

Juneberry

Juneberry (*Amelanchier* spp.), also known as serviceberry, is a small multiple-stemmed tree or shrub that bears edible fruit. Most species are cultivated for use in landscape plantings; however, the saskatoon serviceberry (*Amelanchier alnifolia*) has also been grown commercially for fruit production in Canada and the North Central U.S. Unfortunately, saskatoons are not considered winter hardy in Kentucky and have serious leaf spot problems in our region. However, several ornamental cultivars that show potential for fruit production are hardy and have good leaf spot resistance here. Included are the Allegheny serviceberry (*A. laevis*) and cultivars of apple serviceberry (*A. laevis* x *A. arborea*).

Juneberries have a soft, small (1/4- to 1/2-inch diameter), sweet-tasting fruit that resembles a blueberry in appearance, but not in flavor. The fruit ripens to red, purple, black, or creamy white, depending on the species and cultivar. While juneberry seeds are larger and more noticeable than those in blueberry, they are soft and not objectionable.

Marketing

Although commonly eaten “out of hand,” juneberries are also ideal for jams, syrups, juices, pies, rolls, and sweetbreads. Berries can be dried and marketed as a product similar to raisins. Most consumers are unfamiliar with juneberries, so sampling and point-of-purchase materials about handling and use would need to be included upon sale of juneberries or juneberry products.

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Potential markets for fresh and value-added juneberry products include farmers markets and roadside stands. Community Supported Agriculture (CSA) growers could include this fruit in their offerings.

Frozen juneberries may also be sold to small, locally owned grocers or specialty markets. High-end restaurants, or those specializing in local fare, could be interested in featuring a new product such as juneberry. Some Canadian producers have been successful marketing juneberries as part of a U-pick operation.

Market Outlook

Most commercial juneberries (saskatoons) are grown in Canada, where production is unable to keep up with demand. They report a growing interest in juneberry for fresh market, commercial processing, and freezing industries. Because the popularity of saskatoons is expected to spread into the U.S., several North Central

states (such as Nebraska, Wisconsin, and the Dakotas) are currently exploring commercial production. However, juneberry has not yet been evaluated for large-scale production in Kentucky. Interested growers should start small, planting at least 2 or 3 different cultivars in a field, orchard, or garden site. Larger plantings should not be attempted until the crop has been evaluated over several seasons and the grower has test-marketed their product.

Commercial production of juneberries will require overcoming some significant obstacles. These include: difficulty in obtaining large quantities of planting material at a price that is economically feasible, lack of consumer awareness, and the long term nature of the enterprise. However, juneberries are one of the first fruits to ripen in the spring during the latter part of May and early June (strawberry season) and occupy a unique niche market for the producer willing to develop this crop.

Production Considerations

Cultivar selection

While a few cultivars have been planted at the University of Kentucky Horticulture Research Farm, there is currently insufficient research data upon which to base local cultivar and production recommendations for fruit production. However, the following cultivars can be suggested for trial plantings based on Kentucky observations of ornamental serviceberries and on Dr. Michael Dirr's reports from Georgia.

'AUTUMN BRILLIANCE' — Purple fruit taste good and are 3/8-inch in diameter; plants reach a height of 20 to 25 feet at maturity; fairly leaf spot and fire blight resistant; grows and produces well in Kentucky.

'BALLERINA' — Fruit are purple when ripe and 3/8- to 1/2-inch in diameter; Dr. Michael Dirr rates this fruit as "superb, large, sweet and juicy;" plant reaches a height of 15 to 20 feet; is hardy as far north as Zone 4; has very good leaf spot and fire blight resistance.

'PRINCE CHARLES'—Fruit are 3/4 inch in diameter and rated high in taste evaluations in Georgia; plant is upright and reaches an estimated height of 25 feet.

'PRINCESS DIANA'—Sweet, juicy blue-black fruit are 3/8 inch in diameter; plants can reach a height of 25 feet; good leaf spot resistance.



Site selection and planting

Juneberries can be grown on a wide range of well-drained soils with a pH between 5.5 and 7.5. Slightly sloping sites, especially northeast slopes, are advantageous to juneberry production. Avoid cold pockets since juneberries may be subject to occasional spring flower losses from frost. Irrigation during establishment and fruiting will increase the likelihood of success. It can be difficult to obtain a significant quantity of planting stock for commercial production since most U.S. nurseries supply serviceberry for ornamental use, not fruit production.

