

BLUEBERRIES

Blueberries make handsome and colourful garden plants. In spring, blueberry twigs are peppered with white or pink, urn-shaped flowers. In summer, most berries change from green to pink or red and finally to blue although one variety stays pink. In fall the foliage turns maroon to crimson, which rivals many ornamental shrubs and in winter some twigs are a warm red.

There are several types of blueberries. There are hardy low-bush blueberries (*Vaccinium augustifolium*) which grow close to the ground and produce an abundance of small, sweet fruit. There are also high-bush blueberries (*Vaccinium corymbosum*) and the half-high or mid-height blueberries which are the most popular type of blueberries at the nursery. Although generally less hardy than the low-bush (hardiness varies somewhat by variety) they do well in the right location; especially if protected from dry, cold, north and north-west winds. They produce clusters of large berries on moderate sized bushes. Some varieties of mid-height bushes produce larger fruit with the hardiness and flavor of the low-bush varieties.

PLANTING AND CARE

Blueberry plants are long-lived (30 to 50 years or perhaps even longer), so considerable time and effort in preparing the planting site is a wise investment. Blueberries need full sun for the best yield. Avoid planting in low-lying areas prone to frost and poor air circulation. Blueberries do best in a well-drained soil but need moisture, especially in the summer months. The soil should be loose and well-drained with a pH around 4.5. Although your container plant soil is at an acceptable acid level it is important that you acidify your soil area which will most likely be at a higher pH. Soils not within the range of pH acceptability for blueberry plant growth are ideally prepared before planting. If the pH is too high, the growth of the plant is slowed and the foliage turns yellow. If the pH remains too high for an extended period of time, the plants will die. When several plants are to be grown together, more satisfactory results will be obtained if an entire bed is prepared rather than digging holes for individual plants. To grow

blueberries where soil is poorly drained and/or too basic to be acidified adequately, prepare a raised planting area. To accommodate two plants, create a raised planting bed 40cm deep by 60cm wide by 140cm long. Fill with a soil mixture of 4 bushels well-rotted sawdust, leaf mold, or peat; 2 bushels loam soil; and 2 cups wettable sulfur. For 50 cubic feet of sandy soil (the amount of soil in a space 10 feet by 10 feet by 6 inches), use one to two pounds of elemental sulfur to reduce the pH by one point. You will need to use three to six pounds to get the same effect in loam soils. Elemental sulfur takes at least one year to adjust the pH.

As the soil settles and decomposes over the years, you will need to continue adding some sulfur, soil and peat to the planting bed. Some pine needle mulch will also help maintain acidity. To modify soil that is too dry and sandy, there is no need to create a raised bed; instead, make a hole in the ground of the above dimensions and fill it with the soil mixture. Mulch the planting with 2 to 4 inches of sawdust, peat moss, or chopped straw.

Some blueberries need cross-pollination with compatible cultivars; others can produce crops on their own but will produce more if placed near another cultivar. In general, young plants will take longer to establish before they reach their yield potential. Older, more mature plants often demonstrate a generous yield at the nursery and will be dependable producers sooner in good growing conditions. The yield in the next season after planting on mature plants may be reduced due to the plant stress involved in getting established, but they generally recover well by the third season.

Blueberries have low nutrient requirements but they won't grow well if nutrients are lacking. Adding some fresh top-dressing compost (first number 1.0 or greater) around the plant each spring will meet most or all of your plant needs.

Keep the soil evenly moist. Appropriate watering is critical in the first and second year. Water the planting frequently enough to keep the soil moist but not saturated throughout the life of the planting. Drip irrigation or soaker hoses would be useful in larger plantings. Surface mulch helps maintain uniform soil moisture, good soil structure and it reduces soil temperature in the summer.

Replenish the mulch as needed. Avoid mulching within 10cm of the plant stems to prevent bark-rot.

Low-bush blueberries are generally planted about 60cm apart. Mid-height bushes that grow up to 90cm should be spaced 90-120cm apart. Some highbush blueberries may reach heights of 1.8-3.6 meters tall and are normally spaced 1.8 meters apart.

