

Growing Brambles in the Home Garden

Raspberries and blackberries are the group of cultivated fruit crops referred to as brambles. They are distinguished in the following way: when you pick a blackberry, the white receptacle (core) comes off with the fruit; when you pick a raspberry, the core remains attached to the plant, leaving a hollow center in the fruit. Depending on the cultivar blackberries can be either thorny or thornless. There are red, black, purple and yellow cultivars of raspberries. Some of the red and yellow raspberries are called fall-bearing (or sometimes everbearing) raspberries. These types of raspberries produce fruit in the fall on what are called primocanes (first year canes) and also in the summer on what are called floricanes (second-year canes.) Blackberries and red raspberries produce many suckers and spread laterally. Black raspberries and purple raspberries generally stay confined to the area of the original planting hole.

Cultivar Selection: There are many cultivars of raspberries and blackberries which are available to the home gardener. It is important to choose cultivars which can withstand the winter temperatures that are common on Long Island. Most of Long Island is designated as USDA Hardiness Zone 7a (0° to 5° F.) although a portion in the center of Suffolk County is designated at USDA Hardiness Zone 6b (0° to -5° F.) Also consider productivity, use, and the season of ripening and fruit quality as well. Raspberries in general are reliable for USDA Hardiness Zones 5 to 7. Fall bearing raspberry cultivars may not be a good choice if you are in a location where frosts occur earlier in the fall compared with most of Long Island. The thornless blackberries are susceptible to rodent damage and are of marginal hardiness in the Northeast, and should be planted only in a protected area. For more information on cultivars and sources of plants visit the [Nursery Guide for Berry and Small Fruit Crops](#) on the Cornell Fruit Resources web page.

Summer-bearing red raspberries: *Prelude (1), Reveille (1), Killarney (1), Canby* (2), Festival* (2), Titan (4) Encore (5).*

Summer-bearing yellow raspberries: *Amber (4).*

Summer-bearing black raspberries: *Allen (2), Bristol (2), Alleghany (2), Jewel (2), Huron (3).*

Summer-bearing purple raspberries: *Brandywine (4), Royalty (4).*

Fall-bearing red raspberries (primocane-fruiting): *Heritage (7), Autumn Bliss (3).*

Fall-bearing yellow raspberries (primocane-fruiting): *Kiwi gold (7), Fall gold (7), Goldie (7).*

Blackberries (Thornless): *Black Satin, Thornfree, Triple Crown, Chester, Hull.*

****Blackberries (Thorny):** *Darrow, Illini, Shawnee.*

Key: *= nearly thornless; Numbers in () indicates harvest season: 1 (early) to 7 (late fall); ** = Resource: *Bramble Production Guide*, NRAES-35.

Site and Soil Preparation: Brambles grow best on a sunny site in sandy loam soil with a soil pH between 5.5 and 6.5. Contact [Cornell Cooperative Extension - Suffolk County](#) for information on having your soil tested. Begin preparing the soil at least a year before planting, especially if the soil pH needs to be adjusted. Although brambles tolerate a broad range of soil types, they require soil with good drainage to reduce the risk of infection from the disease *Phytophthora* root rot. In addition, excessive water, either on the soil surface or below, can be troublesome during winter when alternate freezing and thawing of the soil causes considerable damage from heaving. Avoid planting raspberries in sites where water accumulates after a rainfall. If this is not possible, plant raspberries on a raised bed at least 10 inches in height. Selecting a site somewhat higher than nearby land improves drainage and reduces the danger of cold injury and late spring frosts.

Adequate moisture during the growing season is essential for good cane growth and fruit production, particularly during periods of drought. For ease of irrigation during the growing season, locate the planting near a water source.

Keeping the planting free of disease is most important for successful growth. Because the principal source of disease is wild brambles, choose a site far from woodlots and old fields. Destroy all wild brambles growing within 500 feet of your site. A previously cultivated site is best, but only if crops susceptible to the disease *Verticillium* wilt - raspberries,

strawberries, tomatoes, potatoes, peppers or eggplants - have not grown there before. If you choose a new site, till the sod under and plant a cover crop one year before planting.

