



Blueberries in the Home Garden

The blueberry is a perennial flowering plant in the family Ericaceae in the genus *Vaccinium*. Blueberries are a good choice for the home garden as they require little space, are easy to grow, and are well-suited to the acidic New England soil. The indigo colored fruit can be eaten in a variety of ways: fresh, in baked goods, in jams and jellies, and juice and wine. Blueberry fruit is low in calories and sodium and is a great source of fiber. Blueberry shrubs are woody plants and are generally categorized as lowbush, or wild (*V. corymbosum*), or highbush, (*V. angustifolium*), which are cultivated. Blueberry plants begin to produce fruit in the third year but are not fully productive until year 6. Blueberry bushes have white flowers in May and red-orange fall foliage.

Site Selection and Soil Requirements

Site preparation should be started the prior fall at least should the soil need amendments. The soil pH should be in the 4.0-4.8 range. Soil pH can be tested by submitting a soil sample to the UConn Soil Nutrient Analysis Laboratory. If the soil pH is above 4.5 granular sulfur should be applied in the recommended amounts three months prior to planting. The soil will also need to be amended with organic matter (see below).

Blueberry bushes are hardy in Zones 4-7 (-30°F) although a few varieties such as Patriot, Northland, and Nelson are hardy to Zone 3 (-40°), especially if they are planted in areas that are protected from wind. The highbush blueberry requires full sun and well-drained soil that is high in organic matter for optimum yield.

Planting

Blueberry bushes should be planted in the spring before bud break which is when dormant buds begin to open and new shoots emerge. 2-3-year-old virus-free plants should be purchased from certified nurseries or through programs such as the [Connecticut Conservation Districts](#) annual spring plant sales. Blueberries are self-fruitful, meaning that they can be pollinated by another flower on the same bush, although cross-pollination by another variety produces earlier and larger berries. It is recommended that 2-3 different varieties be planted together. If early, mid, and late season varieties are planted this can extend the harvest period from late June through late August.

It is recommended in a commercial setting that plants be placed 4-5' apart in rows that are 10' apart although blueberries in a home garden or landscape can be planted as close as 2 ½'. Dig a hole 18" wide by 18" deep. Blueberries do best in soil that is high in organic matter. Blend some of the extracted soil with 1 gallon of moistened peat moss, place ½ of this mixture in the hole and use the rest to fill in around the root ball. Apply 4" of sawdust or wood chip mulch, refreshing each year so that a depth of several inches is maintained. Flower buds are removed the year of planting and the following year also to promote root establishment and vegetative growth.

Care

Plants require 1" of water per week during the growing season which is equal to 2/3 gallon per square foot or 62 gallons per 100 square feet. Trickle or drip irrigation are the best options as they do not wet the foliage although overhead sprinklers do help to cool down the foliage and fruit during periods of high temperatures. Blueberry bushes may need netting to prevent birds and wildlife from eating the ripening fruit.

Fertilizer and Nutritional Requirements

Do not add fertilizer to the planting hole or shortly after planting. Blueberries are given a slow release balanced (1010-10) fertilizer when a second flush of growth is seen when the roots have established themselves. Please see our fact sheet [Suggested Fertilizer Practices for Blueberries](#) for full details. Blueberry bushes use calcium ammonium nitrate or urea ammonium nitrate for their nitrogen needs.

Iron chlorosis is a common problem in blueberry plantings where a pH level above 6 prevents the plant from taking up available iron from the soil. Symptoms of Iron chlorosis are decreased growth, yellowing foliage, early defoliation, and severely weakened plants. Yellowing foliage in the spring can indicate a raised pH while the same symptom appearing later in the summer is a sign that soil temperatures may be too high. If the soil pH has not been tested in the past three years, it should be checked and adjusted accordingly. If the symptoms are later in the season be sure that the mulch layer is 3-4". A temporary solution is to spray the foliage with a chelated iron formulation from the local garden shop.

Harvesting

A 3-year old blueberry bush can produce 2-3 pints and the yield will increase each year up to 7-10 pints from a 10-year-old bush. Berries turn blue 3-4 days before they are fully ripened. Berries with a reddish tinge are unripe and should not be picked as they will not ripen after picking. Ripe berries will easily detach from the bush. Berries picked in the cool of the early morning will have a longer storage life than those that are holding the heat of the day.



Pruning

Pruning is an essential part of growing blueberries as it promotes a healthy plant and good fruit production. Our fact sheet on [Blueberry: Pruning Techniques](#) gives detailed information on necessary practices.