PRUNING AND TRAINING

The objectives of pruning are to remove dead and diseased wood, shape the bush and maintain an adequate number of vigorous main stems to prevent overbearing and to stimulate new shoot growth. Pinch off all the flowers on a young blueberry bush the first year after planting so the bush will grow strong. Pruning new bushes is needed only to remove any dead or dying parts of branches. After the fifth year, prune the bushes annually in the early spring, just before growth starts. Fruit is produced on one-year-old wood. The largest berries are produced on the most vigorous wood, so a good supply of strong, one-year-old wood is desirable. Excessive pruning should be avoided because it greatly reduces the crop for that year. Keep the bush fairly open by cutting out any weak or old stems that no longer produce strong wood to encourage productive new growth and to let plenty of sun and air to penetrate the entire plant. Remove these older stems at ground level. Keep four to six of the vigorous older stems and one to two strong new shoots per mature bush. The new shoots will eventually replace the older stems.

Blueberry plants tend to overproduce. Often, if all the flowers are left to develop into fruit, the berries will be small and late ripening and plants will have little new growth. To avoid this, remove most of the thin, weak branches that have many flower clusters and few leaves. This type of pruning can be delayed until the extent of flowering is determined. Try to have a good balance between berry production and growth of vigorous new shoots. Ideally on mid and high-bush, you want two new branches emerging each year. Cut any additional new shoots that come from the base. Rejuvenate low-bush plants by cutting about half the oldest stems to the ground each year.

HARVESTING

Don't pick under-ripe berries as they won't ripen off the plant. Fresh blueberries keep well for about two weeks if stored in the refrigerator and will keep for a considerable period of time if frozen.

PROBLEM PREVENTION AND CONTROL

We are fortunate in this region to have few insect and disease pests causing significant problems in the home garden. Insects and diseases are not likely to cause problems with most plantings. Careful pruning will help prevent disease infection. Prune out and destroy any part of the plant that is dead or dying. Examine the plants for cankers that first appear as small, reddish, discolored areas on the stems. As the affected areas enlarge, the margins remain reddish and the bark in the central part turns gray and then brown. Cankers occur most frequently close to the ground but may occur higher on the stem. Stems are usually girdled in one season by cankers. Girdled stems die and their brown foliage is quite obvious. Cut out affected parts several inches below the cankered area and destroy the plant material.

Cherry or cranberry fruit worm, blueberry maggot and the fungus that causes Mummy Berry are known to occur in Eastern Canada in commercial operations but we have had few cases reported to the nursery in recent years from residential sites. Cherry and cranberry fruit worm are small worms that may be controlled by hand picking where only a few plants are infested. Blueberry maggot, if it occurs may be mitigated organically by the use of the sticky red balls (apple maggot traps). Infected berries should be removed and destroyed. Mummy Berry disease is caused by a fungus that makes berries shrivel up or drop early and only tends to occur in late, wet spring weather. Removal of infected material and mulch and provision of at least two inches of new mulch is recommended. Garden sulphur or Bordo (copper-sulfate) may be used as a preventative measure the following spring. Please consult with nursery staff for more information.

Blueberries are very attractive to birds. Birds can eat the entire crop of a small planting if it is not protected. Covering the individual bushes or the entire planting with netting supported by a light frame is the best protection. Secure the netting so there is no place for the birds to enter. The fruit ripens over a three week period, and you will have to remove the netting to harvest. The netting should not shade the plants or they will not flower well the following year. Be sure to completely remove the netting after harvest.

VARIETIES

Most of the following are available at the nursery. Some other varieties may also be available from time to time. Please check with tree and shrub-office staff for more information about availability. Although most blueberries are self-pollinating, they will produce better if two or more cultivars are present.

BLUECROP is the most widely planted high-bush, mid-season cultivar in the world. It produces high yields of medium sized, firm fruit with good flavor. The canes tend to be weepy so care should be taken to maintain good plant shape. It has very good disease resistance and is winter hardy to -30°C (Zone 4).

BLUEJAY is a high-bush variety which grows rapidly with an upright, open habit. It produces moderate crops of medium sized, high quality, mild, firm fruit that holds well for storage. It is resistant to some viral diseases and moderately resistant to Mummy Berry. Bluejay is winter hardy to -30°C (Zone 4).

BLUERAY is a widely planted high-bush, mid-season cultivar. Fruit size is very good with nice flavor and a high yield potential. Pink blooms in spring and scarlet leaves in the fall. Blueray is a self-pollinator and is considered a good pollinator for other varieties. Extra pruning is needed with this spreading bush as canes tend to weep due to heavy bearing. It has very good winter hardiness, hardy to -30°C (Zone 4).