The most successful means of propagation include plant division, root cuttings, and tissue culture. Plants can be propagated from seed that has been subjected to cold stratification; however, up to a third of the plants will differ from the parent. Hardwood cuttings are generally difficult to root, while softwood cuttings, if taken at the right growth stage, are more easily rooted. Healthy plants 1 to 2 feet tall are best for transplanting.

Juneberries, which can grow to a height of 18 to 25 feet, should be maintained at a height of 6 to

9 feet in commercial plantings. Fruit on shorter plants is easier to harvest and easier to protect from birds. Yearly pruning in the spring is generally necessary after the first 3 to 4 years, while more extensive pruning may become necessary when plants are 6 to 8 years old.

Pest Management

Juneberries are susceptible to *Fabraea* (Entomosporium) leaf spot, cedar-serviceberry rust, powdery mildew, and fireblight. These diseases, however, tend to be minor problems, especially on cultivars that have some resistance to them. Japanese beetles can become a major problem in some plantings. Other potential insect pests include plum curculio, leaf miner, and pear slug sawfly. Birds, which will totally strip plants of their fruit, are the greatest threat to juneberry production. A well-planned bird management program will be necessary in most locations. Other wildlife pests can include mice, rabbits, and deer. Weeds need to be controlled with non-chemical means since there are no herbicides registered for commercial fruit production of this crop.

Harvest and storage

Juneberries bloom in early spring, with fruit forming 6 to 8 weeks later in late May and early June. Plants begin to bear fruit 2 to 4 years after transplanting. Significant yields can be expected after 6 to 8 years, with maximum yields after 12 to 15 years. Mature plants may yield 10 to 15 pounds of fruit per shrub. Well-maintained plantings can be productive for 30 to 50 years.

Clusters of fruit ripen fairly uniformly, making it possible to pick the whole crop at about the same time. Juneberries are hand-picked for fresh market sales or U-pick with the stem attached. Fresh fruit has a short shelf-life, but flash-frozen berries can be stored for 2 years under the proper conditions.

Labor requirements

Labor needs for a mature 1/5-acre planting are

approximately 8 to 12 hours for production, 60 to 80 hours for harvest, and 10 to 15 hours for packing/grading.

Economic Considerations

Initial investments include land preparation, purchase of planting stock, plant establishment, and installation of an irrigation system. The limited supply and relatively high cost of healthy 2-year-old juneberry plants makes even small-scale juneberry production economically risky for the Kentucky grower unless prices equivalent to \$4 per pound can be obtained. Growers could also consider propagating their own plants as long as there are no patent concerns.

Production costs for juneberries are estimated at \$660 per 1/5-acre planting, with harvest and marketing costs at \$1,120 per 1/5 acre. Total expenses per 1/5 acre, including both variable and fixed, would come to approximately \$2,720. Presuming gross returns of \$3,000 per 1/5 acre, returns to land, capital, and management would be approximately \$280 per 1/5 acre.

Selected Resources

- Guidelines for Estimating Saskatoon Berry Production Costs (Manitoba Agriculture, Food and Rural Initiatives, 2008)
<http://www.gov.mb.ca/agriculture/financial/farm/pdf/copsaskatoonscosts2008.pdf> or <http://www.gov.mb.ca/agriculture/financial/farm/xls/copsaskatooncosts2008.xls>
- Juneberry: For Commercial and Home Use on the Northern Great Plains, H938 (North Dakota State University, 1996)
<http://library.ndsu.edu/repository/bitstream/handle/10365/5247/h938.pdf?sequence=1>
- Saskatoon Berry: A Fruit Crop for the Prairies (Purdue University, 1993)
<http://www.hort.purdue.edu/newcrop/proceedings1993/v2-516.html>
- Saskatoons (Manitoba Agriculture, Food and Rural Initiatives, 2001)
<http://www.gov.mb.ca/agriculture/crops/fruit/bld01s00.html>

Books in print

- *Manual of Woody Landscape Plants*, 5th edition. Michael Dirr. 1998. Stipes Publishing L.L.C., Champaign, IL. 1250 pp.
- *Uncommon Fruits Worthy of Attention*. Lee Reich. 1992. Addison-Wesley Publishing Company, Inc. 272 pp.

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*Photos of blooms and fruit of the 'Autumn Brilliance' cultivar (an *Amelanchier x grandiflora* selection) by John Strang, University of Kentucky*

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For additional information, contact your local [County Extension](#) agent