

Caragana or Siberian Peashrub



Caragana or Siberian Peashrub (*Caragana arborescens*)

General Description

Drought tolerant legume, long-lived, alkaline-tolerant, tall shrub native to Siberia. Ability to withstand extreme cold and dryness. Major windbreak species.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Light brown, chaffy in nature.

Bud Size - 1/8 inch, weakly imbricate.

Leaf Type and Shape - Pinnately-compound, 8 to 12 leaflets per leaf.

Leaf Margins - Entire.

Leaf Surface - Pubescent in early spring, later glabrescent.

Leaf Length - 1½ to 3 inches; leaflets 1/2 to 1 inch.

Leaf Width - 1 to 2 inches; leaflets 1/3 to 2/3 inch.

Leaf Color - Light-green, become dark green in summer; yellow fall color.

Flowers and Fruits

Flower Type - Small, pea-like.

Flower Color - Showy yellow in spring.

Fruit Type - Pod, with multiple seeds. Pods open with a popping sound when ripe.

Fruit Color - Brown when mature.

Form

Growth Habit - Erect, oval shrub with sparse branches.

Texture - Medium-fine, summer; medium-coarse, winter.

Crown Height - 6 to 14 feet.

Crown Width - 6 to 12 feet.

Bark Color - Olive-green in color, angled from the nodes, with pale, horizontal lenticels.

Root System - Dense, spreading.

Environmental Requirements

Soils

Soil Texture - Adapted to a wide range of soils.

Soil pH - 5.0 to 8.0.

Windbreak Suitability Group - 1, 1K, 3, 4, 4C, 5, 6D, 6G, 8, 9C, 9L.

Cold Hardiness

USDA Zone 2.

Water

Drought tolerant. Does not perform well on very wet or very dry sandy soils.

Light

Full sun.

Uses

Conservation/Windbreaks

Medium to tall shrub for farmstead and field windbreaks and highway beautification.

Wildlife

Used for nesting by several species of songbirds. Food source for hummingbirds.

Agroforestry Products

No known products.

Urban/Recreational

Screening and border, ornamental flowers in spring.

Cultivated Varieties

Dwarf Siberian Peashrub (*Caragana arborescens* 'Nana')

Sutherland Peashrub (*C. arborescens* 'Sutherland') - Narrowly-upright in form.

Walker Peashrub (*C. arborescens* 'Walker') - Extremely fine-textured.

Weeping Siberian Peashrub (*C. arborescens* 'Pendula')

Related Species

Pygmy Peashrub (*Caragana pygmaea*)

Russian Peashrub (*C. frutex*)

Pests

Common diseases include stem decay, Septoria leaf spot and branch cankers. Common insect pests include blister beetles in mid to late summer.

SIBERIAN PEASHRUB

Caragana arborescens Lam.

Plant Symbol = CAAR18

Contributed By: USDA NRCS National Plant Data Center



Conservation Trees & Shrubs for Montana
USDA, NRCS, Montana State Office

Alternative Names

Ross caragana, Siberian pea tree, pea-tree

Uses

Medicinal: The plant is used for cancer of the breast, the orifice to the womb, and other gynecological problems (Kiangsu 1977).

Wildlife: During World War II, the Siberian peasants reportedly carried their chicken flocks through the winter by feeding them *Caragana arborescens* seeds (Snell 1983). The seeds serve as valuable food for wild life. It also provides cover for upland game.

Agroforestry: *Caragana arborescens* has been recommended as a nitrogen-fixing windbreaker and groundcover plant that binds the soil and produce fiber and dye. It is often used as a single row field shelterbelt for borders, screen plantings, or flowering hedges.

Other uses: Some ethnic groups have used young pods for vegetables. The bark provides a fiber and the leaves yield an azure dye. The wood is used for woodturning.

Status

Introduced into the U.S. Please consult the PLANTS Web site and your State Department of Natural Resources for this plant's current status, such as, state noxious status and wetland indicator values.

Description

General: Pea Family (Fabaceae). Siberian peashrub is an introduced, deciduous shrub or small tree ranging between ten to fifteen feet tall. The leaves are alternate, three to five inches long, with each leaf composed of eight to twelve oval leaflets. The flowers are yellow and appear early in the season forming pods in late June or early July. As the pods ripen, they crack and burst, spreading the seeds. The young bark is smooth and olive green and becomes less vivid in color as the bark ages.

Distribution: Siberian peashrub is native to Siberia and Manchuria. In the United States, its growth is stunted south of Nebraska. For current distribution, please consult the Plant profile page for this species on the PLANTS Web site.

Adaptation

Siberian peashrub succeeds in most well drained soils. It prefers full sun but can tolerate some shade. This species is very tolerant of infertile soils, cold winter temperatures, and drought conditions. It tolerates alkaline soils and deicing salt. This plant's chief value is its ability to adapt to poor sites. It also requires little maintenance.

Establishment

Propagation by Seed: Seed is best sown as soon as it is ripe in a cold frame. Stored seeds should be pre-soaked twenty-four hours in warm water and then sown in a cold frame. If the seeds do not swell, then stratify them and re-soak for another twelve hours before sowing. Germination should occur in two to three weeks at 20°C. Certain pesticides can increase germination possibly by inhibiting disease.

Propagation by cuttings: Layering should be done in the spring. Cuttings should consist of half ripe wood, three to four inches with a heel, and should be done between July and August. Grafting the cultivars,

especially 'Pendula', 'Lorbergii', and 'Walker', are top worked at four to six inches height on Caragana arborescens seedlings (Dirr & Heuser 1987). *Root cuttings, layering or grafting can also propagate Caragana arborescens.*

Management

General: Siberian peashrub is susceptible to leaf spot diseases, red spider mites, blister beetles, grasshoppers, and aphids, which leads to poor foliage quality in mid to late summer.

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

'Sutherland', 'Lorbergii', 'Pendula', 'Walker', and 'Nana' are cultivars of Siberian peashrub. 'Sutherland' has a narrow, upright form. 'Lorbergii' has a graceful form with fine textured leaves. 'Pendula' has a stiffly weeping form with arching branches. 'Walker' is much like 'Lorbergii' in leaf character but strongly weeping (Dirr 1990). 'Nana' has a dwarf form with somewhat contorted branches.

Consult your local nurseries to choose the right cultivar for your specific landscape. 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

Jammie Favorite
Formerly USDA NRCS National Plant Data Center, Baton Rouge, Louisiana

Species Coordinator

Lincoln M. Moore
USDA NRCS National Plant Data Center, Baton Rouge, Louisiana

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For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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Caragana

Caragana arborescens

Growth Form: irregular or hedgelike
Crown Density: dense
Size: 8-12 feet high
5-8 foot spread
Drought Resistance: excellent
Cold Hardiness: excellent
Growth Rate: rapid
Life Span: moderate
Elevational Range: to 9,500 feet
Soil Conditions: good salt and alkaline tolerance
Possible Insect Problems: aphids and grasshoppers
Possible Disease Problems: very resistant
Wildlife Value: good: songbirds
Seasonal Color: yellow spring flowers
Miscellany: does well in poor soils



Taken from: Trees for Conservation, a buyer's guide, Colorado State Forest Service

BLACK CHERRY

Prunus serotina Ehrh.

Plant Symbol = PRSE2

Contributed by: USDA NRCS National Plant Data Center & the Biota of North America Program



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Botany Dept., NMNH, Smithsonian Institution
@ PLANTS

Alternate Names

Wild black cherry, mountain black cherry, rum cherry

Uses

Black cherry wood is a rich reddish-brown color and is strong, hard, and close-grained – one of the most valued cabinet and furniture woods in North America. It is also used for paneling, interior trim, veneers, handles, crafts, toys, and scientific instruments. Black cherry is used for reclamation of surface mine spoil.

