



C008

BLUEBERRIES

Blueberries are a member of the *Ericaceae* or heath family. Both highbush and lowbush varieties are native to North America. They are handsome landscape plants that have bright red foliage in the fall. They bear fruit with well documented health benefits. The berries freeze well and retain their quality when frozen. Therefore, although blueberries are better suited to the environment found in western Washington, they are well worth the effort needed to create growing conditions necessary for their success in eastern Washington. For Blueberry Varieties Recommended for the Inland Northwest see Fact Sheet C017.

PLANTING SITE

- Full sun is best. They will tolerate some shade, particularly in the late afternoons. However, be careful not to choose too shady a location. As shade increases blossom and fruit production decreases. Also, blueberries grown in too much shade become leggy, unattractive plants with spindly branches that are unable to handle a snow load.
- Avoid planting in frost pockets, such as at the bottom of a hill; cold snaps may injure the blossoms or young fruit. On the other hand, very warm areas such as against a building with full sun exposure may force plants to bloom too early.
- Avoid areas surrounded by trees. Not only is the site likely to be too shady, but the blueberry plants will need to compete with the trees for water and nutrients.
- Blueberries are classified by bloom time. Later blooming varieties are best suited for the Inland Northwest because they are less likely to be damaged by a late spring frost.

SOIL REQUIREMENTS

- Blueberries grow best in acidic soil with a pH between 4.5 and 5.5. You should test the soil in the area you want to plant them. They also do best in soils that are well drained, loose, and high in organic material.
- Blueberry plants can have long lives with some living to fifty years of age. So, it is wise to invest the time and effort into properly preparing your growing site before planting. If the pH is too high the foliage will turn yellow, fruit production will suffer, and growth will slow. If the pH stays too high for an extended period, the plant will die.
- If the pH is between 5 and 6.5 mix 4 to 6 inches of peat moss, sawdust, bark, or wood chips into the top 8 inches of soil. If you use uncomposted sawdust you will need to add extra nitrogen to prevent the nitrogen in the soil from being depleted. As a rule of thumb, add one-half pound of ammonium sulfate (21-0-0) for each cubic foot of uncomposted organic material.
- If pH is above 6.5 plant blueberries in raised beds that are at least 8 inches deep. Fill with equal parts peat moss and soil (sandy mix). The soil below the raised bed must drain well.

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e-mail your garden questions to: mastergardener@spokanecounty.org

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- Check your soil annually to keep the proper acidity for your blueberries. You may need to add sulfur (in the form of ammonium sulfate) every few years. Sprinkle the powder around the drip line of each plant and gently scratch in. Water well.
- For more information on acidifying your soil for blueberries, see our fact sheet C091 Soil pH.

GROWING REQUIREMENTS

- Blueberries are not drought tolerant. Have an irrigation system in place prior to planting. Drip is advised because overhead watering can lead to some diseases when the leaves are wet, particularly in the evening.
- Blueberries do not tolerate standing water. Irrigate often enough to keep the soil moist, but not waterlogged.
- Blueberries prefer soils with high organic matter, moderate water holding capacity, and a pH between 4.5 and 5.5.
- The amount of water needed will depend on the temperature and your soil. However, 1 to 2 inches per week is often the correct amount.
- Mulching conserves moisture, controls weeds, and protects roots from extreme temperatures.
- Blueberries are shallow rooted and susceptible to winter kill. Deep fall watering and good mulching will prevent winter dieback.

PLANTING

- Set out dormant plants in early spring.
- Prune. Cut off all diseased or damaged roots and canes. Leave healthy canes, but remove any twiggy growth they may have.
- Blueberries grow well in soil that is highly amended with organic materials. However, it is best to till a 6- to 12-inch deep layer of compost into the entire row or bed prior to planting. If, instead, you fill the hole with organic material the boundary between that and the native soil will interfere with water movement and root growth.
- If you have used uncomposted sawdust, wood chips, or bark in amending your soil, add extra nitrogen so that the soil will not be depleted of nitrogen. One half pound of ammonium sulfate for each cubic foot of uncomposted organic material is usually sufficient.
- Eliminate all weeds in the site. Pay special attention to thistles, quackgrass, and other perennial weeds with rhizomes as they will compete with the blueberry bushes for moisture and nutrients.
- Dig a hole large enough to spread all roots horizontally and deep enough to cover the uppermost roots with 2 -3 inches of soil.
- Mulch with 2 – 4 inches of sawdust or peat moss.
- Plant bushes 4 – 6 feet apart in rows 8 – 10 feet wide.
- Water immediately after planting.
- While blueberries are self-fertile, having 2 varieties will give better pollination and larger, earlier fruit.
- Plant 2- to 3-year-old plants.

MULCHING

There are several options for mulching blueberries. The objectives of organic mulches such as Douglas Fir sawdust are to add organic matter to the soil over time, help conserve soil moisture, moderate soil temperatures, and help control annual weeds.

