

Growing Serviceberries

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This publication contains information on planting, growing, propagating, pest and disease management of serviceberry, as well as a table of hardy serviceberry cultivars for Montana, and their characteristics.



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SERVICEBERRY (*AMELANCHIER* SPP.), ALSO

known as juneberry, saskatoon, shadbush, sarvisberry or just sarvis, is a member of the rose family and native to North America. Easy to grow, serviceberries are one of the first specimens to bloom in spring. They provide delicious fruit all summer long as well as dramatic fall color. This shrub or small tree serves as an ornamental landscape plant, valuable wildlife habitat, and can be planted for commercial fruit production. Serviceberry is adaptable to a wide variety of growing conditions, making it a beneficial addition to Montana landscapes.

There are a variety of serviceberry species and hybrids that are well-suited for Montana. Among them is our native Saskatoon serviceberry (*Amelanchier alnifolia*) which can be found growing in riparian habitats, grassland-woodland interfaces, and lower-elevation coniferous forests. Downy (*A. arborea*), Shadblow (*A. canadensis*), Allegheny (*A. laevis*), and Juneberry (*A. lamarckii*) can also be excellent additions to the landscape. The hybrid cross between downy and Allegheny serviceberry, known as Apple serviceberry (*A. x grandiflora*), provides the most disease resistance. Although the mature height differences vary between these species, they generally have similar fragrant white flowers in early spring, dark reddish-purple pome fruit ripening in June, and brilliant red-orange fall foliage color. Refer to the included table for specific cultivar details.



Serviceberry fall color (T. Davis Sydnor, The Ohio State University, Bugwood.org)

Planting

While serviceberry is tolerant of a variety of soil types and pH ranges, it is best to avoid heavy, wet, poorly-drained soils. Hard clay soils can restrict root development. The ideal planting site has moist, well-drained sandy loam soil with a pH between 5.5 and 7.0, though it will tolerate alkaline soils of 8.0 pH. Serviceberry adapts to a range of sun exposure, from full sun to partial shade; however, full sun will produce higher fruit yields.

Bare-root plants should be purchased and planted in early spring while container plants can be planted in the spring or the fall. Prepare a hole twice the width and approximately the same depth as the container, slightly wider for bare-root plants. Place the plant in the hole so the root flare is 2-4 inches above the ground plane. Backfill the planting hole and water immediately to remove any

air pockets. If the soil settles after watering add more backfill to bring it to ground level. Mulch 4-6" deep with shredded bark mulch to help retain soil moisture and discourage weeds.

Care

Irrigation

The goal with serviceberry is to keep the soil moist, not wet. Consistent drip irrigation is recommended as this method of watering decreases the chance of foliar disease, such as fungal leaf spot, to which many cultivars are susceptible. Serviceberry is tolerant to drought, but irrigation is necessary for maximum yield and larger fruit.

Fertilizer

With wild serviceberry occurring throughout Montana, it seems these plants can thrive in soils that may not be highly fertile. A soil test is recommended to determine if nutrients are lacking as well as for monitoring plant growth, fruit yield and foliage color. A general fertilizer recommendation would be to apply 4 oz. of 16-16-16 in spring when buds break.

Pruning

Pruning serviceberry is very similar to pruning currants. The best time is late winter or early spring, before bud break. During the first 3 years only prune weak or damaged branches, after that, prune more vigorously to control height and shape and to encourage new growth. Then, prune as needed to allow for light and air movement. Flowers develop on stems that are 2-4 years old. Proper pruning replaces all the fruiting wood every 3-4 years. Removing one-third of old growth will allow for good fruit production. Work toward an open, spreading, vase-shaped shrub with a spread equal to its height.

Propagation

Seeds are not true to parentage and cuttings have limited success. The best method for propagating serviceberry is to dig suckers in spring prior to bud break. When choosing suckers, make sure each shoot selected has roots attached. Sever the shoot from the main plant with a shovel or pruners and wash off any debris from the roots that may harbor disease. Plant the shoot in a pot or directly in the ground, at the same level as it was growing previously. Water thoroughly.

Pests and Diseases

Weeds

To get maximum yield from your serviceberry, it is important to maintain a weed-free root zone. This can be achieved through shallow cultivation (to avoid disturbing the root system) and a thick bed of mulch.

Entomosporium leaf and berry spot

One of the most common diseases of serviceberry is caused by the fungus *Entomosporium* spp. and infects both the leaves and the fruit. Small, angular brown lesions, often with a yellow halo, are observed on the leaves. Infected fruit will be disfigured and have gray areas. Outbreaks are more likely during rainy spells and if overhead watering is used. To prevent spread of disease, prune infected plant material 12" below the infected area and disinfect pruners between every cut.

Gymnosporangium rusts

Rarely causing severe damage, *Gymnosporangium* rusts are more of an aesthetic issue. They produce yellow-orange leaf and fruit lesions as well as gelatinous galls on leaves, stems and fruit. Depending on the alternate (aecial) host, these rust fungi could include Hawthorn Rust, Quince Rust, Cedar-Serviceberry Rust and Juniper Broom Rust. *Gymnosporangium* rust fungi are heteroecious, meaning they need two different hosts to complete their life cycle. In this case the primary, or telial, host species is *Juniperus* and the secondary, or aecial, host is *Rosaceae*. By removing the primary host, you can eliminate rust from serviceberry by interrupting the disease life cycle. If that is not possible, make sure to avoid planting eastern red cedar or juniper plants within 200 yards of *Rosaceae* species to reduce chance of infection. Once infected, rust can be controlled by pruning away diseased material. Protective fungicides, such as Myclobutanil, can be used under extreme rust infections.