The leaves, twigs, bark, and seeds produce a cyanogenic glycoside. Most livestock poisoning apparently comes from eating wilted leaves, which contain more of the toxin than fresh leaves, but white-tailed deer browse seedlings and saplings without harm. The inner bark, where the glycoside is concentrated, was used historically in the Appalachians as a cough remedy, tonic, and sedative. The glycoside derivatives act by quelling spasms in the smooth muscles lining bronchioles. Very large amounts of black cherry pose the theoretical risk of causing cyanide poisoning.

The fruit has been used to flavor rum and brandy (“cherry bounce”). Pitted fruits are edible and are eaten raw and used in wine and jelly. Black cherry

fruits are important food for numerous species of passerine birds, game birds, and mammals, including the red fox, black bear, raccoon, opossum, squirrels, and rabbits.

Status

Please consult the PLANTS Web site and your State Department of Natural Resources for this plant’s current status, such as, state noxious status and wetland indicator values.

Description

General: Rose Family (Rosaceae). Native trees are 38 m tall; bark of larger trunks fissured and scaly, but thin. Leaves: alternate, simple, ovate to oblong-lanceolate, 5-15 cm long, 2.5-5 cm wide, with finely toothed margins, glabrous or commonly with reddish hairs along the midrib beneath, near the base. Inflorescence is an oblong-cylindric raceme that is 10-15 cm long at the end of leafy twigs of the season, with numerous flowers; calyx tube of short lobes, petals 5, white. Fruits: berry-like, about 8-10 mm in diameter, obovoid, black when ripe; seed a single, black, ovoid stone 6-8 mm long. The common name is from the black color of the ripe fruits.

Variation within the species: The species has a number of geographic variants:

Var. *eximia* (Small) Little - Edwards Plateau of central TX

Var. *rufula* (Woot. & Standl.) McVaugh - TX, NM, AZ

Var. *serotina* - widespread in the eastern US

Var. *virens* (Woot. & Standl.) McVaugh - TX, NM, AZ

Var. *salicifolia* Koehne - Mexico and Guatemala

Var. *serotina* may reach 38 meters tall in the eastern US, but southwestern US varieties typically are smaller; southwestern black cherry (var. *rufula*) seldom grows taller than 9 m, and escarpment black cherry (var. *eximia*) no taller than 15 meters. The leaves of var. *serotina* are thin compared to those of the other varieties. Domesticants and wild populations of *P. serotina* in Mexico and Central America, called “capulin” (var. *salicifolia*), have larger (2 cm) fruits, apparently through selection by native peoples. Plants previously recognized as *P. serotina* var. *alabamensis* (Mohr) Little have been taxonomically returned to species rank, as *P. alabamensis* Mohr.

Distribution

Widespread in eastern North America, from Nova Scotia, New Brunswick, and Quebec, Canada, Minnesota and North Dakota, southward to Florida and east Texas, with outlying populations in central Texas, west Texas, New Mexico, and Arizona, and south in Mexico to Guatemala. Known to be highly invasive in forests of Holland and other countries of Western Europe; also naturalized in northern South America. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Adaptation

Black cherry is a shade-intolerant species that primarily occurs in successional vegetation or in forest openings as well as in old fields and along fencerows. It usually occurs as scattered individuals in various types of mesic woods and second-growth hardwood forests; at elevations of 0-1520 meters. Black cherry in the southwestern US is confined to canyons, valleys, and rich bottomlands. Flowering: May-July (March-April in the Southwest); fruiting: June-October.

Establishment

Seeds may be produced on trees as young as 10 years, but maximum production in natural stands occurs on trees 30-100 years old. Some seed is produced yearly, with good crops produced at 1-5-year intervals. High proportions of the seeds are viable. Because of long-distance seed dispersal by birds and mammals, seedlings are often abundant in sites with no or few reproductive black cherry trees. Seeds that pass through the digestive tracts of passerine birds also have higher germination rates than undigested seeds.

Seeds from one crop germinate over a period of 3 years — this delayed germination allows large numbers of seeds to be banked in the forest floor. After cold stratification, seeds germinate in loose soil and forest litter; germination is higher in litter than in mineral soil. Seedlings typically grow to a height of 5-10 cm within 30 days after germination.

Black cherry also reproduces by stump sprouts following cutting or fire, and sprouting frequency remains high for trees up to about 60 years of age.

Black cherry rarely occurs in the canopy of late successional deciduous forests but buried seeds are present and an abundance of small seedlings is common in the understory. These grow slowly in dense shade, sometimes reaching 15 cm in height in 3-4 years, but any canopy opening will release this

bank of suppressed plants, which grow rapidly to overtop shade-tolerant associates. Black cherry saplings in the understory may repeatedly die back to the stem base and resprout and can persist for 40-60 years by maintaining a small above-ground size until released. Because of its abundant soil-stored seeds and sprouting ability, black cherry may dominate secondary succession following logging, fire, or wind-throw. Trees have been reported to grow to more than 250 years, although mortality increases rapidly after 80-100 years.

Management

Black cherry is sometimes grown in even-aged management — clearcutting or shelterwood cuts are used, depending on the availability of soil-stored seed. Where deer populations are high, successful regeneration may require that larger seedlings be so abundant that deer cannot eat them all. Because it is shallow-rooted and has a tendency to overtop its associates in mixed stands, black cherry is susceptible to wind throw. Best results in establishing black cherry on reclamation or rehabilitation sites are by planting 1-year or older nursery grown seedlings. Direct seeding has generally been unsuccessful.

The thin bark of black cherry makes it highly susceptible to girdling, and it is usually killed or top-killed by fires of moderate severity. As fire severity increases, the percentage of tree-sized individuals killed also increases. When aboveground portions are killed by fire, black cherry sprouts prolifically from the root crown or stump. This vegetative reproduction, however, depletes carbohydrate reserves and leaves plants in a weakened condition. Quickly repeated fires would probably kill any seedlings and saplings that survived the first fire by resprouting.

Pests and Potential Problems

The eastern tent caterpillar and the cherry scallop shell moth defoliate black cherry and can cause growth loss and mortality. The fungal disease “black knot” is common on black cherry – it causes elongated, rough, black swellings on the twigs, branches, and trunk.

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

These plant materials are readily available from commercial 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

Guy Nesom

Formerly BONAP, North Carolina Botanical Garden,
University of North Carolina, Chapel Hill, North Carolina

Species Coordinator

Gerald Guala

USDA, NRCS, National Plant Data Center, Baton Rouge, Louisiana

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Black Cherry (*Prunus serotina*)

A deciduous tree from the Rose Family (Rosaceae)



3-9	30'	60'	medium	full to part sun	symmetrical during growth but irregular into maturity	deep, moist, rich, well-drained soils of variable pH
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Black Cherry, a rapidly growing woodland tree common throughout all of Ohio, is often found in open fields and previously harvested forests. Its beautiful, fine-grained, orange-brown to mahogany-colored heartwood ranks second only to Black Walnut as the ultimate choice for making solid wood furniture, interior trim, and high-quality veneer. Its small fruits are relished by birds and mammals as a food source in late summer. This tree is named for its ripened black cherries as well as its black-gray, flaky mature bark, which looks like black cornflakes pasted on the trunk of the tree.

A native of eastern and midwestern North America, Black Cherry is a pioneer invader tree in open fields or woodlots, and as such can become a "woody weed" as an aggressive sapling. In youth, it displays a symmetrical, often pyramidal growth habit, but it often divides into several upright branches due to storm damage and assumes an irregular shape as it matures. Also known as Wild Black Cherry, this tree may grow to 60 feet tall by 30 feet wide (or larger) when it is found in an open field. As a member of the Rose Family, it also is related to orchard trees (Apples, Plums, Peaches, Apricots, Cherries, Pears, and Almonds) as well as to Strawberries, Roses, and

Blackberries, among others.

Planting Requirements- Black Cherry quickly invades a variety of sites due to its prolific fruit production and the resulting distribution of its seeds by birds and mammals. It prefers deep, moist, rich, well-drained soils of variable pH under full sun to partial sun conditions, but tolerates relatively dry, poor soils as well, with a reduced growth rate. It grows in zones 3 to 9.

