



## Serviceberry in the Garden

*Kristan Crouch*, Student, *Tiffany Maughan*, Research Associate, and *Brent Black*, Extension Fruit Specialist

### Summary

Serviceberry (*Amelanchier* spp.), also known as juneberry, saskatoon or shadbush, is considered a large shrub that can be grown as a small tree. It is native to North America, and is adapted to many areas of Utah. White flowers appear in early spring, with yellow to red foliage in the fall. The fruit is a berry-like pome, and resemble small blueberries. When ripe, they are dark red, purple or almost black in color. They are primarily harvested for juice, jellies, jams and pies, but can also be eaten fresh. Serviceberries are cold hardy to zone 3, adapt to a range of soil types and may have desirable ornamental qualities.

### Recommended Varieties

*Amelanchier alnifolia* var *pumila* is a naturally occurring dwarf variety that is native to the western United States. It will often stay quite small, only about 3 feet high and wide, and produces small round berries. There are several cultivars that have been selected for fruit production and will do well in the home garden (Table 1). Serviceberry availability at local nurseries can be limited, but many online companies carry serviceberry plants. Care should be taken to only order from reputable nursery companies. Another option is to propagate serviceberries on your own. One of the easiest and most effective methods of propagation is by digging up suckers from a healthy established plant and transplanting them to the desired location. This should be done in the spring before bud break, and



the shoots should be pruned back to about 2 inches. Serviceberries seeds will not grow true to parentage, and hardwood and softwood cuttings have only limited success.

### How to Grow

**Soil:** Serviceberry is tolerant of a variety of soil types and pH levels, but prefers well-drained sandy loams and loams. However, it will also do well in silt loam as long as adequate drainage is provided. Clay soil can cause root rot problems, so till organic mulch into the soil before planting and consider

Table 1. Recommended serviceberry cultivars.		
Cultivar	Size at maturity	Comments
'Honeywood'	12' x 9'	Very productive, clusters of medium-large fruit. Minimal suckering. Ripens mid-season.
'Northline'	10' x 6'	Heavy producer, medium sized berries with excellent flavor and few seeds. Can produce many suckers. Ripens early to mid-season.
'Pembina'	12' x 8'	Productive with smaller, very flavorful fruit. Low sucker production but vigorous plant.
'Thiessen'	15' x 12'	.Very high yielding with large fruit. Ripens late-season.
'Regent'	6' x 6'	Smallest of the recommended varieties, little suckering. Small, mild-flavored fruit.
'Martin'	13' x 9'	High-yielding, large fruit. Ripens late-season.
'Parkhill'	12' x 8'	Well-suited for home growers or you-pick operations because the fruit ripen over a long period. Ripens mid-season. High-yielding

raised beds to avoid these issues. Sandy soils need to be properly irrigated to maintain moisture and nutrient uptake.

**Soil Preparation:** Soil testing can help determine the appropriate amendments to add to the site before planting. Apply any deficient nutrients, as indicated from testing results, to the planting area and till into the soil.

**Plants:** Serviceberry shrubs range in size from 6 feet tall and wide to 30 feet tall by 20 feet wide, depending on the cultivar. It is important to choose the appropriate cultivar to fit the planting site and the desired fruiting requirements. Serviceberry is self-fruitful and bloom typically occurs between early and late May, depending upon the location

and weather. Flowers will appear before or at the same time as leaves. Full sun is required for maximum harvest potential. Serviceberry plants are adaptable to partial shade, but will suffer from reduced yields.

**Planting and Spacing:** Planting in the spring or fall is ideal for serviceberry, as it allows root systems to establish before summer heat becomes an issue. For most online nursery companies, bare-root plants are more commonly available than containerized plants. Both will establish well, but bare-root plants will need more frequent irrigation for the first 2 weeks. Before planting, prepare a hole twice the width and the same depth as the container or roughly the same depth and somewhat wider than the roots of the bare-root plant. Immediately after planting, water heavily to settle the soil around the roots and to remove air pockets. Applying mulch around the plant will help keep the soil moist between watering and keep weeds down. Spacing should be based on the cultivar and should leave sufficient room between shrubs to allow sunlight to penetrate the canopies when full growth has been achieved.

**Irrigation:** During the first season, irrigate at an interval that will keep the soil moist, but not wet. Depending on rainfall and temperature, irrigate about two times per week. For the next few years, maintain a bi-weekly watering program that will apply about 30 inches of water over the season. This can be reduced if there is significant rainfall accumulation. Although established serviceberry plants can survive with little water, to achieve maximum yield and more desirable fruit, irrigation is needed. Additional irrigation may be necessary when hot, dry conditions are prevalent. It is best to water at the base of the shrub, in order to keep the canopy dry and reduce the chance of disease. This may be accomplished with a drip system or deep watering with a hose. It is also advisable to maintain a mulch bed around the base of the shrub instead of sod, as sod has very different watering requirements that conflict with that of serviceberry.

**Fertilizer:** Applying 4 ounces of an all-purpose fertilizer, such as 16-16-16, in the spring as the plant comes out of dormancy, should supply sufficient nutrients for the growing season and will maximize growth. If phosphorus and potassium are

shown to be readily available in a soil test, a nitrogen only fertilizer can be applied instead. Adjustments to a fertilizer program should be determined by plant growth, harvest yield and leaf color.

