

The *Vaccinium* plant genus is thought to include some of the oldest plants on the planet and its 450 or so members are native to different spots all over the globe. These include cranberry, bilberry, azalea, mountain laurel, rhododendron and blueberry. True blueberries though, occur naturally only in eastern and north-central North America.

The evidence that wild bears were the first to truly appreciate this fruit begins with the fact that they will eat nothing except the succulent, juicy blueberries when they are in season. It has been documented that bears will travel, on an empty stomach, from ten to fifteen miles per day to sniff out a blueberry patch.

Native Americans recognized their value and gathered wild blueberries for centuries. They consumed them fresh, dried them to add to stews, soups and meats, powdered them to make a beef jerky, made medicinal teas from the leaves and roots, drank the juice to relieve coughs and also used the juice to make an excellent blue dye for baskets and cloth. Over time, some northeast North American natives even came to revere blueberries and much folklore developed around them. The blossom end of each berry (calyx) forms the shape of a perfect five-pointed star; the elders of the tribe would tell how the Great Spirit sent "star berries" to relieve the children's hunger during a famine.

Knowledge of the berries was passed on to the Pilgrim settlers of Plymouth in the 1600s by the Wampanoag Indians, who taught them how to gather blueberries, dry them and store them for winter. In time, blueberries became an important food source and were preserved, and later canned. A beverage made with blueberries was an important staple for Civil War soldiers. In the 1880s a blueberry canning industry began in the Northeast U.S.

Recently, we've finally learned what Native Americans tried to show us 400 years ago: blueberries are a superfood with the favorable combination of nutrient richness, antioxidant strength, and great potential health benefits. It is now accepted that blueberries are higher in antioxidants than any other fruit or vegetable. They help protect against cancer and there's also evidence that blueberries can reduce urinary tract infections, inflammation and protect against heart disease, Alzheimer's and stroke. They also have very high levels of the dietary mineral manganese, vitamins C, A, B6 and dietary fiber.

Rabbit-eye vs. Southern Highbush

There are two types of blueberries that grow well in Florida, rabbiteye and Southern highbush. Rabbiteye blueberries (*V. ashei* Reade) have been grown throughout the southeastern United States, including north and northwest Florida for many years. Ripening from late May to early August, they are grown primarily for U-pick and roadside and local consumption. Generally, rabbiteye blueberries are better adapted to north and northwest Florida than are southern highbush. They also bloom later, are less susceptible to late winter and early spring freezes, more drought tolerant and better adapted to low organic matter soils than Southern highbush. However, here in Brevard County with our warmer climate, the Southern highbush performs much better.

The majority of blueberries now grown in central and south Florida are Southern highbush (*V. corymbosum* hybrid). Since the 1970s, Highbush varieties have been improved through natural selection and plant breeding programs, especially at the University of Florida, to produce magnificent plump berries with deep, rich color and a delicious fruity flavor. Florida's early-season fruit are the first blueberries to ripen in North America, making Florida the major producer of early-season blueberries from April 1 through May 15. Highbush blueberries are perennial, long-lived, deciduous, woody shrubs. Mature plants reach 5 to 7 feet and grow almost as wide.

Both the rabbiteye and Southern highbush are erect perennial shrubs that grow from four to six or more feet and almost as wide as they are high with proper pruning. They are also deciduous, cold hardy and long-lived. It is not unusual for a healthy plant to give fruit for more than 30 years.

Site Preparation

The key to growing large, healthy blueberry plants is soil preparation. Blueberries thrive in full sun in well-drained acid soils with a pH between 4 and 5. Soil should also have a coarse texture that is mostly moist, but never saturated. Dr. Paul Lyrene, who developed most of the blueberry varieties we now grow here, recommends a 50/50 mix of **Canadian peat moss** and **mini pine bark nuggets**. Where more stability is needed, 50% of the mixture can be a combination of the pine bark nuggets and **Fafard Soil Conditioner**.

Blueberries have fairly shallow roots, so they can be grown in containers or in the ground, where they are usually planted in raised beds. In either case, make sure the blueberry is planted at the same depth as it was in its original container.

Container: Use plastic, wood or glazed pots, and not clay or concrete as these will leach calcium into the soil and counteract the conditions you want to create.

Ground: Whether planted directly in the ground or in a raised bed (8-inches is recommended), replace existing soil with the same mixture described above in an area that is about 3 feet around and 18 inches deep.

Space blueberry bushes about five to six feet apart. Space rows eight to ten feet apart. They will tolerate a little crowding. Plant 3 feet apart for a hedgerow effect. Keep a thick layer of pine mulch around your blueberry bushes to eliminate weeds, and help keep the soil moist. A new bush will produce fruit in the second or third year! After that, your bush will thrive for many years to come with just a little care and maintenance.

Water

When blueberry plants are first planted in the ground they will require hand watering to get established. In warm weather, this generally will mean once a day the first week, every other day the second week, and twice a week for the third through sixth week. After that, water as needed. As with any plants, be flexible with your watering schedule as weather, soil conditions and maturity of the plants dictate. Do not use water that contains more than 1,200 ppm salt.

