



Black cherry

Yvonne Carree Barkeley



One of the most handsome of our domestic hardwoods, black cherry (*Prunus serotina*) has long been favored by craftsmen for its strong, durable, reddish-brown wood that develops a deep luster as it ages. These characteristics, plus its good working qualities, low shrinkage, and freedom from warping and checking have made it a cabinetmaker's first choice in materials. Hardiness, high wildlife value, and the relative scarcity of this species make it an ideal tree for planting in plantation and conservation settings.

Biology and Silvics

Native to the eastern part of the United States, black cherry can be found growing over a wide range of conditions – from the dry semi-arid deserts of the southwest to the wet, sub-tropical climates of northern Florida. But it is at its best on the Allegheny Plateau located in Pennsylvania, New York, and West Virginia, where high-quality trees suited for lumber and veneer are found.

Black cherry is a shade intolerant species and does not do well on poorly drained soils. It is absolutely intolerant of flooding. On the Allegheny Plateau, where it reaches its greatest height and girth, conditions are cool, moist, and temperate. Annual precipitation is 38-44" and is well distributed throughout the year. The frost-free growing season is 120 days. In Idaho, black cherry plantation trials have shown this species to be frost and drought tolerant and adaptable to a variety of soil types. In areas with soil pH levels above 7.0 and/or poorly drained or flooded soils, black cherry has grown slowly, declined, and eventually died.

Unlike other cherries, black cherry flowers open after the leaves have expanded and are much smaller and without fragrance. Flowers bloom from early April to

the first week of June. Fruit matures from mid-August to late October and are small, blue-black drupes borne in clusters. The fruit is an important source of food to upland and non-game birds and the inner bark was once used widely as an ingredient in cough syrups and tonics. Wilted leaves from freshly cut branches contain cyanic acid which can be harmful to domestic livestock, though browsing wildlife are unaffected.

Black cherry sprouts readily from stumps and the sprouts grow rapidly and with good form. Seedlings typically develop a taproot with many lateral roots, but as the tree matures the root system becomes more spreading and the distinct taproot recedes. Growth is rapid for the first 45-50 years and slows as the tree reaches maturity. On the best sites, black cherry can reach diameters of 20-24" and 80-100" in 60 years.

Plantation Establishment

Site selection. Black cherry will do well on a number of different soil types, but does best in deep, well-drained soils with a pH between 5.0 and 6.5. Although drought tolerant, this species does best on north- and east-facing aspects which provide moister, cooler environments. Areas of poor drainage or flooding should be avoided as black cherry has zero tolerance of saturated soils. Black cherry is frost tolerant, but a late spring freeze can kill trees, especially those planted in frost pockets and cold air drainages.

Planting densities. Black cherry plantations can be planted at an initial spacing of 8' x 14'. We have found that planting black cherry closer together within the rows encourages a straighter form, development of a single leader, and less basal and bole sprouting than more generous spacings.

Planting stock. Experience has shown that seed source for black cherry is very important in determining the growth rate and form of your trees. The UI Forest Research Nursery obtains their seed from an established

black cherry seed orchard at the UF Research and Extension Center in Sandpoint, ID. The seed orchard is stocked with trees grown from seed selected from superior trees on the Allegheny Plateau.

Plantation Culture and Management

Pruning. Proper pruning is as much of an art as it is a science. Research has shown that proper pruning can greatly increase the quality of your black cherry trees, and possibly double the value of your plantation at harvest. Black cherry is a prolific sprouter and notorious for producing multiple leaders. Start pruning your black cherry the first fall after establishment and be diligent about fall pruning every year after until your trees have grown tall enough for you to have established a straight, clean trunk. Sprouts are easiest to remove as they are emerging in the spring by rubbing them off with your gloved hand. Experience has shown that not only is this the most efficient way to remove multiple sprouts, but it also seems to inhibit subsequent sprouting for the rest of that growing season.

Thinning. As trees mature a commercial thinning can take place at approximately year 20. Every other tree can be removed to open the plantation up to a 16' x 14' spacing. Trees taken can be used for specialty products such as turned bowls and vases, spoons, sculpture, and professional scientific instruments. The remaining trees can then be left to grow into veneer quality logs.

High-value timber is but one of the many benefits that black cherry provides the private landowners of Idaho. This species also contributes to biological diversity and wildlife habitat while being aesthetically pleasing. With the right planning, culture, and maintenance you too can experience the multiple benefits of alternative tree crops such as black cherry.

At a glance ...

Species: *Prunus serotina*

Common names: wild black cherry, rum cherry, mountain black cherry.

Native range: Nova Scotia to Minnesota, south to Central Texas, and east to Florida; also native in southern New Mexico, and western Arizona to Guatemala; found up to 5,000' elevation in Appalachian Mountains.

Hardiness: USDA Zone 3-9.

Soil type: grows in a wide variety of soils but prefers moist, fertile conditions on north- and east-facing slopes and in protected coves. Does not tolerate saturated soils.

Shade tolerance: intolerant.

Form: fast-growing, moderately long-lived; 100' tall, with a narrow to broadly rounded crown.

Regional insect & disease problems: tent caterpillars, black knot.

Objectional characteristics: prolific basal sprouter; cyanic acid in wilted foliage toxic to domestic livestock; browsed heavily by mammals of all types.

Other: surprisingly drought tolerant; leaves and inner bark contain the almond-flavored hydrocyanic acid, used in cough medicine and tonics; important food source for wildlife.

About the Author: *Yvonne Carree Barkley* is an Extension Associate - Forestry with the University of Idaho Cooperative Extension System.

Graphic artist: *Lorraine Ashland.*

