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## Elm, Cedar

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**Leaf Color** Green

**Fall Color** Yellow

This plant has attractive fall colors.

### Leaf Identification

**Type:** Simple

**Arrangement:** Alternate

**Venations:** Pinnate

**Margins:** Crenate, double serrate and serrate

**Shapes:** Elliptic and obovate

**Length:** Less than 2in./5cm

**Fruit Color** Green

The fruit is dry and oval.

### Environment

This plant tolerates drought, flooding and some salt.

This plant will grow in very dry to wet or submerged soil.

Suitable soil is well-drained/loamy, sandy or clay.

The pH preference is an acidic to alkaline (less than 6.8 to more than 7.7) soil.

### Landscape Uses

- Street tree
- Pollarding
- Specimen

### Attributes and Features

- Inconspicuous blooms
- Inconspicuous fruit
- Fruit is edible by birds

### *Ulmus crassifolia*

Cedar Elm

Ulmaceae (Elm)

**Type** Tree, woody plant

**Hardy range** 6B to 9A

**Height** 50' to 75' / 15.20m to 22.80m

**Spread** 50' to 60' / 15.20m to 18.20m

**Growth rate** Average

**Form** Rounded and vase shaped

**Exposure** Partial shade or partial sun to full sun

**Persistence** Deciduous

**Bloom Color** Green

**Bloom Time** Fall

### Native Habitat

South-central US to one county in Florida usually along water courses but can also be found in dry limestone hillsides. Best growth is in deep rich soils with plenty of moisture. Good growth occurs in dense, poorly drained clay.

Native to the following North American locales: Arkansas, Florida, Louisiana, Mississippi, Mexico, Oklahoma

### Crown, Branch and Twig

This plant is asymmetrical with a fine texture and has a moderately dense crown.

This plant's bark is not showy.

Branches or twigs are thin.

This plant typically grows with one trunk.

This plant has low flammability. National champions are 100 x 44 (Mississippi) and 107 x 69 feet (central Florida).

### Culture Notes

Cedar Elm is commonly planted in Texas as a street tree. It tolerates the rigors of urban life quite well. With some pruning when the tree is young to space major branches along a central trunk, trees are relatively low maintenance. Regular pruning may be needed for street trees in order to remove drooping branches. One of the best attributes of this tree is its tolerance to alkaline and



wet soils. This makes it a good choice for planting in parking lot islands and along streets and other tough sites with compacted soil. Except for its susceptibility to Dutch Elm Disease, this would make it a good candidate for planting in areas other than Texas. Pollen from flowers in the fall contribute to allergies. Wings on twigs are less prominent than on winged elm.

Cedar Elm should be grown in full sun on well-drained soil, acid or alkaline. It is very drought-tolerant once established and tolerates wet soil well. It would be a low maintenance shade and street tree except for its thin, somewhat drooping branches which are somewhat susceptible to breakage at the crotches of major limbs. Some of this could be avoided by maintaining a regular pruning and training program in the early years after transplanting. Strive to keep branches no larger than about two-thirds the diameter of the trunk.

Existing trees are occasionally left near new homes and other buildings in new developments. Roots damaged by construction equipment can decay quickly. This can leave the plant with few supporting roots in the years following construction despite a green canopy. The tree could fall over as a result. In addition, branches that are suddenly exposed to unlimited light when nearby trees are removed begin to grow rapidly. As a result, they could become too long and break. Keep them shortened with reduction cuts to help prevent breakage.

Elms are among those susceptible to summer branch drop according to surveys in California. Summer branch drop is a phenomena resulting in failure and breakage of large diameter, live branches typically on calm summer days.

The wood is considered ring porous which means that there is a large difference in size between the spring wood pores and the summer wood pores. All elms reportedly produce allergenic pollen.

### **Maintain adequate mulch area**

Clear all turf away from beneath the branches and mulch to the drip line, especially on young trees, to reduce competition with turf and weeds. This will allow roots to become well established and keep plants healthier. Prune the tree so trunks and branches will not rub each other. Remove some secondary branches on main branches with included bark. This reduces the likelihood of the main branch splitting from the tree later when it has grown to become an important part of the landscape. Locate the tree properly, taking into account the ultimate size, since the tree looks best if it is not pruned to control size. The tree can enhance any landscape with its delightful spring flush of foliage. It can be the centerpiece of your landscape if properly located.