Fragrant, white serviceberry flower (Mary Ellen (Mel) Harte, Bugwood.org), left; and Serviceberry fruit (John Ruter, University of Georgia, Bugwood.org), right.

Species/Cultivar	Hardy to Zone	Growth Habit	Height/Spread	Foliage Color	Flower color/ Bloom Time	Susceptible	Resistance	Notes
Saskatoon serviceberry (<i>Amelanchier alnifolia</i>)								
'Regent'	2	Compact, Rounded	4-6'/4-8'	Yell/Red	White/April		Drought	No serious disease issues
'Standing Ovation'	2	Upright, multi-stem, compact	10-20'/4'	Red/Org	White/early spring		Deer	Cold hardy; no serious disease issues
Allegheny serviceberry (<i>Amelanchier laevis</i>)								
'Cumulus'	4	Oval, compact	25'/5-10'	Yell/Org/Red	White/April-May	FB		Prefers wet sites
'Prince Charles'	4, 5	Upright, dense, multi-stem	25-30'/15-20'	Org/Red	White/April-May	FB		Limited range, best in NW MT
'RJ Hilton'	4	Rounded, compact, multi-stem	13'/10'	Org/Red	White/March-April	FB		Prefers wet sites
'Snowcloud'	4	Narrow, upright	20-25'/12-15'	Copper/Org	White/April-May			Prefers wet sites; good disease resistance
Shadblow (<i>Amelanchier canadensis</i>)								
Glenn Form® Rainbow Pillar®	3	Dense, upright, symmetrical	15-20'/8-10'	Org/Red	White/April-May		PDM	Tolerates clay soils
'Prince William'	3	Upright, spreading	10'/8'	Red/Org	White/early spring			Root suckers
'Spring Glory'	4	Upright, suckering, compact	12'/6-8'	Org/Yell	White/early spring			Suckers prolifically
'Tradition'	4	Oval, upright, multi-stem	25-30'/15-20'	Red/Org	White/very early spring			Heavy fruit; prefers wet site; one of first to bloom in spring
Downy Serviceberry (<i>Amelanchier arborea</i>)	4	Narrow, upright, rounded	15-25'/15-25'	Yell/Org/Red	White/early spring	ELS, CS, PDM, FB, PLB, PSS, B, WSS		Tolerates clay soils
Apple serviceberry (<i>Amelanchier x grandiflora</i>)								
'Autumn Brilliance'	4	Rounded	15-20'/15-20'	Red	White/April		Leaf spot, fire blight	Root suckers
'Princess Diana'	4	Spreading	15-20'/12-15'	Red	White/April		Leaf spot	Root suckers; yellow flower buds
'Ballerina'	4	Upright, spreading	20-25'/15-20'	Bronze/purple	White/early spring		Leaf spot, fire blight	
'Cole's Select'	4	Upright	15'/15'	Org/Red	White/early spring			
Juneberry (<i>Amelanchier lamarckii</i>)	4	Upright	15-25'/15-25'	Red/Org	White/April			No serious disease issues

KEY

ELS	Entomosporium leaf spot	FB	Fire blight	B	Borers
CS	Cedar-serviceberry rust	PLB	Pear leaf blister	WSS	Willow scurfy scale
PDM	Powdery Mildew	PSS	Pear slug sawfly		

Powdery mildew

Caused by fungal spores, powdery mildew causes a greyish-white coating on the leaves of plants. Although not lethal, it causes a significant depreciation in aesthetic value of ornamental plants like serviceberry. To control, allow for adequate light and air flow around plants, use drip irrigation to keep foliage dry and prune out severely infected plant material.

Fire blight

The bacterium, *Erwinia amylovora*, affects over 130 *Rosaceae* plant species, including serviceberry. Leaves and shoots of infected plants will wilt and turn brown or black, while fruit turns dark and shrivels on the stem. Management of fire blight primarily includes pruning out branches to 12" beyond the infected area. Sanitize tools after every cut to not spread the disease over the tree.

Other Pests

Less common pests that affect serviceberry are aphids and spider mites, which can be controlled using dormant oil. Pear slug sawfly damage is primarily cosmetic but can be controlled with insecticidal soap. Although typically a common pest of fruit trees, blister mites may attack serviceberry. If treatment is necessary, chemical controls are very effective. Bark beetles, such as Shothole

borer, can be thwarted by pruning out dead or decaying branches and destroying any infected material.

Although lovely to watch, birds can be a serious threat to your serviceberry crop. Drape entire shrubs with bird netting in the spring to protect ripening fruit.

Harvest and Uses

Serviceberry fruit is not a true berry, but rather a pome fruit which looks like a rose hip. Most serviceberry are self-fruitful and will only produce marginally for the first 2 years. Heavier yields begin when the plant is 3-5 years old, with full production at 8 years. Once established, serviceberry can produce 10 pounds per plant and, if well maintained, can produce for up to 20 years.

Serviceberry fruit ripens in late June through July. The more mature the fruit is the sweeter it will be, so it is best to wait until $\frac{2}{3}$ of all the fruit is ripe before harvest. The fruit will continue to ripen after harvest, so refrigeration is recommended. Hand pick early in the morning when fruit is dry and cool.

Serviceberries are high in fiber, iron, calcium, magnesium and manganese. Uses include jams, jellies, pies, syrup, breads and muffins, pastries, sauces and salad dressings.



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