**Juglans nigra: Black Walnut**

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**Introduction**

Black walnut grows with a rounded crown to about 70 feet (can reach 100 to 150 feet in the woods) and spreads 60 to 80 feet when open grown. Best growth occurs in a sunny open location and a moist rich soil, common along stream banks in its native habitat. The tree grows rapidly when young but slows down with age and develops with a number of massive branches well spaced along the trunk forming a very strong, durable tree. While valued as a lumber tree it may not make the best yard tree. The nuts are edible but are a nuisance to clean up and leaves often fall prematurely from some type of leaf disease.

**General Information**

- **Scientific name:** Juglans nigra
- **Pronunciation:** JOO-glanz NYE-gruh
- **Common name(s):** Black walnut
- **Family:** Juglandaceae
- **USDA hardiness zones:** 5A through 9A (Fig. 2)
- **Origin:** native to North America
- **Invasive potential:** little invasive potential
- **Uses:** specimen
- **Availability:** somewhat available, may have to go out of the region to find the tree

**Description**

- **Height:** 60 to 70 feet
- **Spread:** 50 to 70 feet
- **Crown uniformity:** irregular

![Figure 1. Middle-aged Juglans nigra: Black Walnut Credits: Ed Gilman, UF/IFAS](image)

![Figure 2. Range](image)
Crown shape: round
Crown density: moderate
Growth rate: moderate
Texture: coarse

Foliage
Leaf arrangement: alternate (Fig. 3)
Leaf type: odd-pinnately compound
Leaf margin: serrate
Leaf shape: ovate, lanceolate
Leaf venation: pinnate
Leaf type and persistence: deciduous
Leaf blade length: 2 to 4 inches
Leaf color: green
Fall color: no color change
Fall characteristic: not showy

Flower
Flower color: unknown
Flower characteristics: not showy

Fruit
Fruit shape: round
Fruit length: 1 to 3 inches
Fruit covering: dry or hard
Fruit color: green, black
Fruit characteristics: attracts squirrels/mammals; showy; fruit/leaves a litter problem

Trunk and Branches
Trunk/bark/branches: branches don’t droop; not showy; typically one trunk; thorns
Pruning requirement: little required
Breakage: resistant
Current year twig color: gray, brown
Current year twig thickness: thick
Wood specific gravity: 0.55

Culture
Light requirement: full sun
Soil tolerances: clay; sand; loam; alkaline; acidic; occasionally wet; well-drained
Drought tolerance: high
Aerosol salt tolerance: high

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

Use and Management
Black walnut roots contain juglone which inhibits growth of some plants beneath the tree. Plants such as tomato and evergreens are quite sensitive to juglone. Trees produce a strong tap root on well-drained loose soils and recover poorly after transplanting. Trees with trunks to 5 feet in diameter can be found in the eastern part of the country. A yellow dye is made from the fruit husks. The seed is used in candy-making, cleaning abrasives and explosives.

The tree is probably best used in a park, campus or other open space area. However, the fruit is very hard and can dull a lawn mower blade quickly and a mower can ‘shoot’ the fruit across a lawn at a high rate of speed, possibly injuring people in the area.

Place the tree so it will receive an adequate supply of water. It is not drought tolerant, often dropping leaves in dry spells and is poorly adapted for urban soils. It is really most happy in the loose gravely soil of stream banks and other undisturbed areas but tolerates alkaline and wet soil.

One cultivar is listed: ‘Laciniata’—a beautiful tree with cut leaflets. Other cultivars exist for nut quality. *Juglans microcarpa* is recommended for the central part of the country and western parts of Oklahoma and Texas. *Juglans regia* is the tree that brings us the edible walnut.

Pests
Fall webworm larvae web over branches then feed on leaves inside the nest. Nests can be pruned out of small trees or use sprays of *Bacillus thuringiensis*. Tent caterpillars also eat foliage in the spring.
Scales of various types attack walnuts. Most scales can usually be controlled with horticultural oil applied.

The leaves may be eaten by any one of several caterpillars. These can be controlled with sprays once identified.

Mites cause speckling and yellowing of the leaves.

**Diseases**

Brown leaf spot or anthracnose symptoms are irregular dark brown spots occurring in early summer. Severely infected trees may be defoliated. Rake up and destroy infected, fallen leaves.

Canker diseases cause dieback or death of trees. Infected bark may be discolored, sunken, or have a different appearance than surrounding healthy bark. Prune out infected branches and keep trees healthy. If the canker girdles the trunk the tree dies.

Bacterial blight causes small, irregularly-shaped spots on the leaves and leaf stems. Black spots occur on young nuts and shoots. Nearly ripe nuts have large black spots on the husks. Infected nuts fall prematurely or may have husks, shells, and kernels blackened and ruined.

Powdery mildew causes a white coating on the leaves.

During periods of high temperature and drying winds, walnuts may scorch. Make sure plants have adequate soil moisture.