

LOCAL NAMES

English (hinds's black walnut,Northern California walnut,claro walnut,West Coast Walnut,Oregon Black Walnut,Oregon Walnut,California Black Walnut,California Walnut,figured Walnut,flamed Walnut)

BOTANIC DESCRIPTION

Juglans hindsii is a medium sized deciduous, fast growing tree 6-23 m, usually with a single, straight trunk and a spreading crown. Bark grey to brown, shallowly fissured, ridges flat topped and scaly.

Leaves alternate, pinnately compound with 15-19 leaflets, 20-38 cm long; leaflets narrowly ovate to lanceolate with finely serrated margins, 5-11 cm long, shiny green above and paler below.

Twig stout, initially green but turning reddish brown, buds are scruffy light brown; leaf scar very large, raised and 3-lobed; pith chambered. Terminal buds ellipsoid to oblong, flattened, 6-8 mm.

Flowers monoecious, male flowers in yellow-green hanging catkins, 7-10 cm long from last year twigs; female flowers very small occurring on short spikes either singly or in clusters of 2 or 3 near the ends of the current year twigs, appearing with the leaves.

Fruit round nut, 3-5 cm in diameter; initially bright green but turning brown; nut smooth or nearly smooth or shallowly and indistinctly ridged or grooved.

BIOLOGY

Black walnut is monoecious and self fertile, flowering April to June and is wind pollinated.

ECOLOGY

Black walnuts grow best in deep, moist, rich, well-drained loam; prefers bottomlands, by the coast, near creeks, along rivers and streams, sometimes on disturbed slopes. It tolerates full sun, drought and seasonal flooding and cannot grow in shade.

BIOPHYSICAL LIMITS

Altitude: 0-900 m

Temperature: 7-21°C

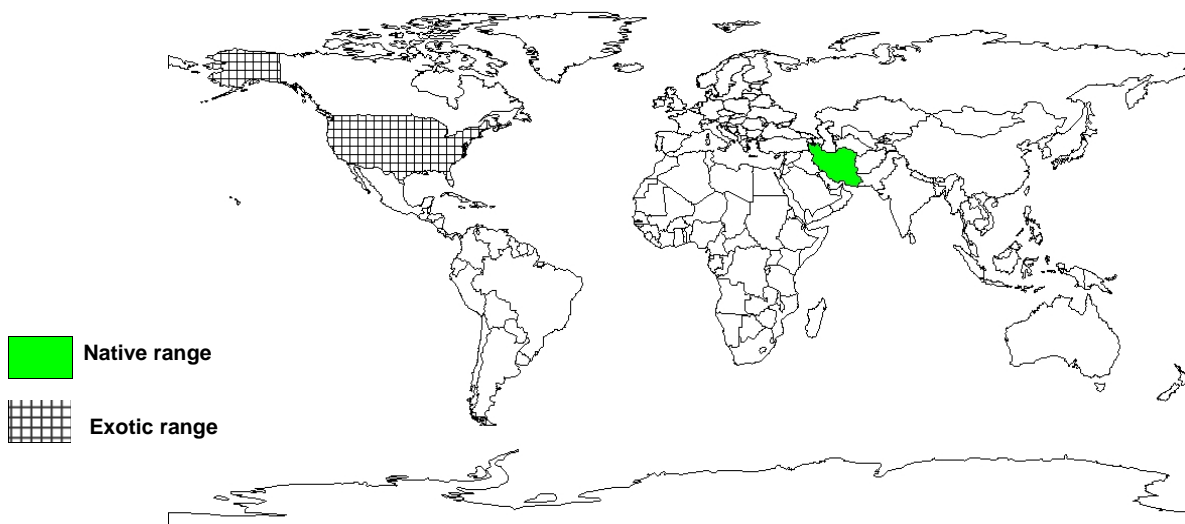
Rainfall: 300-2120 mm

Soil type: Prefers well-drained sandy, loamy and clay soils of pH 6-8.

DOCUMENTED SPECIES DISTRIBUTION

Native: Iran

Exotic: US



The map above shows countries where the species has been planted. It does neither suggest that the species can be planted in every ecological zone within that country, nor that the species can not be planted in other countries than those depicted. Since some tree species are invasive, you need to follow biosafety procedures that apply to your planting site.

PRODUCTS

Food: The seed is eaten raw and has a sweet taste. Edible oil is obtained from the seed, though tends to go rancid quickly.

Tannin or dyestuff: A black dye is obtained from the seed husks.

Timber: The wood is heavy, hard, rather coarse grained; a valuable source of timber used in the construction of fine furniture.

SERVICES

Ornamental: Black walnut trees are very attractive, and can be seen in groves around old farms in New York.

Other services: *Juglans hindsii* is often used in south-western N. America as a vigorous disease-resistant and drought tolerant rootstock for *Juglans regia*.

TREE MANAGEMENT

Seedlings should be given some protection for their first winter or two. Any pruning should only be carried out in late summer to early autumn or when the plant is fully dormant. Regular watering is necessary. The roots of several members of this genus produce substances that are toxic to many plant species, especially apples (*Malus* species), members of the Ericaceae, *Potentilla* spp and the white pines. The leaves of many species also secrete substances that have an inhibitory affect on plants growing underneath them. There is no certainty yet for *Juglans hindsii*, but generally it is not a good companion plant.

GERMPLASM MANAGEMENT

Black walnuts should be picked up by hand soon after the nuts fall from the tree, and the husks removed immediately. The seed storage behaviour is described as orthodox; viability can be maintained for 4-5 years in hermetic storage at 80-90% relative humidity (i.e., <15% moisture content) and 3-4°C. The seed requires cold stratification before germination.

PESTS AND DISEASES

Common insect pests include the walnut husk maggot, regal moth caterpillar, codling moth, Pacific flathead borer, nut weevil and aphids. Birds and squirrels may also be a menace. Black walnut is notably resistant to honey fungus, but can suffer from leaf spots, sooty mold, walnut blight and cankers.

FURTHER READNG

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SUGGESTED CITATION

Orwa C, Mutua A , Kindt R , Jamnadass R, Simons A. 2009. Agroforestry Database:a tree reference and selection guide version 4.0 (<http://www.worldagroforestry.org/af/treedb/>)