Buying seedling trees rather than planting nuts in place saves two to three years of establishment time, and seedling trees can be obtained relatively cheaply.

Topworking

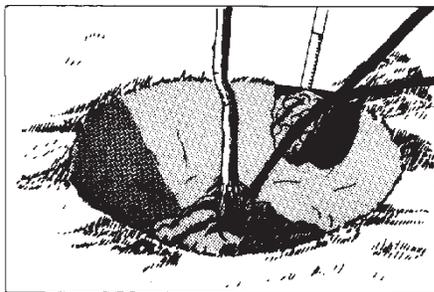
Whether you plant seedling trees or nuts you will need to graft the seedlings to a named cultivar, since pecan seedlings will not be true to type. Currently the most popular type of graft with both experienced and novice grafters is the four-flap graft, although the bark graft can also be used (See OSU F-6230 'Four-flap Grafting of Pecans', F-6204 'Bark Grafting Pecans' and F-6217 'Collecting and Storing Pecan Propagation Wood'). Place the graft at least 3-4 feet off the ground. Leaving this much of the seedling trunk improves the winter hardiness of the tree trunk. If cattle are to be in the orchard, do all of the grafting 7-8 feet above the ground to keep the graft out of reach. The tailgate of a pick-up backed up to the tree provides a convenient working platform.

Starting With Grafted Trees

Using grafted trees is by far the quickest way to get a pecan orchard into production, but it is also the most expensive. The source of the seedling rootstock is usually unknown and the graft is usually near ground level. This is more of a concern in northern Oklahoma than it is in southern Oklahoma. Many successful orchards have been established using grafted nursery trees.

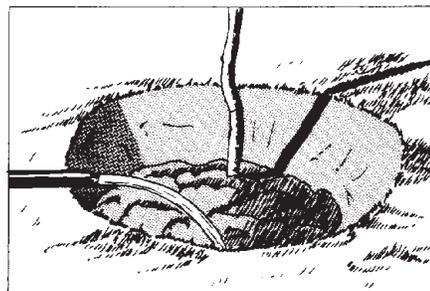
Planting Pecan Trees

February, March or early April is the best time to plant the trees. If buying grafted nursery stock, five to six foot trees are the best size. Select the best adapted varieties for your location. See F-6201, 'Pecan Varieties for Oklahoma'. If the root system of the trees looks dry when the trees arrive, soak the roots in water for three to four hours before planting. The pecan tree is dormant at planting time, but it is extremely important to prevent drying out of the roots during or after



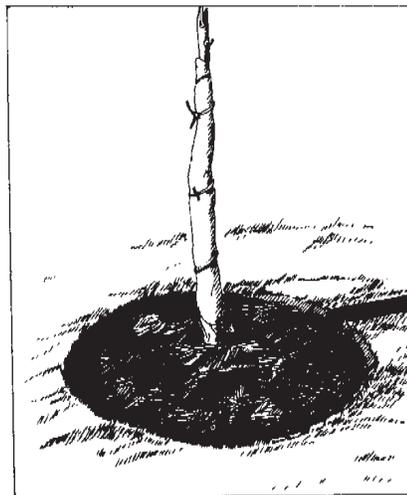
setting. Damp burlap or other suitable cover should be used at planting time to prevent damage to the tree roots from exposure to sun or wind.

- (a) Dig hole large enough to accommodate the root system of the tree without twisting the roots. Trim the taproot to a length of 20 inches. Trim off all broken roots.
- (b) The tree should be set 1 inch deeper than it was in the nursery. On well-drained soils, plant the tree leaving a shallow basin around the tree to make watering easier. On poorly drained soil plant the tree so it is on a slight mound so water will not collect around the tree after a rain.
- (c) Fill in around the tree roots with the moist topsoil, tamping with the end of the shovel until the hole is 3/4 full.
- (d) Water the tree to settle the soil.
- (e) Finish filling the hole and water again.



- (f) Remove about 1/2 of the top of the tree.
- (g) Wrap the trunk with tree wrap, heavy brown paper, or aluminum foil to prevent sunscald and borer injury. This will only be necessary for the first two years.

It is important to avoid drought stress and weed competition, especially during the first growing season.



Based on original material prepared by E.L. Whitehead and Jim Gallott

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Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Robert E. Whitson, Director of Cooperative Extension Service, Oklahoma State University, Stillwater, Oklahoma. This publication is printed and issued by Oklahoma State University as authorized by the Vice President, Dean, and Director of the Division of Agricultural Sciences and Natural Resources and has been prepared and distributed at a cost of 20 cents per copy. 0606 GH.