Fertilizer

Blueberries have fine, fibrous roots that do not develop root-hairs. All types form symbiotic relationships with mycorrhizal fungi, which aid root functions. We recommend using the all-natural fertilizer, **Espoma Holly-Tone**. Not only is it an acid-forming fertilizer, it also contains the mycorrhizal agents that are beneficial to the plant. During the first two years, fertilize the blueberries every two months, stopping after the October feeding and continuing again in February. Starting the third year, fertilize three times a year: February, May and September. Blueberries require a minimal amount of fertilizing. So only use two or so small handfuls per bush.

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To promote quicker growth of young plants, use **Dynamite 18-6-8 (green bottle)** every four months during the first year after planting.

Pollination

All Florida blueberries benefit from the cross pollination of 2 or more cultivars. They are generally pollinated by bees. Cross pollination does not occur between rabbiteye and highbush types.

A few blueberry varieties self-pollinate. However, most homeowners find that they are much happier when several varieties are planted because fresh berries may be obtained over a longer period of time since the berries ripen at different periods on different varieties. Generally, the more varieties in the mix, the better the fruit set and the bigger the size of fruit. Alternate varieties in rows for effective pollination.

Harvest

Blueberries ripen from spring to late summer, depending on variety. Turning blue is not a sign of ripeness since most blueberries turn blue one to two weeks before they're ready to pick and the berries don't ripen all at once. Also, they must be fully ripe when harvested, as they do not continue to ripen after they have been picked.

Pruning

Fruiting occurs on the previous year's growth, and buds for next year's fruit form in late summer through early fall. As you prune the newest growth, you are reducing production for the following year. To keep mature plants strong and bearing well, each year cut out one or two weakened older canes (those with twiggy side branches) and cut away late-season growth near the base of the bush. If there is twiggy old growth at the base of an established plant, trim it away. Be careful not to cut away more than ½ of the newest growth. Keep in mind pruning leads to healthier plants and fewer, but bigger berries.

Pruning can be done any time between harvest and the following March, although the preferred season is January to late February.

Problems

The risks with blueberries are a freak March freeze which can damage the blooms or immature fruit, flooding from a hurricane, birds, and animals. Freezes in March are rare, and if you raise your beds and provide for proper drainage, root rot shouldn't be a problem. Birds? The biggest destroyer of Florida blueberries comes from crows and Cedar Wax Wings, which are a migratory bird. Use bird netting if they are a problem.

Southern Highbush Varieties

Abundance

Early-midseason harvest of 3 to 5 weeks. Fruit is large, medium-blue, crisp, firm and sweet. Bush is upright, vigorous with very high production. Fruit grows in long exposed clusters. This plant sprouts vigorously in spring and after post-harvest hedging.

Emerald

Midseason harvest of 4 to 6 weeks, Fruit is very large, dark blue, firm and mildly sweet. Bush is upright, spreading and vigorous with high yield potential. Capable of carrying heavy crops.

Gulf Coast

Very early season harvest. Fruit is medium to large in size, dark blue and firm with tangy good flavor. Bush is semi-upright and full, with medium to high productivity. This compact bush makes a good landscape effect. Widely used as a pollenizer for Sharpblue. Very low chilling requirement.

Jewel

Late season harvest, and high berry quality. Fruit is large to very large, medium blue and firm with excellent taste, but tends to be tangy until fully ripe. Bush is upright and rounded with high production potential. Moderately low chilling requirement.

Millenia

Early season harvest. The berry is large to very large on well-leafed bushes that are not overloaded. Fruit is powder blue and firm with good flavor. Bush is spreading rather than an upright and high in vigor. It produces a heavy load of flower buds in the fall, and young plants should be winter pruned the first 2 years to prevent over-fruiting and to enhance early leafing.

Primadonna

Very early season harvest of 4 to 6 weeks. Fruit is very large, medium-blue, firm and sweet with good flavor. Bush is upright and vigorous with a fairly high yield potential. It has high resistance to leaf rust. Plant should be pruned in spring to maintain a balance between leaves and flowers because of its tendency to produce flowers before leafing out.

Sapphire

Early season harvest of 4 to 6 weeks. Fruit is very large, medium-blue, firm and very sweet. Bush is upright and vigorous with a fairly high yield potential. Plant tends to set a large numbers of flower buds which may require thinning for adequate vegetative growth. The plants may be slow to establish during the first 2 to 3 years after planting.

Sharpblue

Mid-late season harvest. Fruit is medium-sized, medium-blue and sweet with excellent flavor. Bush is spreading, vigorous and has a high yield potential. Long grown in Florida, Sharpblue is one of the most adaptable blueberries available.

Springhigh

Very early season harvest of 3 to 5 weeks. Berry is large, dark-blue, fairly firm and sweet. Bush is upright, vigorous and very productive with fairly high yield potential.

Windsor

Mid-late season harvest of 4-6 weeks. Berry is very large, medium-blue, firm and sweet with low acidity and good flavor. Bush is upright, spreading and vigorous with a fair yield potential. Early spring leafing allows plant to support a large crop.