**Pruning:** Pruning is needed to maintain an open canopy, which allows for sufficient light penetration and air movement. The best time to prune is in the late winter or early spring, before new growth appears. Pruning also helps rejuvenate the shrub and promotes higher fruit yields. For the first 3 years, only prune out weak or damaged branches. After 3 years, when the plant is in production, pruning should become more vigorous to encourage new growth and to keep the plant size manageable. Flowers develop on stems that are 2 to 4 years old, and this should be kept in mind while pruning. Removing about one third of old growth from the shrub yearly will help maintain enough young fruiting wood for good fruit production. Similar to apple, serviceberry plants are prone to biennial bearing. This is when a large crop one year is followed by a very small crop load. If careful crop load management is practiced this effect can be minimized.

## Problems

**Pests and Diseases:** Birds are probably the worst threat to serviceberry crops, as they seem to enjoy the fruit even more than we do. One of the most effective control options is to drape the branches with bird netting in order to protect ripening fruit. Aphids, spider mites and bark beetles can also be a problem. Dormant oil applied in the spring, just before bud break, can help control overwintering pests. Frequent scouting throughout the year should be done to monitor pest occurrence.

*Entomosporium* leaf and berry spot is one of the most common diseases of serviceberry plants. Symptoms include small, angular brown discolorations on the leaves, often with a yellow ring around the spot. Utah's low humidity helps keep disease occurrence low, but in rainy years or if over-watered, it can still be a problem. Keeping an open canopy through proper pruning, removing leaf litter in the fall and avoiding irrigation techniques that would wet the leaves will help control for *Entomosporium* leaf and berry spot. Infected fruit will have gray spots and will be disfigured. Prune

out diseased wood 12 inches below the infected section and sterilize the shears between each cut. Maintain an open canopy to aid in preventing disease occurrence. Saskatoon-Juniper rust can be another problem for serviceberry production. Yellow spots and swellings first develop on leaves and fruit, followed by characteristic yellow, spiky outgrowths from these locations. As the name implies, the life cycle of the rust includes stages on juniper plants. To avoid the disease, it is best to avoid planting serviceberry next to juniper plants. One chemical control option is a broad-spectrum fungicide (ex. Funginex 190 EC). Powdery mildew will also infect serviceberry shrubs. Look for a white dust on the leaves and stems. Early detection and pruning out of diseased shoots as well as planting resistant cultivars are the best control options.

USU Extension provides guidelines for home orchard pest management, as well as weekly fruit tree pest advisories that can be helpful in disease and pest identification and management and are available at your county agent's office or at <http://utahpests.usu.edu/ipm/htm/subscriptions>.

**Weeds:** Keeping weeds clear from around the serviceberry plant is important for achieving maximum yields. Applying a mulch around the base of the shrub can help keep weeds to a minimum. Another option is shallow cultivation to kill weeds, but care should be taken not to till deeper than a few inches in order to avoid damaging the serviceberry roots.

## Harvesting, Storage and Use

The berry-like pomes usually ripen in late June through July. It is best to wait until two-thirds of the fruit is ripe before harvesting. Serviceberries continue to ripen after harvesting and should be refrigerated quickly to avoid spoilage. Early pickings that are somewhat less ripe are higher in acid and the more mature fruit have a higher sugar content. If using the fruit for jellies, jams and pie fillings, wait until fully ripe to ensure peak flavor and sweetness. However, the fruit is softer at this stage and can be damaged easily during harvest. It is best to pick by hand early in the morning, when the fruit is dry and cool. Remove damaged or diseased fruit and wash to clean. Fruit should be dry before refrigerating or freezing.

## Productivity

Newly planted serviceberry shrubs will not produce heavily for the first 2 years. They will usually begin to bear fruit when 3 to 5 years old and reach full production at 8 years. Once established, some of the highest yielding cultivars will produce 10 pounds per plant. A well-maintained plant can produce fruit for 20 years.

## Nutrition

Serviceberry fruit are high in fiber, iron, calcium, magnesium and manganese.

## Resources

Alston, D., M. Murray, and C. Nischwitz. 2012. Utah home orchard pest management guide. Utah State University Extension, Publication HG137.

Barney, D. Growing Saskatoons. University of Idaho. Extension, Apr. 2009. Web. Mar. 2013.

<http://www.cals.uidaho.edu/edcomm/pdf/BUL/BUL0866.pdf>

Herman, D.E., C.M. Stange, and V.C. Quam. Juneberry or Saskatoon serviceberry (*Amelanchier alnifolia*). p. 33-34. In: North Dakota Tree Handbook. North Dakota State University,

Gough, R.E., and C. Moore-Gough. 2010.

Juneberries for Montana gardens. Montana State University Extension.

<http://msuextension.org/publications/YardandGarden/MT198806AG.pdf>

St-Pierre, R.G. 2006. Common Disease Problems in Saskatoon Orchards. <http://www.prairie-elements.ca/saskatoon/10.3-disease.pdf>

Utah State University is committed to providing an environment free from harassment and other forms of illegal discrimination based on race, color, religion, sex, national origin, age (40 and older), disability, and veteran's status. USU's policy also prohibits discrimination on the basis of sexual orientation in employment and academic related practices and decisions.

Utah State University employees and students cannot, because of race, color, religion, sex, national origin, age, disability, or veteran's status, refuse to hire; discharge; promote; demote; terminate; discriminate in compensation; or discriminate regarding terms, privileges, or conditions of employment, against any person otherwise qualified. Employees and students also cannot discriminate in the classroom, residence halls, or in on/off campus, USU-sponsored events and activities.

This publication is issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Kenneth L. White, Vice President for Extension and Agriculture, Utah State University