

PLANT HEALTH CARE REPORT



Pecan in Texas

Pecan (*Carya illinoensis*), the largest of the hickories, is native to about 150 Texas counties and can be grown anywhere in the state. This Texas state tree grows naturally in fertile, well-drained river and creek bottoms. Homeowners utilize the tree for its filtered shade as well as the hope for the occasional bumper crop of nuts in the fall. Some mature landscape pecan trees originated from native seed while others are specific varieties selected and planted by the homeowner.

When planting new trees in the home landscape, select a disease-resistant cultivar. Good choices include 'Choctaw', 'Cheyenne', 'Caddo', and 'Cape Fear'. Stuart is an older variety that displays moderate resistance to pecan scab. In rainy springs, disease problems should be anticipated unless newer resistant varieties have been used.

Pecan will grow on any well-drained soil if supplied with adequate moisture. It survives drought fairly well when situated on river bottoms, but suffers when planted on shallow soils and soils disturbed by development. Mulching and irrigation are, therefore, important management tools. Pecan is also sensitive to extreme cold.



Pecans at Everman Park, Abilene, Texas
Photo courtesy of [Wikimedia](#)



Pecan nuts developing in early fall
Photo courtesy of [Pixabay](#)

Because heavy nut crops expend the stored food supply of the tree, regularly applying slow-release fertilizer is important to produce vigorous growth in young trees and to maintain health in established trees.

Soil sampling is recommended every three years to guide fertilization and soil care programs. Pecan is a heavy user of zinc, which may need supplemented to avoid symptoms of deficiency. Without sufficient amounts of zinc, the inner nodes between buds are shortened and the foliage takes on a clumped appearance called rosetting.

It is very prone to branch failure due to heavy branch ends, poor tree structure, and the added weight of large nut crops. Most pecans benefit from periodic pruning to reduce weight at branch ends.

Pecan has several disease and insect problems but none that commonly kill the tree. Pecan scab, caused by a fungus (*Venturia effusa*), infects leaves and nuts in the spring and early summer. Infected nuts develop black spots and may drop before maturing or die on the tree. Infected leaves have olive-brown to black spots and may shed early. Defoliation weakens the tree and will reduce nut production and quality in subsequent years.

An important insect pest for those interested in a nut crop is the pecan weevil (*Curculio caryae*). This tiny, snouted beetle emerges from the soil under the tree in late summer after spending almost two years in the ground. The adult beetle enters the tree by flying or crawling up the stem.

Monitoring and Treatment Considerations for Pecan in Texas

Winter

Remove dead, dying, diseased, and broken branches. Reduce or remove branches to promote appropriate structure in young trees and reduce risk of branch failure in mature trees. Gather and dispose of fallen leaves and husks that harbor overwintering pests. Inspect for sapsucker woodpecker damage; apply burlap wrap as needed.

Early spring

Apply first fungicide treatment to suppress pecan scab and other diseases if conditions are wet/humid. Monitor for phyloxera; treat if severe in previous year.

Mid-spring

Apply second fungicide treatment to suppress pecan scab and other diseases if conditions are wet/humid. Apply third fungicide treatment to suppress pecan scab and other diseases 2 weeks after the second treatment.

Early summer

Monitor for casebearer eggs/damage and webworm nests; treat as needed. Monitor for aphids; treat as needed.

Midsummer

Monitor for fall webworm, walnut caterpillar, aphids, mites, and phyloxera; treat as needed. Inspect for zinc rosette symptoms. Sample for foliar nutrient analysis if deficiency is suspected.

Two types of damage to the pecan occur:

1. Adult feeding causes a tobacco-like stain at the site where the beetle punctures the husk and deposits eggs. This causes premature nut drop.
2. A more significant type of damage is caused by the feeding of the larvae on the kernel. At maturity, the weevil larvae chew a $\frac{1}{8}$ inch diameter hole through the nut and drop to the ground, completing their life cycle.

In some years, as much as 95% of the nut crop can be lost to weevil damage.

Fall webworm is a defoliator of pecan, producing up to four generations per year. Their webby nests remain throughout the winter making the tree unattractive.

Heavy defoliation will affect tree health.

A variety of other pests can reduce nut yield and impact tree health by infecting or eating foliage and attacking roots. The more common pests affecting nuts include nut casebearer, shuckworms, and stinkbugs. Spider mites can give the foliage a bleached appearance, and in some seasons, aphids may build to high numbers. This sucking insect not only damages the tree but also secretes sticky honeydew onto objects below. An aphid-like insect, phylloxera, occasionally forms galls on both leaves and petioles resulting in premature leaf drop. Control of phylloxera requires careful timing of treatments. Foliage may also be damaged by leaf-eating caterpillars, such as the walnut caterpillar moth.

Early fall

Apply first treatment for pecan weevil. Monitor for fall webworm; treat as needed. Apply second treatment for pecan weevil 10–14 days after the first. Fertilize, adjust pH, and amend soil according to soil analysis.
