UF IFAS Extension UNIVERSITY of FLORIDA

ENH299

Celtis occidentalis: Common Hackberry[1]

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Introduction

The tree forms a rounded vase reaching a height of 40 to 80 feet, is a rapid grower, and transplants easily. The mature bark is light gray, rough and corky and the small fruit turns from orange red to purple and is relished by birds. The fruit temporarily stains walks. Leaves are wider than *Celtis laevigata* and more serrated. Hackberry may recover from transplanting from a field nursery slowly due to the extensive, coarsely branched root system, but this can be overcome by planting from containers.

Figure 1. Mature *Celtis occidentalis*: Common Hackberry
Credits: Ed Gilman

General Information

Scientific name: *Celtis occidentalis*
Pronunciation: SELL-tiss ock-sih-den-TAY-liss
Common name(s): Common hackberry
Family: *Ulmaceae*
USDA hardiness zones: 3A through 9B (Fig. 2)
Origin: native to North America
Invasive potential: weedy native
Uses: tree lawn > 6 ft wide; urban tolerant; street without sidewalk; reclamation; shade; highway median; bonsai
Availability: not native to North America

Figure 2. Range

Description

Height: 45 to 80 feet
Spread: 40 to 50 feet
Crown uniformity: irregular
Crown shape: round, vase
Crown density: moderate
Growth rate: fast
Texture: medium

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Foliage

Leaf arrangement: alternate (Fig. 3)
Leaf type: simple
Leaf margin: serrate
Leaf shape: elliptic (oval), ovate
Leaf venation: pinnate
Leaf type and persistence: deciduous
Leaf blade length: 2 to 4 inches
Leaf color: green
Fall color: yellow
Fall characteristic: showy

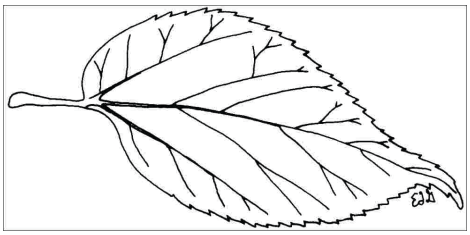

Figure 3. Foliage

Flower

Flower color: green
Flower characteristics: not showy

Fruit

Fruit shape: round
Fruit length: less than .5 inch
Fruit covering: fleshy
Fruit color: red, purple, black
Fruit characteristics: attracts birds; not showy; fruit/leaves a litter problem

Trunk and Branches

Trunk/bark/branches: branches don't droop; showy; typically one trunk; thorns
Pruning requirement: needed for strong structure
Breakage: susceptible to breakage
Current year twig color: green, brown
Current year twig thickness: thin
Wood specific gravity: 0.53

Culture

Light requirement: full sun, partial sun, or partial shade
Soil tolerances: clay; sand; loam; alkaline; acidic; extended flooding; well-drained
Drought tolerance: high
Aerosol salt tolerance: moderate

Other

Roots: can form large surface roots
Winter interest: yes
Outstanding tree: no
Ozone sensitivity: tolerant
Verticillium wilt susceptibility: resistant
Pest resistance: resistant to pests/diseases

Use and Management

Hackberry grows naturally in moist bottomland soil but will grow rapidly in a variety of soil types from moist, fertile soils to hot, dry, rocky locations in the full sun. Hackberry is tolerant of highly alkaline soil whereas sugarberry is not. It is wind, drought, salt and pollution tolerant once established and is considered a moderately tough, urban-tolerant tree. Skilled pruning is required several times during the first 15 years of life to prevent formation of weak branch crotches and weak multiple trunks.

It was extensively used in street plantings in parts of Texas and in other cities as it tolerates most soils except extremely alkaline (pH > 8), and grows in sun or partial shade but branches may break out from the trunk if proper pruning and training is not conducted early in the life of the tree. Even slight injury to the trunk and branches can initiate extensive decay inside the tree. If you use this tree, locate it where it will be protected from mechanical injury. Best for low-use areas such as along the edge of woods or in an open lawn, not for along streets. The tree is very susceptible to damage in an ice storm.

One especially nice cultivar is 'Prairie Pride', — quick-growing tree with a uniform, upright, compact crown. Prune and thin the canopy to prevent formation of weak, multi-trunk trees.

Pests

The most common insect on hackberry causes the hackberry nipple gall. A pouch or gall forms on the lower leaf surface in response to feeding. There are sprays available if you care to reduce this cosmetic problem.

Scales of various types may be found on hackberry. These may be partially controlled with horticultural oil sprays.

Diseases

Native and planted trees died slowly from an unknown cause.

Several fungi cause leaf spots on hackberry. The disease is worse during wet weather but chemical controls are seldom needed.

Witches' broom is caused by a mite and powdery mildew. The main symptom is clusters of twigs scattered throughout the tree crown. Prune out the clusters of twigs when practical. It is most common on *Celtis occidentalis*.

Powdery mildew may coat the leaves with white powder. The leaves may be uniformly coated or only in patches.

Mistletoe is an effective colonizer of hackberry, which can kill a tree over a period of time. It appears as evergreen masses several feet in diameter scattered about the crown.