Planting: Set plants 1 inch deeper than grown in the nursery and at least 30 inches apart in rows that are spaced 9 to 10 feet apart between rows. Plant rooted canes early in spring, and set tissue culture plantlets after danger of frost has passed. Remove old canes which may be attached to the new plant, because they are a source of disease. Do not apply fertilizer at planting or for several weeks after planting. Apply water liberally because brambles have shallow root systems.

Care: Fertilize- Brambles are easily injured by too much fertilizer. Apply no more than 5 pounds of 10-10-10 per 100 linear feet of row the first year and no more than 10 pounds per 100 linear feet of row in subsequent years. Apply fertilizer only in the early spring before flowering. Apply the fertilizer evenly to the soil surface in an approximate 3-foot-wide band over the entire row. Because brambles have shallow root systems allow the fertilizer to remain on the soil surface to avoid damaging the roots. Avoid using fertilizers, which contain chlorides. For best performance, have a leaf analysis and soil test done every two to three years and follow the recommendations given with the results. Contact Cornell Cooperative Extension - Suffolk County for information on leaf analysis.

Irrigation - Irrigation will likely be required between bloom and harvest. When necessary apply water early in the day after the plants have dried from the morning dew. Plants which remain wet during warm nights are more susceptible to certain diseases.

Trickle or drip irrigation is particularly suited to small fruit crops and especially in home gardens. A properly installed drip irrigation system is an effective and efficient way of using available water and avoids wetting the foliage of the plant, which helps reduce the potential for certain foliage diseases. Drip tubes, tricklers or emitters drip water continuously or intermittently into the root zone around the plant. With drip irrigation soil in the spaces between rows remain firm and dry. At the same time soil in the root zone remains moist at all times. Water loss is minimal with the system.

Cultivation – Home gardeners should keep about a 3-foot-wide strip of soil cultivated around the plants. Then use a lawn mower to mow the alleyways between the cultivated strips. To control weeds gardeners should cultivate from early spring to mid-July and later if needed. To avoid injuring roots, cultivate no deeper than 2 inches. Mulches used on top of soil have the potential to retain too much moisture, which could cause root disease problems and therefore are not recommended around brambles.

Cane Management: Pruning *every year* is necessary if you intend to get good quality fruit. One of the biggest mistakes made by the home gardener is to delay pruning for several years after planting or to neglect to prune brambles every year. Some bramble types require thinning to keep the planting from becoming too crowded while other types can be managed by mowing off the canes annually. Proper managing of canes and pruning helps reduce the incidence of disease and improve growth, fruit number, size, quality and sweetness.

Primocane Fruiting Raspberries (fall-bearing raspberries) - This type of raspberry plant produces fruit at the top of the first year canes (which are called *primocanes*) in the late summer or early fall as well as on the lower portion of those same canes in the early summer of the second year. If the growing season cooperates, you can expect fruit from primocane raspberries in the fall of the year in which you plant.

Most growers choose to “sacrifice” the early-summer crop by pruning or mowing down the canes between fall harvest and bud break in early spring in favor of a smaller but higher-quality late summer crop. When pruning primocane fruiting raspberry plants for a single late season crop it is important to cut the canes as close to the ground as possible in early spring which will force new buds to break from below the soil surface. To maximize the number of canes with this pruning method you should not thin out any canes.

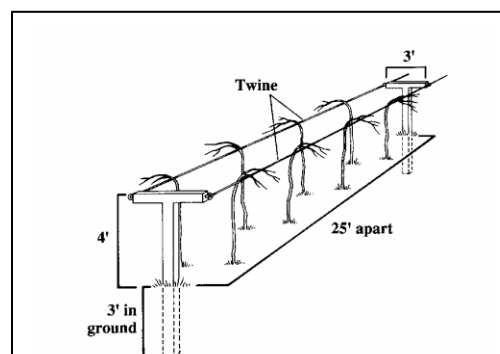


Figure 1. A temporary trellis for primocane-fruiting raspberries. (Illustration from *Cornell Guide to Growing Fruit at Home*, Information Bulletin 156 Cornell Cooperative Extension.