Potential Problems - Like many members of the Rose Family, Black Cherry is beset with pest problems (the most serious being tent caterpillars, borers, scales, and aphids), and also has some diseases (primarily leaf spot and trunk canker). Abundant seedlings may arise in recently disturbed open areas and along fencerows, creating a weedy thicket of saplings in just a few years. Occasional storm damage occurs to the upper branches of this fast-growing tree due to its relatively weak sapwood.

Leaf Identification Features



Leaves of Black Cherry are among the first to emerge in early spring. They are alternate, simple, and have fine serrations along their margins.



The shiny leaves are dark green on their uppersides, light green on their undersides, and easily flutter in the breeze. Fall color is a subdued mixture of green, yellow, and orange hues, sometimes with a hint of red.

Other Identification Features



The showy white flowers of Black Cherry are arranged in long, pendulous, cylindrical structures that adorn the tree in mid-spring. The flowers are slightly fragrant, attract many bees, and later give rise to the fruits.



Some fruits of Black Cherry are eaten prematurely in mid- to late summer by birds and mammals, when the small cherries have a red or purple color. However, the remaining fruits will turn to black and, while still bitter to the taste, are sweeter, juicier, and softer. The prominent internal seed easily germinates, and results in this tree being widely dispersed in nature by the many animals that consume the fruits.



Twigs of Black Cherry are thin, shiny, reddish-brown, and with prominent dotted lenticels. They give rise to the smooth branchlets and branches that are reddish-brown to reddish-gray and brightly shine in reflected sunlight, with striking horizontal lenticels.



With age, the smooth bark becomes scaly then flaky, and takes on a dark silvery-gray to almost black coloration. It is one of the easiest trees to identify in the forest, especially in winter, when its black flaky bark is easily seen from a distance.

Taken from: http://ohiodnr.com/trees/cherry_bk/tabid/5351/Default.aspx



Carmine Jewel Cherry

Prunus "Carmine Jewel"

Height: 6 feet

Spread: 6 feet

Sunlight: ○

Hardiness Zone: 2a

Description:

An exciting new development, this hybrid is prized for its tart red cherries in summer, excellent for jams and pies, as well as showy white flowers in spring; upright and rounded, the hardiest sour (pie) cherry yet

Ornamental Features:

Carmine Jewel Cherry is draped in stunning clusters of fragrant white flowers along the branches in mid spring before the leaves. It has dark green foliage throughout the season. The pointy leaves turn an outstanding yellow in the fall. The fruits are showy crimson drupes carried in abundance in mid summer, which are excellent for cooking and baking, making jams and jellies and wine-making but which can be messy if allowed to drop on the lawn or walkways. This is a self-pollinating variety, so it doesn't require a second plant nearby to set fruit. The smooth dark red bark is not particularly outstanding.

Landscape Attributes:

Carmine Jewel Cherry is a multi-stemmed deciduous shrub with a more or less rounded form. Its average texture blends into the landscape, but can be balanced by one or two finer or coarser trees or shrubs for an effective composition.

This shrub will require occasional maintenance and upkeep, and is best pruned in late winter once the threat of extreme cold has passed. It is a good choice for attracting birds to your yard. It has no significant negative characteristics.

Carmine Jewel Cherry is recommended for the following landscape applications;

- General Garden Use
- Orchard/Edible Landscaping
- Mass Planting



Prunus "Carmine Jewel" fruit
Photo courtesy of Northscaping.com



Prunus "Carmine Jewel" flowers
Photo courtesy of Northscaping.com



Plant Characteristics:

Carmine Jewel Cherry will grow to be about 6 feet tall at maturity, with a spread of 6 feet. It has a low canopy with a typical clearance of 1 feet from the ground, and is suitable for planting under power lines. It grows at a medium rate, and under ideal conditions can be expected to live for approximately 30 years.

This shrub should only be grown in full sunlight. It does best in average to evenly moist conditions, but will not tolerate standing water. It is not particular as to soil type or pH. It is highly tolerant of urban pollution and will even thrive in inner city environments.

This particular variety is an interspecific hybrid.





Mayday

Prunus padus

Height: 30 feet

Spread: 25 feet

Sunlight: ○

Hardiness Zone: 3a

Other Names: European Bird Cherry, Common Bird Cherry

Description:

A medium sized upright accent tree covered in racemes of snowy white flowers in spring followed by tiny bitter fruit, attractive to birds, good fall color; extremely ornamental in bloom, does best in full sun, can be susceptible to black-knot

Ornamental Features:

Mayday is bathed in stunning racemes of fragrant white flowers hanging below the branches in mid spring before the leaves. It has dark green foliage throughout the season. The pointy leaves turn an outstanding yellow in the fall. The black fruits are held in clusters in late summer. The smooth brown bark is not particularly outstanding.

Landscape Attributes:

Mayday is a deciduous tree with a shapely oval form. Its average texture blends into the landscape, but can be balanced by one or two finer or coarser trees or shrubs for an effective composition.

This tree will require occasional maintenance and upkeep, and is best pruned in late winter once the threat of extreme cold has passed. It is a good choice for attracting birds to your yard. Gardeners should be aware of the following characteristic(s) that may warrant special consideration;

- Disease

Mayday is recommended for the following landscape applications;



Prunus padus flowers
Photo courtesy of Northscaping.com



Prunus padus fruit
Photo courtesy of Northscaping.com



- *Shade*
- *Accent*

Plant Characteristics:

Mayday will grow to be about 30 feet tall at maturity, with a spread of 25 feet. It has a low canopy with a typical clearance of 4 feet from the ground, and should not be planted underneath power lines. It grows at a medium rate, and under ideal conditions can be expected to live for approximately 30 years.

This tree should only be grown in full sunlight. It does best in average to evenly moist conditions, but will not tolerate standing water. It is not particular as to soil type or pH. It is highly tolerant of urban pollution and will even thrive in inner city environments.

This species is not originally from North America.



Prunus padus in bloom
Photo courtesy of Northscaping.com



Mayday Tree (*Prunus padus commutata*)



Mayday Tree (*Prunus padus commutata*) The Mayday Tree is of medium height (30'), low-branched and has a compact, rounded canopy that may reach 20'. It is one of the first trees to leaf out and bloom in spring. Related to the chokecherry, it is taller and is usually pruned down to a single trunk. Mayday Tree is hardy to zone 3, has low to moderate water needs and is drought resistant. It tolerates most soils, including our alkaline soil, as long as they are well-drained. This tree can be grown in full sun or partial shade.

Drawbacks include susceptibility to black knot. This is a fungal disease that can be controlled by pruning. The trees branches are stiff and can be broken by heavy snow. Unless the roots are disturbed, it does not tend to sucker.



Foliage is bright green, emerging in April. Leaves are alternate, ovate to elliptic, and 2 to 5 inches long with serrated margins. Fall color ranges from yellow, to copper, to bronze red.



Pendulous clusters of fragrant pure-white flowers appear in May after leaf break. They are very attractive to butterflies and bees.



Fruit is nearly black and cherry-like, inedible to humans but birds love it. It can leave stains on concrete.



Bark is a gunmetal gray.

Photos: Judy Sedbrook

Nanking Cherry



Nanking Cherry (*Prunus tomentosa*)

General Description

A winter hardy, moderately fast-growing, short-lived shrub native to China, Japan, and the Himalayas. A broad spreading, densely twiggy shrub, becoming more open and picturesque with age. Also called Manchu cherry. Edible fruits are dark red and excellent for pies and jellies.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Brown.

Bud Size - 1/8 inch.

Leaf Type and Shape - Simple, elliptical.

Leaf Margins - Unequally serrate.

Leaf Surface - Rough-veined, pubescent.

Leaf Length - 2 to 3 inches.

Leaf Width - 1 to 1½ inches.

Leaf Color - Medium to dark green above; white hairs below; yellow fall color.

Flowers and Fruits

Flower Type - Small but numerous.

Flower Color - Pink in bud, becoming near white.