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Blueberry plants grow best in an acid soil (pH 4.5 to 5.5) and prefer high organic matter. The pH of Douglas Fir sawdust is about 4.2. There are other low pH mulch options including bark mulch (a great option), wood chips, and pine needles -- all have a relatively low pH. Note, if you use a material like wood chips, you need to watch the plants carefully. By adding woody mulch like chips to the soil surface you should also add more nitrogen fertilizer (these mulch products take a longer time to break down).

Other options include composted manures and yard debris composts (typical yard composts). Unfortunately, these options have a very high pH (about 7 to 8); for this reason, you would not use these products as a mulch alone. If you add 3 inches of mulch made solely of composted manure or yard compost, the pH will be too high for good blueberry growth. Use ½- to 1-inch deep of this type of product, and put about 2-inches of bark or sawdust on top. This avoids high soil pH and poor blueberry growth.

Finally, another option for mulching is to put down bark (about 1- to 2-inches), then top with weed mat or a porous landscape fabric (black) -- this helps minimize weed growth. This method will require a drip irrigation method under the weed mat to ensure plants can get enough irrigation water in summer.¹

First Year Care

- Strip blossoms, preventing plants from setting fruit. This encourages vegetative growth and is essential for creating strong, healthy plants in the years to come.
- Remove any dead branches.
- Mulch for weed control and to retain moisture.

Do not fertilize the first year.

Second Year Care

- Strip most of the blossoms.
- Remove dead, damaged, or weak branches. Prune lightly, dead branches only.
- Renew mulch to 3-4 inches.
- Fertilize (see chart).

Third Year Care

- Strip a few of the blossoms
- Remove dead, damaged, or weak branches. Prune lightly.
- Renew mulch to 3 – 4 inches.
- Fertilize (see chart)

Miscellaneous:

- Consistent watering prevents cracking fruit
- Full production occurs in 6th – 8th year.
- Plants produce for 10 – 15 years.
- Potential yield is 1 gallon per plant.
- Moderate yearly pruning keeps blueberries healthy and productive. Prune in late winter or early spring before new growth begins.

¹ Mulching information courtesy of Professor Bernadine Strik from Oregon State University

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- Canes are most productive during their 2nd and 3rd growing seasons. Four-year-old canes become weak and unproductive and should be removed.
- Keep two of the strongest new canes each spring and remove all other new canes (suckers).

FERTILIZING BLUEBERRIES

| Age of plants from transplant date | 5-10-10 March 15 - <i>April 15</i> | Ammonium sulfate (21-0-0) May 20 | Ammonium sulfate (21-0-0) June 15 |
|------------------------------------|--|--|---|
| Newly set | 0 | 0 | 0 |
| 1 year | 2 oz. (1/4 cup) | 1 oz. (2 Tbs.) | 1 oz. (2 Tbs.) |
| 2 years | 4 oz. (1/2 cup) | 1-2 oz. (2-4 Tbs.) | 1-2 oz. (2-4 Tbs.) |
| 3 years | 6 oz. (3/4 cup) | 1-2 oz. (2-4 Tbs.) | 1-2 oz. (2-4 Tbs.) |
| 4 years | 8 oz. (1 cup) | 2-3 oz. (1/4 cup + 2 Tbs.) | 1-2 oz. (2-4 Tbs.) |
| 5 years | 10 oz. (1 1/4 cup) | 2-3 oz. (1/4 cup + 2 Tbs.) | 1-2 oz. (2-4 Tbs.) |
| 6 years and older | 12 oz. (1 1/2 cup) | 2-3 oz. (1/4 cup + 2 Tbs.) | 1-2 oz. (2-4 Tbs.) |

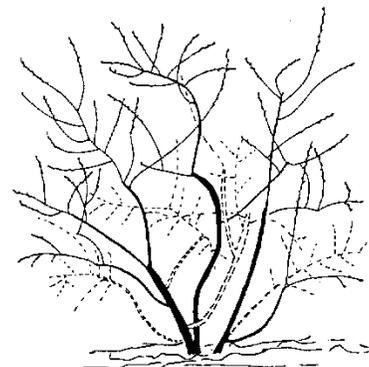
PRUNING

First Two Years

Prune dead branches only.

Third Year

- Prune out crossing branches and dead twigs.
- Cut 1 or 2 older canes back to the ground. Leave 1 or 2 new canes to replace them (new canes are not branched).
- Leave 1 fruiting bud for each 3" of new shoot growth.
- Each bud will produce 5 to 8 berries.
- Fruiting buds are plump while leaf buds are small and pointed.



Tips

- Severe pruning produces fewer but larger berries and more new growth.
- Berries are produced on second and third year canes.
- Prune in winter or early spring. Remove weak side shoots in top of plant.
- To increase fruit size, head back shoots that have an abundance of flower buds.

DISEASES & INSECTS

Common diseases, Insect problems that affect blueberries, and chemical control information can be found at:

[Hortsense](#)