

# *Celtis laevigata*: Sugarberry<sup>1</sup>

Edward F. Gilman, Dennis G. Watson, Ryan W. Klein, Andrew K. Koeser, Deborah R. Hilbert, and Drew C. McLean<sup>2</sup>

## Introduction

This very large, broad, fast growing deciduous North American native tree has a rounded vase crown with spreading, pendulous branches. The medium-textured, light green leaves turn bright yellow in fall and can be showy in some years. Leaves have a longer, slender tip than *Celtis occidentalis*. The grey-brown to silvery bark has some warty projections or corky ridges, making it attractive in wintertime. The bark is far less warty than *Celtis occidentalis*. Open-grown sugarberry commonly reaches 50 to 70 feet in height with a similar spread, and makes a wonderful shade tree. It could be grown and used more in urban areas but, unfortunately, appears to compartmentalize injury poorly, resulting in branch and trunk rot. Be sure to locate the tree where mechanical injury will not occur.

## General Information

**Scientific name:** *Celtis laevigata*

**Pronunciation:** SELL-tiss lee-vih-GAY-tuh

**Common name(s):** Sugarberry, sugar hackberry

**Family:** *Cannabaceae*

**USDA hardiness zones:** 5A through 10B (Figure 2)

**Origin:** native to the southeastern United States, in addition to adjacent states from Texas to Kentucky, and northeastern Mexico

**UF/IFAS Invasive Assessment Status:** native

**Uses:** parking lot island > 200 sq ft; tree lawn > 6 ft wide; shade; street without sidewalk; reclamation; highway median; Bonsai



Figure 1. Full Form—*Celtis laevigata*: Sugarberry

1. This document is ENH297, one of a series of the Environmental Horticulture Department, UF/IFAS Extension. Original publication date November 1993. Revised December 2005 and December 2018. Visit the EDIS website at <https://edis.ifas.ufl.edu> for the currently supported version of this publication.
2. Edward F. Gilman, professor emeritus, Environmental Horticulture Department; Dennis G. Watson, former associate professor, Agricultural Engineering Department; Ryan W. Klein, graduate assistant, Environmental Horticulture Department; Andrew K. Koeser, assistant professor, Environmental Horticulture Department, UF/IFAS Gulf Coast Research and Education Center; Deborah R. Hilbert, graduate assistant, Environmental Horticulture Department, GCREC; and Drew C. McLean, biological scientist, Environmental Horticulture Department, GCREC; UF/IFAS Extension, Gainesville, FL 32611.

The Institute of Food and Agricultural Sciences (IFAS) is an Equal Opportunity Institution authorized to provide research, educational information and other services only to individuals and institutions that function with non-discrimination with respect to race, creed, color, religion, age, disability, sex, sexual orientation, marital status, national origin, political opinions or affiliations. For more information on obtaining other UF/IFAS Extension publications, contact your county's UF/IFAS Extension office.

U.S. Department of Agriculture, UF/IFAS Extension Service, University of Florida, IFAS, Florida A & M University Cooperative Extension Program, and Boards of County Commissioners Cooperating. Nick T. Place, dean for UF/IFAS Extension.