Fruit Type - Cherry-shaped drupe.

Fruit Color - Dark red.

Form

Growth Habit - Upright, semi-spreading, and densely twiggy.

Texture - Medium-fine, summer; fine, winter.

Crown Height - 6 to 10 feet.

Crown Width - 6 to 10 feet.

Bark Color - Shiny brown and exfoliating when mature.

Root System - Medium in depth and spread.

Environmental Requirements

Soils

Soil Texture - Prefers loamy soils.

Soil pH - 5.0 to 7.5.

Windbreak Suitability Group - 1, 3, 4, 4C, 5.

Cold Hardiness

USDA Zone 2.

Water

Tolerates considerable wind and dryness.

Light

Full sun only.

Uses

Conservation/Windbreaks

Medium shrub for farmstead windbreaks.

Wildlife

Fruit is relished by many songbirds. Nesting cover for a few species of songbirds. Browsed by rabbits, mice, and deer, which could cause serious injury if control measures are not taken.

Agroforestry Products

Food - Fruits processed into wine, syrup, jellies and pies.

Medicinal - Some *Prunus* species have been used as an astringent, for coughs, bronchial problems; an antibiotic, in cancer research, and for gout.

Urban/Recreational

Used for screen, hedge, border and specimen plantings. It is often a rather short-lived plant.

Cultivated Varieties

White Nanking Cherry (*Prunus tomentosa* 'Leucocarpa') - White fruits.

Related Species

American Plum (*Prunus americana*)

Chokecherry (*P. virginiana*)

Mongolian Cherry (*P. fruticosa*)

Western Sandcherry (*P. besseyi*)

Pests

Common diseases include branch cankers. Extracts of various *Prunus* species are toxic to insect pests.

Nanking cherry

Prunus tomentosa

Growth Form: round to irregular
Crown Density: moderate
Size: to 8 feet high
to 8 foot spread
Drought Resistance: good
Cold Hardiness: excellent
Growth Rate: rapid
Life Span: moderate
Elevational Range: to 8,000 feet
Soil Conditions: good alkaline tolerance
Possible Insect Problems: tent caterpillars, bark beetles
Possible Disease Problems: shot-hole leaf spot, black knot
Wildlife Value: high: song and game birds
Seasonal Color: white flowers in spring
Miscellany: delicious edible fruit for jellies; blooms early



Pin Cherry

Prunus pennsylvanica



Mature



Leaf

General Attributes

Type	Deciduous Tree or Deciduous Shrub
Height	20 - 35 Feet
Spread	20 - 35 Feet
Form	Columnar or Columnar
Utility Lines	Compatible
Growth Rate	Fast
Life Expectancy	Short
USDA Zone	2 - 6
Root Pattern	Deep Lateral

Flowers/Foliage/Fruits

Flower Color	White
Flower Season	Spring
Fruit	Drupe
Fruit Color	Red
Fruit Season	Summer
Summer Texture	Medium
Winter Texture	Fine
Spring Foliage	Green
Summer Foliage	Green
Fall Foliage	Red
Winter Foliage	Not Applicable

Plant Community

Sun	Full Sun
Orientation	North, South, East, West
Soil Texture	Sand to Sandy Loam
Topography	Upland
Plant Community	Savannah, Forest Edge, Old Field
Succession	Pioneer
Origin	MSA Zone 1, MSA Zone 2, MSA Zone 3, MSA Zone 4, MSA Zone 5, MSA Zone 6, Minnesota, North America

Soils

Salt Spray Tolerance	Moderate
Soil Salt Tolerance	
Compaction Tolerance	Intolerant
Water Table	24 Inches
Drainage	Excessive, Moderate
Flood Tolerance	
Drought Tolerance	Tolerant
Moisture Regime	Dry, Moist, Wet
pH	6.0 through 7.5
Windbreak Group	

Pin Cherry

Prunus pennsylvanica



Planting Ease

Spring Bareroot Easy

Fall Bareroot

Spring Container Easy

Fall Container Easy

Spring Seed

Fall Seed

Maintenance

Formal Moderate

Informal Low

2,4-D Tolerance Sensitive

Dicamba Tolerance Sensitive

Picloram Tolerance Sensitive

Clopyralid Tolerance

Artificial Light

Sulfur Dioxide

Ozone Tolerance

Hydrogen Flouride Moderate

Nitrogen Oxide

Pests/Problems

Allergens both sexes 5-7 depending on species depending on variety

Invasiveness Non-Invasive

Toxicity Has toxic Leaves

Cold Injury Not Susceptible

Storm Damage Susceptible

Biological Control

Mechanical Control

Chemical Control

Miscellaneous

Wildlife Rating High

Insect Concerns Minor

Disease Concern Minor

Wildlife Concerns

Comments

Seldom planted native tree even though it has attractive flowers, fruit, and fall color. Fruit good for jams. Tolerant of all but poorly drained soils. Leaves contain cyanide.



Fall



Flower

Pin Cherry

Prunus pennsylvanica



Fruit

Western Sandcherry



Western Sandcherry (*Prunus besseyi*)

General Description

A small, winter-hardy, relatively short-lived shrub native to the Northern Great Plains. Edible fruits which are dark purple to black. Purpleleaf Sandcherry, a hybrid, is a popular landscape shrub.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Brown.

Bud Size - 1/8 inch.

Leaf Type and Shape - Simple, oval-lanceolate.

Leaf Margins - Appressed-serrate.

Leaf Surface - Smooth, glabrous.

Leaf Length - 1 to 2 inches.

Leaf Width - 1/2 to 1 inch.

Leaf Color - Dark silvery-green to gray-green, lighter beneath; yellow fall color.

Flowers and Fruits

Flower Type - 2 to 4 per cluster.

Flower Color - White.

Fruit Type - Cherry-shaped fruit, globose.

Fruit Color - Dark purple to black when mature.

Form

Growth Habit - Open, spreading.

Texture - Medium, summer; medium, winter.

Crown Height - 3 to 6 feet.

Crown Width - 3 to 6 feet.

Bark Color - Gray-brown.

Root System - Medium in depth and spread.

Environmental Requirements

Soils

Soil Texture - Prefers loamy soils.

Soil pH - 5.0 to 7.5.

Windbreak Suitability Group - 1, 3, 5, 6D, 6G.

Cold Hardiness

USDA Zone 3.

Water

Fair drought tolerance.

Light

Full sun only.

Uses

Conservation/Windbreaks

Small to medium shrub for farmstead windbreaks.

Wildlife

Fruits are relished by many songbirds. Nesting cover for a few species of songbirds. Makes good loafing and roosting cover for song and game birds. Browsed by deer.

Agroforestry Products

Food - Fruits eaten fresh, dried, or processed as jellies and pies.

Medicinal - *Prunus* species have been used for coughs and colds, as an antibiotic and in cancer research.

Urban/Recreational

Used in screen, hedge, or border plantings, occasionally.

Cultivated Varieties

Hanson Bush Cherry (*Prunus besseyi* 'Hanson')

Purpleleaf Sandcherry (*P. x cistena*)

Related Species

American Plum (*Prunus americana*)

Chokecherry (*P. virginiana*)

Mongolian Cherry (*P. fruticosa*)

Nanking Cherry (*P. tomentosa*)

Pests

Common diseases include *Taphrina* leaf curl, black knot, and fireblight. Extracts of *Prunus* species repel or are toxic to various insect pests.

