

BLACK WALNUT

Juglans nigra L.

Plant Symbol = JUNI

Contributed by: USDA NRCS National Plant Data Center



Robert Mohlenbrock
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Uses

Ethnobotanic: The bark of black walnut was used by many native groups, including the Cherokee, in tea as a laxative and chewed for toothaches. **Caution: Bark should be used cautiously in medicine, because it is poisonous.** The Cherokee also ate the fruit of the black walnut. The Chippewa and the Cherokee used the bark to make brown and black dyes. The Comanche created a paste from the leaves and husk of the fruit for treatment of ringworm. Black walnut was also used by the Appalachian, Cherokee, Comanche, Iroquois, and Rappahannock to treat athlete's foot, hemorrhoids, and as an insecticide.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status (e.g. threatened or endangered species, state noxious status, and wetland indicator values).

Description

General: Walnut Family (Juglandaceae). Black walnut is usually a medium sized tree ranging from

70-90 feet tall and 2-3 feet in diameter at breast height. However, black walnut can reach 150 feet tall and 8 feet in diameter at breast height. The branches are widely spread and form a massive crown. The bark is thick and brown to grayish-black in color. The bark has deep furrows and narrow forking ridges. The furrows and ridges form a diamond pattern. The twigs are stout with notched leaf scars. They are light brown to orangish in color. The terminal buds are short, blunt, and covered with a few hairy scales. The leaves are up to 6 dm long with 9-23 leaflets attached directly to a stout rachis without a supporting stalk. The rachises are covered with fine short hairs. Flowers appear in late May to early June. The flowers bear 17-50 stamens, but lack pistils. The fruits are 4-6 cm in diameter and spherical shaped. They can be found in groups of 2-3 or solitary. The fruits have a thick, semi-fleshy, husk covered with short hairs and are yellowish-green in color. The nut is corrugated with rounded ridges.

Distribution: For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Habitat: Black walnut is found in fields and rich woodlands.

Adaptation

Black walnut produces a toxin, known as "juglone", which inhibits the growth of other plants around it, thereby reducing competition. Juglone deprives sensitive plants of energy needed for photosynthate production. The symptoms of plants being affected by juglone include foliar yellowing, wilting, and eventually death. The largest sources of juglone on the tree are located in the buds, roots, and nut hulls.

Establishment

Black walnut is difficult to transplant and therefore, propagation by seed is recommended. Seeds should be planted in the fall in moist, well-drained, deep soil that is rich in organic matter. Black walnut prefers full sun.

Management

Black walnut is a very intolerant tree. Planted in fairly dense stands or under forest competition the tree develops a tall and well formed, clear bole. This bole form results from the tree putting its resources into competing for sunlight and is ideal for wood fiber production. Logs 10 inches in diameter at

breast height can be developed in 35 years under ideal growing conditions.

Pests and Potential Problems

Black walnut suffers from a variety of deforming and deadly pests and diseases including parasitic nematodes, mistletoe, fusarium canker, bacterial blight, white trunk rot, and cylindrocaradium root rot.

Environmental Concerns

Juglone may be a concern when landscaping or planting black walnut near a garden.

Cultivars, Improved, and Selected Materials (and area of origin)

These materials are readily available from commercial plant sources. Contact your local Natural Resources Conservation Service (formerly Soil Conservation Service) office for more information. Look in the phone book under "United States Government." The Natural Resources Conservation Service will be listed under the subheading "Department of Agriculture."

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Prepared By:

Matthew D. Hurteau

Formerly USDA, NRCS, National Plant Data Center, c/o Environmental Horticulture Department, University of California, Davis, California

Species Coordinator:

M. Kat Anderson

USDA, NRCS, National Plant Data Center, c/o Plant Sciences Department, University of California, Davis, California

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