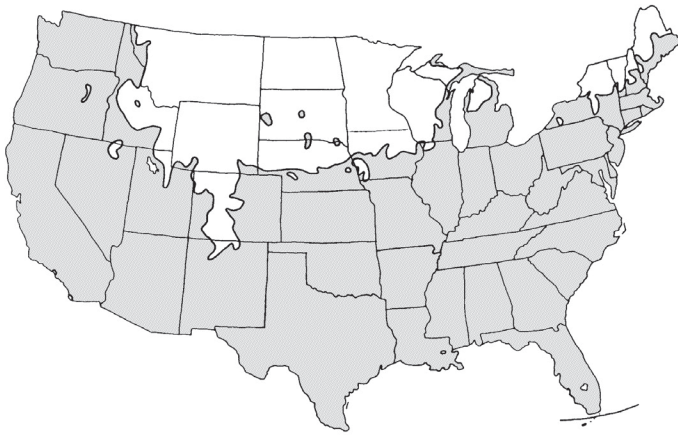


Figure 2. Range

## Description

**Height:** 50 to 70 feet

**Spread:** 50 to 60 feet

**Crown uniformity:** irregular

**Crown shape:** vase, round

**Crown density:** moderate

**Growth rate:** fast

**Texture:** medium

## Foliage

**Leaf arrangement:** alternate

**Leaf type:** simple

**Leaf margin:** serrate

**Leaf shape:** ovate, lanceolate

**Leaf venation:** pinnate, brachidodrome, reticulate, bowed

**Leaf type and persistence:** deciduous

**Leaf blade length:** 1 to 6 inches

**Leaf color:** light green on top, paler green underneath

**Fall color:** yellow

**Fall characteristic:** showy



Figure 3. Leaf—*Celtis laevigata*: Sugarberry

## Flower

**Flower color:** greenish white

**Flower characteristics:** not showy; emerges singly or in clusters at leaf axils

**Flowering:** spring, with the leaves

## Fruit

**Fruit shape:** round

**Fruit length:** ⅓ inch

**Fruit covering:** fleshy drupe

**Fruit color:** orange to red, turns deep purple when ripe

**Fruit characteristics:** attracts birds; not showy; fruit/leaves a litter problem

**Fruiting:** matures in the fall



Figure 4. Fruit—*Celtis laevigata*: Sugarberry

## Trunk and Branches

**Trunk/branches:** branches droop; showy; typically one trunk; no thorns

**Bark:** gray brown to silver, smooth, develops corky projections with age

**Pruning requirement:** needed for strong structure

**Breakage:** susceptible to breakage

**Current year twig color:** green, brown

**Current year twig thickness:** thin

**Wood specific gravity:** unknown

## Culture

**Light requirement:** full sun to partial shade

**Soil tolerances:** clay; sand; loam; alkaline; acidic; wet to well-drained

**Drought tolerance:** high

**Aerosol salt tolerance:** high





Figure 5. Bark—*Celtis laevigata*: Sugarberry  
Credits: Gritta Hasing

## Other

**Roots:** can form large surface roots

**Winter interest:** yes

**Outstanding tree:** no

**Ozone sensitivity:** unknown

**Verticillium wilt susceptibility:** unknown

**Pest resistance:** free of serious pests and diseases

## Use and Management

The tiny, berry-like, sweet fruits attract many birds, and sugarberry should be included in any natural landscape setting. It is not normally grown by wholesale nurseries. It will grow rapidly and require regular pruning and training to develop a strong branch structure and to keep it looking neat in the nursery. Lack of popularity may be due to the open, awkward appearance of young trees and susceptibility to trunk rot in mature trees. But it appears to be no more sensitive to trunk rot than laurel oak. Avoid injury to the trunk and existing trees will serve you for many years.

Sugarberry will grow in a variety of soil types but grows best in moist, fertile soils in a full sun location, though it will tolerate partial shade. It is sensitive to highly alkaline soils. Chlorosis develops on alkaline soil, but witches broom and nipple gall are not a problem as they are on *Celtis occidentalis*. Sugarberry is moderately drought- and salt-tolerant once established and is very adaptable, growing in wet sites fairly well. Skilled pruning is required several times during the first 15 years of life to prevent formation of weak branch crotches and multiple trunks. But once this

is accomplished, trees should grow with little care. Avoid pruning large-diameter branches from the trunk since the tree compartmentalizes decay poorly. A number of southern cities use sugarberry as a street tree while others ban it. Give this tree a try in some of your urban and suburban landscapes.

The wood is used in much the same way as elm in the lumber industry for plywood, furniture and veneer.

‘All Seasons’—rounded crown, bright yellow fall foliage, and is very hardy (USDA hardiness zone 5). In the North and Midwest, the native *Celtis occidentalis* is used in place of *Celtis laevigata*. Somewhat similar in overall appearance, it is a smaller tree (to 60 feet) with a more warty bark and smaller, sandpapery leaves than *Celtis laevigata*.

Propagation is by seed.

## 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, but galls generally do no harm to the tree.

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

## Diseases

Trunk rot, leaf spots, witches’ broom.

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

Generally resistant to witches’ broom. Witches’ broom is caused by a mite and powdery mildew. The main symptom is clusters of abnormally short twigs which are scattered throughout the tree crown. Prune out the clusters of twigs when practical.

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

Sugarberry is a favorite host for mistletoe.

## Reference

Koeser, A. K., Hasing, G., Friedman, M. H., and Irving, R. B. 2015. *Trees: North & Central Florida*. Gainesville: University of Florida Institute of Food and Agricultural Sciences.