Sand cherry

Prunus besseyi

Growth Form: spreading

Crown Density: moderate

Size: 3 feet high

4 foot spread

Drought Resistance: good

Cold Hardiness: good

Growth Rate: rapid

Life Span: short

Elevational Range: to 7,500 feet

Soil Conditions: best on sandy to loamy soils

Possible Insect Problems: pear slug; fall web worm

Possible Disease Problems: powdery mildew

Wildlife Value: excellent; browse and food value

Seasonal Color: pink flowers

Miscellany: native; edible fruit



Taken from: Trees for Conservation, a buyer's guide, Colorado State Forest Service

Aronia melanocarpa (Black chokeberry)



Hardiness Zones: 1 2 3 4 5 6 7 8 9 10 11

Botanical Name: *Aronia melanocarpa* ah-ROE-nee-ah mel-an-oh-KAR-pah **Common Name:** Black chokeberry

Genus: *Aronia*

Black chokeberry is a medium-size shrub with multiple seasons of interest. Starting with showy clusters of white flowers in early summer, followed by dark purple fruits greatly appreciated by robins, this adaptable shrub closes the growing season with beautiful, wine red fall foliage. Black chokeberry is most effective when massed in the landscape and allowed to follow its natural tendency to spread by suckering.

Noteworthy characteristics: Showy flowers; purple fruit that attracts birds; red fall color. U.S. native.

Care: Provide full sun to partial shade and most any soil. Best fruit production occurs in full sun.

Propagation: Root softwood cuttings in early summer, or sow seed in a seedbed in fall.

Problems: Nothing serious.

Height	3 ft. to 6 ft.
Spread	6 ft. to 10 ft.
Growth Habit	Spreads
Light	Full Sun to Part Shade
Moisture	Adaptable
Maintenance	Low
Characteristics	Attracts Birds; Native; Showy Fall Foliage; Showy Fruit
Bloom Time	Early Summer; Summer
Flower Color	White Flower
Uses	Naturalizing, Waterside
Style	Woodland Garden
Seasonal Interest	Summer Interest, Fall Interest
Type	Shrubs

Taken from:
www.finegardening.com

Black Cherry (*Prunus serotina*)

A deciduous tree from the Rose Family (Rosaceae)



3-9	30'	60'	medium	full to part sun	symmetrical during growth but irregular into maturity	deep, moist, rich, well-drained soils of variable pH
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Black Cherry, a rapidly growing woodland tree common throughout all of Ohio, is often found in open fields and previously harvested forests. Its beautiful, fine-grained, orange-brown to mahogany-colored heartwood ranks second only to Black Walnut as the ultimate choice for making solid wood furniture, interior trim, and high-quality veneer. Its small fruits are relished by birds and mammals as a food source in late summer. This tree is named for its ripened black cherries as well as its black-gray, flaky mature bark, which looks like black cornflakes pasted on the trunk of the tree.

A native of eastern and midwestern North America, Black Cherry is a pioneer invader tree in open fields or woodlots, and as such can become a "woody weed" as an aggressive sapling. In youth, it displays a symmetrical, often pyramidal growth habit, but it often divides into several upright branches due to storm damage and assumes an irregular shape as it matures. Also known as Wild Black Cherry, this tree may grow to 60 feet tall by 30 feet wide (or larger) when it is found in an open field. As a member of the Rose Family, it also is related to orchard trees (Apples, Plums, Peaches, Apricots, Cherries, Pears, and Almonds) as well as to Strawberries, Roses, and

Blackberries, among others.

Planting Requirements- Black Cherry quickly invades a variety of sites due to its prolific fruit production and the resulting distribution of its seeds by birds and mammals. It prefers deep, moist, rich, well-drained soils of variable pH under full sun to partial sun conditions, but tolerates relatively dry, poor soils as well, with a reduced growth rate. It grows in zones 3 to 9.

Potential Problems - Like many members of the Rose Family, Black Cherry is beset with pest problems (the most serious being tent caterpillars, borers, scales, and aphids), and also has some diseases (primarily leaf spot and trunk canker). Abundant seedlings may arise in recently disturbed open areas and along fencerows, creating a weedy thicket of saplings in just a few years. Occasional storm damage occurs to the upper branches of this fast-growing tree due to its relatively weak sapwood.

Leaf Identification Features



Leaves of Black Cherry are among the first to emerge in early spring. They are alternate, simple, and have fine serrations along their margins.



The shiny leaves are dark green on their uppersides, light green on their undersides, and easily flutter in the breeze. Fall color is a subdued mixture of green, yellow, and orange hues, sometimes with a hint of red.

Other Identification Features



The showy white flowers of Black Cherry are arranged in long, pendulous, cylindrical structures that adorn the tree in mid-spring. The flowers are slightly fragrant, attract many bees, and later give rise to the fruits.



Some fruits of Black Cherry are eaten prematurely in mid- to late summer by birds and mammals, when the small cherries have a red or purple color. However, the remaining fruits will turn to black and, while still bitter to the taste, are sweeter, juicier, and softer. The prominent internal seed easily germinates, and results in this tree being widely dispersed in nature by the many animals that consume the fruits.



Twigs of Black Cherry are thin, shiny, reddish-brown, and with prominent dotted lenticels. They give rise to the smooth branchlets and branches that are reddish-brown to reddish-gray and brightly shine in reflected sunlight, with striking horizontal lenticels.



With age, the smooth bark becomes scaly then flaky, and takes on a dark silvery-gray to almost black coloration. It is one of the easiest trees to identify in the forest, especially in winter, when its black flaky bark is easily seen from a distance.

Taken from: http://ohiodnr.com/trees/cherry_bk/tabid/5351/Default.aspx

Aronia melanocarpa (Black chokeberry)



Hardiness Zones: 1 2 3 4 5 6 7 8 9 10 11

Botanical Name: *Aronia melanocarpa* ah-ROE-nee-ah mel-an-oh-KAR-pah **Common Name:** Black chokeberry

Genus: *Aronia*

Black chokeberry is a medium-size shrub with multiple seasons of interest. Starting with showy clusters of white flowers in early summer, followed by dark purple fruits greatly appreciated by robins, this adaptable shrub closes the growing season with beautiful, wine red fall foliage. Black chokeberry is most effective when massed in the landscape and allowed to follow its natural tendency to spread by suckering.

Noteworthy characteristics: Showy flowers; purple fruit that attracts birds; red fall color. U.S. native.

Care: Provide full sun to partial shade and most any soil. Best fruit production occurs in full sun.

Propagation: Root softwood cuttings in early summer, or sow seed in a seedbed in fall.

Problems: Nothing serious.

Height	3 ft. to 6 ft.
Spread	6 ft. to 10 ft.
Growth Habit	Spreads
Light	Full Sun to Part Shade
Moisture	Adaptable
Maintenance	Low
Characteristics	Attracts Birds; Native; Showy Fall Foliage; Showy Fruit
Bloom Time	Early Summer; Summer
Flower Color	White Flower
Uses	Naturalizing, Waterside
Style	Woodland Garden
Seasonal Interest	Summer Interest, Fall Interest
Type	Shrubs

Taken from:
www.finegardening.com

Chokecherry



Chokecherry (*Prunus virginiana*)

General Description

This small suckering hardy tree or large shrub is native throughout North Dakota. Purple-leaved selections are popular landscape plants. Fruits commonly used for jellies and jams. The largest tree form in North Dakota is 41 feet tall with a canopy spread of 28 feet.

Leaves and Buds

Bud Arrangement - Alternate.

Bud Color - Light brown.

Bud Size - Small, 1/16 to 3/16 inch.

Leaf Type and Shape - Simple, broadly elliptical.

Leaf Margins - Abruptly acuminate, broad-cuneate to rounded at base, and closely serrulate.

Leaf Surface - Glabrous, except axillary tufts of hair beneath.

Leaf Length - 1½ to 3 inches.

Leaf Width - 3/4 to 1½ inches.

Leaf Color - Dark green above, lighter green below; yellow fall color.

Flowers and Fruits

Flower Type - Racemes, 3 to 6 inches long.

Flower Color - Creamy-white.

Fruit Type - Drupe, fleshy fruit with a stone in the center.

Fruit Color - Dark red to purple-black when mature.

Form

Growth Habit - Oval to rounded, slender twigs.

Texture - Medium-fine, summer; medium, winter.

Crown Height - 12 to 25 feet.

Crown Width - 10 to 20 feet.

Bark Color - Gray-brown.

Root System - Shallow, suckering.

Environmental Requirements

Soils

Soil Texture - Adapted to a wide variety of soils.