### **Tree establishment specifications**

Choose good quality trees for planting. The most common cause of young tree failure is planting too deep. In most instances, the point where the top-most root in the root ball originates from the trunk (referred to as the root flare zone or root collar) should be located just above the soil surface. You may have to dig into the root ball to find the root flare. If there is nursery soil over this area, scrape it off. Never place ANY soil over the root ball. The planting hole should be at least twice the width of the root ball, preferably wider because roots grow best in loose soil. In all but exceptional circumstances where the soil is very poor, extensive research clearly shows that there is no need to incorporate any amendments into the backfill soil. Simply use the loosened soil that came out of the planting hole. Simply planting with the topmost portion of the root ball slightly higher than the surrounding soil might still install the tree too deep - be sure to locate the root flare.

Weed suppression during establishment is essential. Apply a 3-inch thick layer of mulch to at least a six-foot diameter circle around the tree. This area should be at least two feet in diameter for each inch of tree trunk diameter and maintained during the establishment period. Apply a thinner layer of mulch directly over the root ball but keep it at least 10 inches from the trunk. This allows rainwater, irrigation and air to easily enter the root ball and keeps the trunk dry. Placing mulch against the trunk and applying too thick a layer above the root ball can kill the plant by oxygen starvation, death of bark, stem and root diseases, prevention of hardening off for winter, vole and other rodent damage to the trunk, keeping soil too wet, or repelling water.

Regular irrigation after planting encourages rapid root growth that is essential for tree establishment. Trees provided with regular irrigation through the first growing season after transplanting require about 3 months (hardiness zones 9-11), 6 months (hardiness zones 7-8), or one year or more (hardiness zones 2-6) per inch of trunk diameter to fully establish roots in the landscape soil. Trees in desert climates may take longer to establish. Trees that are under-irrigated during this establishment period (and most trees are) often require additional time to establish because roots grow more slowly. Be prepared to irrigate through the entire establishment period, especially during periods of drought.

Irrigation also helps maintain and encourage the desirable dominant leader in the tree canopy on large-maturing trees. Instead of a dominant leader, trees that are under-irrigated during the establishment period often develop undesirable, low, co-dominant stems and double leaders that can split from the tree later.



Unlike established plants, which do best with deep, infrequent irrigation, research clearly shows that recently transplanted trees and shrubs establish quickest with light, frequent irrigation. For trees planted in spring or summer, provide one (cooler hardiness zones) to three irrigations (warmer hardiness zones) each week during the first few months after planting. Daily irrigation in the warmest hardiness zones provides the quickest establishment. Following the initial few months of frequent irrigation, provide weekly irrigation until plants are fully established. With every irrigation, apply one (cool climates) to two (warm climates) gallons of water per inch trunk diameter (e.g. 2 to 4 gallons for a 2-inch tree) over the root ball only. In most landscapes that receive more than 30 inches of rain or irrigation annually, if the mulch area is maintained weed-free, irrigation does not need to be applied outside of the root ball. Never add water if the root ball is saturated.

In cooler hardiness zones, in all but the driest years, irrigation of spring- and summer-planted trees usually can be discontinued once fall color has begun. Irrigation of fall planted trees, however, should be continued until foliage has dropped from the deciduous trees in the region. In warmer climates, irrigate fall- and winter-planted trees as described for the spring- and summer-planted trees.

In drier, desert climates there is benefit to be gained from applying additional irrigation outside of the root ball area. This is best done by making a large diameter berm four to six inches high, then filling it with water so it percolates into the soil. For the first two years, irrigate twice each week through the spring, once per week in summer provided monsoons arrive, and twice each week again in fall if it remains warm. Taper off watering to once or twice each month in winter and resume twice weekly next spring. For years three to five, water twice per month in spring, summer, and fall and once or twice per month in winter. During years five through seven, water once every three weeks in warm weather and once every six weeks in winter. After this, the drought-tolerant desert trees should be able to survive on natural rainfall.

Trees with good, strong structure need no pruning at planting, except to remove broken twigs. Do not remove branches to compensate for root loss - research has shown that this can be detrimental to establishment.

### **Pests, Diseases and Damaging Agents**

**Pests:** Elm leaf beetles devour foliage. Aphids can also drop copious amounts of honey dew beneath the canopy. Mistletoe can cause decline. Lacebugs can cause leaf stippling, bronzing and defoliation.

**Diseases:** Dutch elm disease. Powdery mildew can be a problem in some years but there is usually little if any lasting harm to the tree. Elm yellows affects this tree. It is caused by a phytoplasma and is transmitted by a leafhopper. The phytoplasma enters the phloem through the leafhopper mouth parts and moves to the leaves and twigs. In winter, the phytoplasma moves to the root tips, and fine roots begin dying followed by larger root death. Foliar symptoms follow. These include sparse foliage of the canopy with green leaves followed by leaf yellowing and curling, with discoloration of the phloem. Wood may smell of winter green. Several branches may die in the canopy then the entire crown is affected and dies. Trees take from one to several years to die.

### **Special Notes**

This plant has aggressive roots.