Diseases Mummy

Berry

Mummy Berry is caused by the fungus *Monilinia vacinii-corymbosi*. The fungus attacks new growth, blossom, foliage, and fruit. The fungus produces spores in the spring on the mummified fruit of the previous season. The spores infect new tissues so that they turn brown, wilt, and die. It can appear to be frost damage. A second spore (conidia) is spread by wind, rain, and insects to blossoms and other new tissues. The infected blossoms allow the fungus to invade the developing fruit which become pink to creamy tan and fail to ripen. The infected fruit shrivel and drop to the ground where they take on their mummified appearance and will overwinter as the source for the next year's fungus. Sanitation is the most important measure for disease control. Rake and remove all fallen mummified berries before budbreak in the spring. Alternately, cover the area beneath the plant with 2+ inches of mulch (do not volcano mulch, keep it horizontal to the ground) when forsythia bloom. The varieties Jersey, Dixi, Darrow, Collins, Liberty, Olympia, and Bluetta are considered resistant.

Blight and Berry Rot

Botrytis Blight and Berry Rot are caused by the fungus *Botrytis cinerea* is a disease that is present every year but is more severe during blossoming periods that have rainy, foggy, and cool weather. The fungus overwinters on dead

twigs or in organic matter in the soil. It will produce spores in the spring that attack new shoots and blossoms. Affected plant parts appear water-soaked and turn brown and then become covered with the gray, fuzzy mass of the fungus. The berry rot stage appears on ripening fruit that had been infected earlier in the season. Pruning and removing dead twigs and branches should be done during the dormant season. Effects of the disease can be minimized by having the proper soil pH and avoiding over-fertilization (rapidly growing shoots are prone to infection). If wet weather persists during bloom a fungicide spray may be used.

Canker and Twig Blights

Fusicoccum Canker and Twig Blight, *Fusicoccum* sp., *Godronia cassandrae*, is favored by a cool, wet spring. Canes are infected in spring and early summer and cold stress may predispose plants to infection. Symptoms include red/brown target-shaped cankers that appear on leaf scars and leaves that turn dark reddish-brown but remain on the plant. Controls include sanitation and fungicides applied every two weeks from late dormancy to petal fall for high incidences.

Phomopsis Canker and Twig Blight is caused by the fungus *Phomopsis* spp. including *P. vacciniae* and first appears in the spring as an infection on one-year-old stems that have flower buds. Gray and flat circular lesions appear around fruit buds, producing fruiting bodies called pycnidia. Single canes or whole sections of the plant will wilt and die back. The wood and pith of infected twigs becomes discolored. The fungus overwinters in cankers or dead twigs. Plants that have poor vigor or have been weakened by winter injury are vulnerable to attack by this fungus. All blighted or discolored wood should be pruned or removed during the dormant season or whenever newly infected tips appear. Some varieties that appear to have some resistance are Bluejay, Bluetta, Darrow, Elliot, Jersey, and Rancocas.

Insects

Blueberry Maggot

Blueberry maggot is the larva of *Rhagoletis mendax*, a small black fly. The 3/16" long adult has a distinctive pattern of black bands running diagonally across each wing, white bars on each side of the thorax and a white spot at the posterior tip of the thorax. The larvae develop entirely within the blueberry fruit and grow to about 1/2" in length. They overwinter 1-6" deep in the soil. The adult flies emerge in late July-early August from their underground pupae shortly after highbush berries start to ripen. Female flies lay eggs on large, ripening berries and the larvae hatch about 5 days later, burrowing into the berry where they will feed for two weeks. The mature larvae drop out of the berry and burrow into the soil to pupate.

Biological controls include ants, spiders, and a small parasitic wasp, *Opius melleus*. The ants and spiders may prey on adult flies or mature larvae that drop to the ground. The wasp attacks younger larvae by laying an egg directly in the maggot's body, where it will destroy the maggot as it grows.

Information on additional insect pests can be found at the following links:

[Brown Marmorated Stink Bug](#)

[Scale Control on Highbush Blueberry](#)

[Spotted Wing Drosophila](#)

[Stem Borer](#)

Despite good cultural practices, pests and diseases at times may appear. Chemical control should be used only after all other methods have failed.

For pesticide information visit the [UConn IPM page: Blueberry Insect Pests Management Review](#) or the call UConn Home and Garden Education Center weekdays, in Connecticut call toll free 877-486-6271. Out of state call 860486-6271

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