Soil pH - 5.0 to 8.0.

Windbreak Suitability Group - 1, 1K, 3, 4, 4C, 5, 6D, 6G.

Cold Hardiness

USDA Zone 2.

Water

Moderate drought tolerance.

Light

Shade tolerant, but needs full sun to produce a good fruit crop.

Uses

Conservation/Windbreaks

Tall shrub for farmstead and field windbreaks, riparian plantings and highway beautification.

Wildlife

One of the most important plants for food and cover. Twigs and foliage are heavily browsed by deer.

Agroforestry Products

Food - Fruit commonly used for jelly and wine.

Medicinal - Some *Prunus* species are used as an astringent, for coughs, colds, an antibiotic; for gout and in cancer research.

Urban/Recreational

Very limited use due to its suckering habit. Useful in screen or mass plantings.

Cultivated Varieties

Schubert (or Canada Red) Chokecherry (*Prunus virginiana* 'Schubert' or 'Canada Red') - Cultivar released by the Oscar Will Nursery, Bismarck, North Dakota. Canada Red was originally grafted on Mayday tree rootstock to eliminate suckering, but is now largely seed or cutting propagated. Leaves turn to purple color as they harden-off in early summer.

Related Species

American Plum (*Prunus americana*)

May Day Tree (*P. padus* var. *commutata*)

Mongolian Cherry (*P. fruticosa*)

Nanking Cherry (*P. tomentosa*)

Russian Almond (*P. tenella*)

Western Sandcherry (*P. besseyi*)

Pests

Common diseases include X-disease, black knot, stem decay, shothole and Valsa canker. Common insect pest is prairie tent caterpillar. Deer commonly browse choke-cherry. Extracts of various *Prunus* species are toxic to various insect pests.

CHOCKECHERRY

Prunus virginiana L.

Plant Symbol = PRVI

Contributed by: USDA NRCS Pullman, Washington and Manhattan, Kansas Plant Materials Centers and Kansas State University Forestry Division



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PARTS OF THIS PLANT CAN BE POISONOUS-See Environmental Concerns section of this document

Alternate Names

common chokecherry, choke cherry, black chokecherry, red chokecherry, California chokecherry, Virginia chokecherry, eastern chokecherry, western chokecherry, rum chokecherry, whiskey chokecherry, wild cherry, wild blackcherry, bird cherry, jamcherry, chokeberry, cabinet cherry, chuckleyplum, sloe tree, bitter-berry, caupulin.

Uses

Many people do not realize cherry and some other very important commercial fruit trees (apple, peach, plum, apricot, nectarines, and almonds) are in the rose family. Anthropologists indicate cherries have been harvested in Eurasia from 4,000 to 5,000 B.C. In 1629, chokecherry was imported to England where it has been cultivated as an ornamental. It was first cultivated in North America as an orchard crop in 1724.

The seeds are toxic due to production of hydrocyanic acid in the leaves, stems and seeds. The almond nuts are treated to deactivate the poisonous glycosides before they are put on the market. Cases of illness and deaths have been traced back to eating the seeds of these trees.

Conservation: Chokecherry is used extensively in shelterbelts, windbreaks, wildlife habitat and mass plantings for erosion control. Chokecherry does well in riparian area planting. It provides thermal cover over the water and works well in stabilizing streambanks. It has been used on disturbed sites such as mined land reclamation, highway right-of-ways and construction sites. It is a good erosion control plant because it can form thickets and spread by rhizomes.

Wildlife: Chokecherry is important to many wildlife animals. Birds, rabbits, hares, rodents and bears all seek out and eat its fruit. It provides food, cover and nesting habitat for a variety of birds. Birds will also take advantage of its growth form for cover and nesting habitat. It is used extensively by deer as a browse source in the winter. The early spring flowers provide an important source of nectar for butterflies, honeybees and ants.

Food: The common name, chokecherry, came from the bitter and astringent taste of the fruit. The fruit was a staple for numerous Indian tribes across the North American continent, especially to tribes who lived on the plains and prairies. Chokecherries were routinely cooked before they were eaten or dried thoroughly. Both methods served to break down any formation of prussic acid contained in the stone pits. Drying chokecherries improves their taste by sweetening them, or at the very least, getting rid of the naturally occurring bitter taste. Chokecherries were consumed in three ways by Indians. The fruit and/or juice were eaten. Whole cherries, including pulp, skin and stone, were pulverized into a pulp, shaped into balls and dried in the sun. Fruit balls could be stored for future use. Either boiling or drying the fruit will neutralize the naturally occurring hydrocyanic acid. The most important use was as part of the recipe for pemmican, or mince-meat. Pemmican was made by getting a slice of dried meat (bison was preferred over elk, deer or antelope) and pounding it with a stone until it had a fine texture. Bone marrow and animal lard were then heated and mixed with the meat. Crushed chokecherries were

then added. Pemmican would be cached as a winter food. Some form of pemmican was a mainstay for all plains tribes. Chokecherry butter was made by cooking the mature fruit, straining out the seed and skins, mixing this poultice with an equal quantity of wild plums or crabapples and adding sugar. The bark was brewed for a tea drink. Many tribes would add the fruits to soups and stews as flavoring and as a thickening agent. A green branch was speared through a meat slab while it was cooking to add spice to the taste.

Likewise, pioneers and settlers came to realize its food value. Mature fruits are still collected today and used to make jellies, jams, pie-fillings, syrups, sauces and wines.

Like many plants and animals which were vital to their survival some tribes used parts of the chokecherry plant in their rituals. A green dye was derived from the leaves, inner bark and immature fruit. A purplish-red dye was derived from the ripe fruit. The Cheyenne used the limbs to make arrow shafts and bows. The Crows used it for tipi stakes and pins. Mountain men washed their steel traps in water boiled with the bark to remove the scent. It is speculated many tribes planted seeds in places they frequented to ensure a supply of chokecherries was always available.

Chokecherry is being promoted for planting as a minor crop in the prairie provinces of Canada for juice production. Estimated fruit production potential is 15,000 pounds per acre from mature plants. There is a significant research effort in Canada for developing fruit producing cultivars.

Landscaping: In some parts of the U.S., chokecherry is a popular ornamental. Its quick growth, mature size, attractive white flowers in the spring and strong, sweet and almond-like aroma fragrance make it a good yard tree in urban neighborhoods. Cultivars are planted for ornamentals rather than the native species. All native chokecherry varieties have a great tendency to sucker, which can create problems in lawn care. Most cultivated varieties do not have this suckering trait while producing more attractive flowers and/or larger fruit. The fruit also attracts a diverse population of birds for a number of weeks. Chokecherries can be a component in a screen or noise barrier planting.

Ethnobotany: Chokecherry covered a large geographic range in North America, so a majority of tribes used it to treat a variety of health problems. It

was valued especially for its astringent properties and beneficial effect upon the respiratory system.

The Arika women would drink the berry juice to stop post-partum hemorrhage.

The Blackfeet drank berry juice for diarrhea and sore throats. An infusion of the cambium layer mixed with Saskatoon serviceberry (*Amelanchier alnifolia*) was taken as a general purge treatment and to lactating mothers so they could pass on the medicinal qualities to the nursing baby. They also used it in an enema solution for their children. Willow (*Salix* spp.) tea was used to counteract the laxative effect of chokecherry.

The Cherokees used chokecherry in the following ways: mixed chokecherry with hazel alder (*Alnus serrulata*), downy rattlesnake plantain (*Goodyera pubescens*), Canadian wildginger (*Asarum canadense*) and yellowroot (*Xanthorhiza simplicissima*) to make a blood tonic. An infusion made from boiled bark was given for coughs, laryngitis, chills, ague, fevers and to loosen phlegm. Warm chokecherry tea was given to women when labor pains began. The root bark is a good astringent and was mixed with water and used as a rinse for open sores and old skin ulcers. The tree bark of spicebush (*Lindera benzoin*) and flowering dogwood (*Cornus florida*) was added to corn whiskey and used to treat for measles. The fruit was boiled and eaten to treat for bloody bowels. The branches and leaves were one of six ingredients burned in sweat lodges to treat for indigestion and jaundice. The Cheyenne would gather the immature fruit, dry it in the sun, pulverize it and use it as a treatment for diarrhea.

