

south- or west-facing aspects, hardpan layers, and shallow soils should also be avoided.

Planting densities. Recommendations for planting densities for black walnut vary widely. An initial spacing of 14 feet by 14 feet tends to encourage more upright form and single, central leaders. The closer the initial spacing, the sooner you will have to thin.

Planting stock. Selecting planting stock that is compatible to your site is another important step in the establishment of a successful alternative tree plantation. For Idaho, we recommend the Purdue #1 hybrid black walnut, developed at Purdue University and available from the UI Forest Research Nursery. This particular hybrid has been field tested and found to be successful in a variety of Idaho climates. Purdue #1 black walnut is a patented hybrid with unique qualities which include more than double the average 1/4 inch per year diameter growth rates for ordinary black walnut. Purdue #1 hybrids also have strong central leader tendencies and are late leafers, which increases their chances for escaping damage from late spring frosts.

Culture and Management

Pruning. Black walnut has a tendency to produce multiple leaders due to frost or insect damage to the terminal bud, so corrective pruning to maintain a single leader and limit the number of developing branches is very important if lumber production is your goal.

Thinning. Black walnut responds well to thinning. Your plantation should be thinned when the canopies of adjacent trees begin to touch. For maximum growth, crowns should be five feet apart from adjacent trees. Subsequent thinnings may be required to maintain growing space. At maturity, trees should be thinned to approximately 100 trees/acre for timber production or approximately 25 to 30 trees/acre for nut production. Remove inferior trees at the first thinning and plan to return for an intermediate harvest of marketable trees at a later time.

Strong and beautiful are words often used to describe furniture and gunstocks made from black walnut. These qualities combined with the added benefits of a tasty nut crop and aesthetically pleasing characteristics make black walnut an attractive choice for Idaho landowners with the perfect site for an alternative tree crop.

At a glance...

Species: *Juglans nigra*

Common names: black walnut, eastern black walnut, American walnut.

Native range: eastern United States.

Hardiness: USDA Zone 4-9.

Soil type: deep, rich, moist soils for maximum growth; will grow in drier, less fertile sites at a slower rate.

Shade tolerance: intolerant.

Form: large, semi-formal tree; 50 to 100 feet tall.

Regional insect & disease problems: aphids.

Objectionable characteristics: produces a substance called juglone, which is selectively toxic to certain other species of plants - highest concentration of chemical in roots and fruit husks; deep taproot, making it difficult to transplant; will not tolerate extreme heat and dryness.

Other: as quantities diminish, wood is used primarily for veneer; nuts have a distinct flavor that are in demand for baked goods and ice cream; ground shells are used in many products.

About the Author: Yvonne C. Barkley is an Associate Extension Forester with University of Idaho Extension. Annette Brusven is a Nursery Sales and Extension Associate with the University of Idaho Forest Research Nursery.

Graphic artist: Lorraine Ashland.



The University of Idaho provides equal opportunity in education and employment on the basis of race, color, religion, national origin, gender, age, disability, or status as a Vietnam-era veteran, as required by state and federal laws.