BONUS is a mid to late-season, high-bush variety with large, firm, sweet, light blue coloured berries and is very productive. It produces the largest of all blueberries. Bushes are vigorous, upright and winter hardy to -30°C (Zone 4).

CHIPPEWA is a mid-high, mid-season blueberry that produces medium size firm fruit with good flavor. The Chippewa blueberry bush is a bit taller than other mid-size varieties such as Northblue, Northcountry or Northsky and it produces sweeter, larger fruit. In order to produce the most fruit, it should be planted near other varieties of half-high blueberries. It is considered hardy to -40°C (Zone 3).

DUKE is an early high-bush blueberry with heavy production of high quality fruit. It has a late bloom that avoids many frosts and still produces an early crop. It has a medium-size fruit that is very sweet. The foliage is fiery-red in fall. The fruit is firm with excellent shelf life. Duke is resistant to Mummy Berry disease and winter hardy to -30°C (Zone 4).

ELLIOT is a late-season, high-bush variety producing medium to large fruit with excellent flavor and very good shelf life. The fruit is firm but can be tart because it turns blue before it is fully ripe. A good producer, the bush has an upright habit and forms a dense center that should be pruned to promote air movement. Plants are winter hardy to -30°C (Zone 4).

JERSEY is an old (1928) late-season, high-bush cultivar that can be grown successfully in most types of soil and provides consistently high yields across a broad range of conditions provided that pollination is adequate. It produces medium sized, light-blue, firm berries on a vigorous, upright and bushy plant. It forms a dense center that should be pruned to promote air movement. Jersey is a favorite with home gardeners wanting an easy to grow, heavy producing, late-season variety. This variety shows some resistance to Mummy Berry and is winter hardy to -35°C (Zone 3).

LOW BUSH is our native wild blueberry. It produces small, sweet berries early in the season. It has brilliant red foliage in the fall. This plant grows best in wooded or open areas with well-drained, acidic soils.

NORTHBLUE is an early producing mid-height cultivar yielding quality juicy fruit with a “wild” taste. It is excellent for baking or fresh eating. Northblue is considered hardy to -35°C (Zone 3), although it will thrive best when snow

protection is adequate. Fall foliage is red-burgundy. It is self-pollinating but will yield larger crops if planted with Northcountry.

NORTHCOUNTRY is a mid-height blueberry bush. The berries ripen in the early to middle part of the blueberry harvest season. The fruit is medium sized, with an appealing sweet, “wild” blueberry flavour. It has a spreading compact shape. In the fall the leaves will turn deep red. This variety requires a different selection of the same species growing nearby in order to set fruit. It is considered hardy to -35°C (Zone 3).

NORTHLAND is a mid-height blueberry known for its hardiness and yields a medium sized sweet berry with a wild blueberry taste. It is an early mid-season plant that will tolerate poor soil conditions. It does best with heavy annual pruning. It is considered hardy to -35°C (Zone 3).

PATRIOT is a high-bush, early to mid-season plant that produces medium to large fruit which is sweet and slightly acidic. It is susceptible to early spring frosts due to its early blooming nature. It is a highly resilient plant and is hardier than most high-bush varieties. Its hardiness comes from a low-bush parent as well as its somewhat shorter height for what is considered a high-bush variety. Berries must be fully ripe for good flavor and sweetness. Patriot is winter hardy to -30°C (Zone 4).

PINK LEMONADE is a mid-season, high-bush blueberry with interesting coloured fruit that starts off as pale green and turns to dappled pink and then bright pink. It has pink blossoms in spring and an orange/red fall colour which combined with the berry color makes it an interesting novelty plant. It is derived from Rabbiteye (a southern species) and a half southern high-bush variety and as such would require suitable siting and some winter protection in this region.

POLARIS is a mid-height, early season blueberry bearing medium sized fruit with outstanding quality and flavor. It will self-pollinate but yields better if planted with other northern varieties. It is considered hardy to -35°C (Zone 3).

SUPERIOR is an early, mid-height blueberry. The majority of its fruit matures about one week later in the season than other blueberry varieties in northern

climates. It has exceptional productivity in cold climates. The flavor is balanced and pleasant, and is less acidic than Northblue. This variety is winter hardy to -30°C (Zone 4).

TORO is a mid-season, high-bush variety which produces large, firm fruit that hang like grapes. Fruit is easy to pick, although several pickings are usually necessary. Toro is considered hardy to -30°C (Zone 4).