The Paiutes made a medicinal tea from the leaves and twigs to treat colds and rheumatism.

The Sioux chewed the dried roots and then placed this poultice in open wounds to stop the bleeding. The Sioux, Crows, Gros Ventres and others made a bark tea to cure stomach aches, diarrhea and dysentery. The Crows also used the bark to cleanse sores and burns.

In the 19th century medical doctors used many concoctions of chokecherry leaves and bark to treat a number of ailments. Chokecherry bark was listed in the *U.S. Pharmacopoeia* from 1820 to 1970. It is still listed as a pharmaceutical aid, a flavor agent for liquid medicines. Among the health complaints treated were debility, hectic fever, irritative dyspepsia, irritability of the nervous system, fever,

pleurisy, whooping cough, tuberculosis, pneumonia, sore throats and gastrointestinal problems. It was recommended as a rinse on burns, open sores, cankers and skin ulcers. Pharmaceutical books at that time cautioned against boiling any mixture using chokecherry leaves or bark because it would drive off the medicinal properties. The bark was used as a flavoring agent in many cough syrups. In 1834, Dr. Proctor first identified the bark as containing prussic acid.

In their journals, Lewis and Clark recorded that while camped on the upper Missouri River Captain Lewis became ill with abdominal cramps and fever. He made a tea from chokecherry twigs and was well the next day.

Modern medicinal research shows in small dosages hydrocyanic acid can stimulate respiration, improve digestion and gives a false sense of well-being. Some cancer research involving hydrocyanic acid is being conducted.



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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).

Weediness

This plant may become weedy or invasive in some regions or habitats and may displace more desirable vegetation if not properly managed. Please consult with your local NRCS Field Office, Cooperative Extension Service office, or state natural resource or agriculture department regarding its status and use. Weed information is also available from the PLANTS Web site.

Description

General: Rose Family (Rosaceae). Chokecherry is a native, perennial, deciduous, woody, thicket-forming large erect shrub or small tree. It rarely reaches a height of over 30 feet. The crown is irregular and from 10 to 20 feet wide when mature. The stems are numerous and slender. Reproduction can either be by seed or root rhizomes.

Leaves are dark green and glossy above and paler beneath. They are alternate, simple, glabrous, oval to broadly elliptic in shape, 1 to 4 inches long, and 3/4 to 2 inches wide. The margins are toothed with closely-spaced sharp teeth pointing outward forming a serrated edge. They turn yellow in autumn.

The bark of young trees may vary from gray to a reddish brown. As it ages the bark turns darker, into brownish-black and becomes noticeably furrowed. The bark is distinctly marked by horizontal rows of raised air pores (lenticels). With maturation the lenticels develop into shallow grooves.

It has perfect flowers which are aromatic and arranged in cylindrical racemes 3 to 6 inches long. The racemes always grow on the current year's leafy twig growth. Individual flowers are perfect, 1/4 to 3/8 inch in diameter with 5 white petals. The flowers start appearing before the leaves are fully developed. Flowers may appear from April to July and fruits form a couple of months later.

The fruits are spherical drupes (fleshy fruit with a stone in the center), globose, 1/4 to 3/8 inch in diameter. Small ripe cherries range in color from dark red or purple to almost black. There are from 3,000 to 5,000 seeds per pound.

The roots are a network of rhizomes. Deep root systems grow at irregular intervals along the length of the rhizomes. Rhizomes can extend beyond the drip zone, up to 35 feet away from the base of the tree. Rhizomes grow up to 3/4 inch in diameter.

There are three recognized varieties of *Prunus virginiana*. The variety *demissa* is commonly called western chokecherry. It produces dark red fruit. The variety *melanocarpa* produces black fruit. The variety *virginiana* produces crimson to deep red fruit. This variety can be found in two forms, one with red and one with white fruit.

Habitat: Chokecherry is found in a large geographic area and it grows abundantly in many habitat types and plant associations. It may be found in thin stands, as dense thickets or individually in open

forest clearings. It prefers direct sunlight and is not an understory species of boreal forests.

Chokecherry occurs naturally in a wide range of soil types and textures. Soils supporting chokecherry vary considerably, from abandoned construction sites, with almost no soil depth or fertility, to deep virgin grasslands, with deep profiles and a high level of nutrients. Soil textures range from silt to sandy loam, it does not do well on heavy clay soils. Soil pH can vary from 5.2 (mildly acid) to 8.4 (moderately alkaline) without any adverse effect upon growth. Precipitation ranges from 13 to 65 inches annually. Sites range from low to mostly mid-elevation, although it also occurs from 8,000 to 10,000 feet in Idaho, Nevada and Utah. It is widely adaptable to temperature extremes. It is found in USDA hardiness zones 2 to 7 naturally. If planted, chokecherry will grow into zone 10. The four major limiting factors in its habitat are that it is intolerant of shade, poor drainage, frequent flooding and soils with a large amount of clay.

Many wildlife animals eat the fruit and distribute it. Birds are by far the most common carrier of the seeds. As a consequence it grows abundantly on places where birds rest, like along roadsides, fences, hedgerows, riparian margins and forest clearings. Chokecherry is well adapted to fire disturbance. It can be top-killed by fire, but re-sprouts readily from root crowns and rhizomes. Seed germination is apparently improved with heat treatment, suggesting a further adaptation to fire.

Known Distribution

Distribution: Chokecherry is found in all but eight states or territories. For current distribution, please consult the Plant Profile page for this species on the PLANTS Web site.

Establishment

Nursery grown seedlings establish satisfactorily if planted free of competition in areas having 15 or more inches of annual precipitation. If seeds are planted in the spring they should be pre-chilled for 3 months, then placed about 1/2 inch deep. Saplings are not tolerant of weedy competition for 2 to 3 years after planting. Use of weed barrier mat, a strict cultivation regime, or proper herbicide treatment is necessary if a successful planting is to occur. Check with your local NRCS Field Office to determine if chokecherry is adapted to your area or soils before planting any trees.

Management

Management of chokecherry will be dependent on whether it is looked upon as a desirable or undesirable plant. On range and pastures it is often considered a potential hazard to livestock. As a consequence either mechanical and/or herbicide treatments combined with good grassland management is needed to prevent animal loss. When it is used in windbreaks, as an ornamental plant or as a wildlife resource it is beneficial. Control of weedy vegetation, and treatment for potential diseases, is necessary if it is expected to grow for an extended period of years.

Pests and Potential Problems

Chokecherry is susceptible to X-disease, black knot, stem decay, shothole, Valsa canker, and honey fungus *Plowrightia stansburiana*. Common insect pests are the prairie tent caterpillar, eastern tent caterpillar and aphids. In the northeastern United States, chokecherry is a primary host of the eastern tent caterpillar. Browsing by deer on young immature trees causes considerable damage in some areas.

Environmental Concerns

The leaves, bark, stem, and stone (seed pit) of chokecherry are all toxic. It is potentially poisonous to all classes of livestock, but cattle and sheep are the ones commonly affected. The meaty flesh of the fruit is not toxic.

Hydrocyanic acid (HCN) is often called Prussic acid. HCN does not occur freely as a plant compound. It is formed only after disruption of the plant cell, either by mechanical injury or a sudden freeze. Only then do the degradative enzymes (hydroxynitrile lyases) and glycoside come into contact and mix together. HCN acid occurs in greatest amounts in the leaves. Generally, the amount of HCN in the leaves lessens as the growing season progresses. By autumn chokecherry leaves have so little glycoside, a component of HCN, they are not normally considered hazardous. Drought stress may cause the leaves to concentrate the glycoside in heavier amounts than usual. Wilted leaves are more toxic per unit weight due to dehydration, which concentrates the components, which make up HCN. HCN is so toxic at low levels because it inhibits blood cells from absorbing oxygen. One symptom of HCN poisoning is the blood turns bright red when exposed to the air and it clots abnormally slow.

Cyanogenic glycosides (prunasin, produced in the leaves and twigs, and amygdalin, produced in the stone) are the building blocks for HCN. Of the two,

prunasin is found in a much larger quantity. HCN is most commonly formed in the plant due to mechanical injury (such as browsing), a sudden change in temperature (an early and heavy frost) or in the animal during digestion. The glycosides can either be hydrolyzed by enzymes in the plants or by rumen microorganisms. The glycosides occur in vacuoles in plant tissue while the enzymes are found in the cytosol.

Ingestion of about 0.25 percent of an animal's body weight, or 50 milligrams/kilogram of body weight, is the Lethal Dose of fifty percent of animals (LD50). This means less than 4 ounces of fresh leaves can be toxic to a 100 pound animal.

Poisoning generally occurs when animals graze this amount or more in an hour or less. Formation of HCN must occur primarily within the short time between the mastication of the forage and its arrival in the stomach, for the acidic contents of the stomach slows down the reaction of the chemical process which creates the HCN. The toxic elements become even more active if the animal drinks water immediately after browsing. HCN works so quickly by the time poisoning symptoms are identified it is generally too late to treat. Injection of a combination of sodium thiosulfate and sodium nitrite in the veins or peritoneum is the recommended antidote. Oxidizing substances such as potassium permanganate or hydrogen peroxide given as a drench may help some. Any other medications promoting respiratory help and nerve stimulants may also contribute to recovery. For any treatment to be effective it must be given immediately upon symptoms of poisoning.

Removing livestock from the HCN source is the only practical way to prevent mass poisoning and numerous losses once it has been detected. Good livestock management includes keeping hungry livestock away from areas where chokecherry is abundant. Maintaining a good level of preferred forage in pastures will do a great deal in preventing HCN poisoning.

When a person eats a single apple seed or cherry pit, though not recommended, it is unlikely to cause discomfort or serious illness. However, there have been reported deaths, usually of children chewing on the stems and leaves, or swallowing the stones. Visible reactions to poisoning may include; anxiety; uneasiness; confusion; dizziness; vertigo; headache; nausea; vomiting; the lips turn blue; bloating; dilation of the eyes; muscular weakness; abnormal breathing, either very labored or very rapid; paralysis

of the throat; irregular heart beat; convulsions; coma ensues and finally death. Clinically, death results from the general anoxic state created by the inhibition of cytochrome oxidase.

Seeds and Plant Production

Chokecherry can be propagated by seed, rhizome cuttings, suckers, crown division, semi-hardwood cuttings and grafting. Generally, seed crops are regular and viable. The flowers are more abundant and more fruit is produced on plants growing on open sites or in forest clearings. Natural dispersal of the seed occurs when it passes through the digestive tracts of mammals and birds. The seeds may be carried a long distance from the parent plant in this manner. If the rhizomatous roots are damaged due to a mechanical injury suckers will be produced. This is often how thickets are formed. A fire initially causes major damage to a stand of chokecherry. However, regrowth is enhanced for several years following a burn. It sprouts vigorously from surviving root crowns and suckers arise from the rhizomes. Chokecherry has seed dormancy. About half of the seed which is not stratified germinates within a couple of months. Delayed germination may occur up to 4 months. An after-ripening period in the presence of oxygen and moisture is needed for a majority of seed to germinate. Good germination can only be expected after a cool, moist stratification regime lasting 90 to 160 days at 36 to 41 degrees Fahrenheit. Sow 25 seeds per foot of drill row. One-year-old bareroot stock should be planted on deep, well-drained soils in sunny locations.

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

Planting materials can be obtained from most commercial hardwood nurseries and seed sources. Several cultivars have been released by government agencies and private nurseries for use in landscaping and/or fruit production. The two most commonly marketed cultivars are 'Schubert', and 'Canada Red'. A lot of literature states that these two cultivars are the same one with just different names. This is not the entire truth. 'Schubert' is one of the oldest cultivars. Its parent rootstock is *Prunus virginiana melanocarpa* selected from a native stand near Valley City, North Dakota. It was released by the Oscar Will Nursery which was located in Bismarck. 'Canada Red' was created by grafting 'Schubert' on Mayday rootstock to get rid of the suckering trait. Releases from Canada include, 'Garrington', 'Goertz' and 'Robert'.

Control

Please contact your local agricultural extension specialist or county weed specialist to learn what works best in your area and how to use it safely. Always read label and safety instructions for each control method. Trade names and control measures appear in this document only to provide specific information. USDA, NRCS does not guarantee or warranty the products and control methods named, and other products may be equally effective.

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Prepared By:

Wayne Crowder
USDA NRCS Pullman, Washington
Plant Materials Center

Dr. Wayne A. Geyer
Forestry Division
K-State Research and Extension
Kansas State University
Manhattan, Kansas

Patrick J. Broyles
Formerly USDA NRCS Manhattan Plant Materials
Center, Manhattan, KS

Species Coordinator:

Patrick J. Broyles
Formerly USDA NRCS Manhattan Plant Materials
Center, Manhattan, KS

For more information about this and other plants, please contact your local NRCS field office or Conservation District, and visit the PLANTS Web site <<http://plants.usda.gov>> or the Plant Materials Program Web site <<http://Plant-Materials.nrcs.usda.gov>>

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Chokecherry

Prunus virginiana

Growth Form: ovoid to irregular

Crown Density: moderate

Size: 6-20 feet high
6-20 foot spread

Drought Resistance: good

Cold Hardiness: excellent

Growth Rate: rapid

Life Span: moderate

Elevational Range: to 9,000 feet

Soil Conditions: good alkaline tolerance

Possible Insect Problems: borers, pear-slug sawfly

Possible Disease Problems: black knot, fireblight

Wildlife Value: high: song and ground birds; good: small mammals, and browse for deer

Seasonal Color: golden yellow to orange fall foliage

Miscellany: delicious edible fruit for jellies and pies; native; can be poisonous to livestock

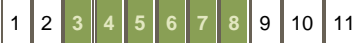


Taken from: Trees for Conservation, a buyer's guide, Colorado State Forest Service

Prunus virginiana 'Schubert' ('Schubert' choke cherry)



Hardiness Zones:



Botanical Name: *Prunus virginiana* 'Schubert' PREW-nus ver-jin-ee-AY-nah **Common Name:** 'Schubert' choke cherry **Genus:** *Prunus*

'Schubert' choke cherry, with its vivid foliage and pyramidal form, makes a fine focal point. Ephemeral, light pink flowers are followed by abundant, dark red-purple fruit that birds love. (Don't plant it near patios or walks, as they'll quickly be covered by bird droppings.) If the tree you buy isn't grafted onto nonsuckering rootstock; otherwise, suckers could become problematic as the years go by. -Ron Smith, *Regional Picks: Upper Plains, Fine Gardening issue #120*

Noteworthy characteristics: Burgundy foliage and reddish purple fruit that attracts birds. The species is a U.S. native.

Care: Provide full sun to light shade and alkaline soil. Plant choke cherry where bird activity will not cause a problem.

Propagation: Remove rooted suckers, if any.

Problems: Tent caterpillars are the primary problem.

Height	15 ft. to 30 ft.
Spread	15 ft. to 30 ft.
Light	Full Sun to Part Shade
Moisture	Medium Moisture
Maintenance	Low
Characteristics	Attracts Birds; Attracts Butterflies; Native; Showy Foliage; Showy Fruit
Bloom Time	Spring
Foliage Color	Colorful/Burgundy Foliage
Flower Color	Pink Flower
Uses	Beds and Borders, Hedge, Screening, Specimen Plant/ Focal Point
Style	Woodland Garden
Seasonal Interest	Spring Interest, Summer Interest
Type	Shrubs, Trees

Taken from:
www.finegardening.com