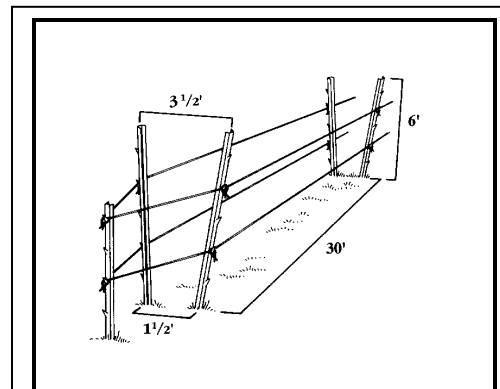


Figure 2. A V-trellis system for floricanefruiting raspberries and blackberries. (Illustration from *Cornell Guide to Growing Fruit at Home*, Information Bulletin 156 revised edition, Cornell Cooperative Extension 5/03.

If you choose to harvest an early summer crop then you will need to manage these raspberries like the floricanes-fruiting brambles listed below.

Floricanes-fruiting Raspberries and Blackberries – This type of bramble produces fruit from buds on second year canes (which are called *floricanes*.) Unlike primocane fruiting brambles, the canes of floricanes types *must remain intact throughout the winter and until after harvest the second year* because these are the canes which produce the fruit. After these types bear fruit, the floricanes die. You can expect your first crop the year after planting and full fruit production in the summer of the third year.

While the floricanes are flowering and fruiting in the summer during their second year, new primocanes canes are being produced and growing up from the soil below. Some of these new primocanes are allowed to grow and they will replace the currently fruiting floricanes next season. But these new canes will compete with the floricanes for sun and water as well as interfere with spraying and harvesting. Therefore it is important to minimize this interference with proper pruning and trellising.

- The traditional method of managing floricanes-fruiting plants is to plant new plants in the spring and then permit the primocanes to grow through their first season, and to remain during the winter and then be allowed to produce fruit (at which time they are called floricanes) the next year (summer.) These floricanes are then cut off at ground level the following early spring when they are dead. Also at this time in early spring you will thin out the primocanes which were produced last summer and which will be the floricanes that produce fruit this coming summer. Thin these to about three or four per foot. Then head back these canes to a convenient height for harvesting, which is usually about 4 to 5 feet. Under no circumstances should you remove more than 25% of the canes during the spring. It is also important to remove any diseased or winter-damaged primocane wood in the early spring as well.
- Another way to reduce plant interference and competition is to mow half of the planting to ground level alternately each year during the dormant season (very early spring.) Later in spring after mowing, primocanes emerge from the soil, grow that summer without interference from fruiting canes, and are allowed to remain over the winter. The following year, these canes (floricanes) flower and fruit and are then cut to the ground during the dormant season. Advantages of this system are that cane thinning and pruning are not necessary and spray material costs are reduced. Disadvantages due to the high cane density with this system include a reduction in fruit quality, berry size and yield.
- A third alternative is to select 4 or 5 primocanes per linear foot of row in June and these 4 or 5 canes will carry through to fruiting during the following year. All other primocanes which you do not want to keep are cut down when they are about 8 inches tall. These primocanes are much easier to cut down and remove when they are small and succulent rather than when they are large and thorny. This system also increases the fruit size and the yield of the current season's crop. The disadvantage to this system is that if any of the canes become diseased or damaged you do not have any other canes to choose from as replacement for the diseased/damaged canes.

Trellising: One of the biggest problems with home bramble plantings is an unruly patch of berries due to incorrect pruning and a lack of trellising. It is recommended that gardeners support their bramble plantings with a trellising system to help reduce berry rotting by keeping the drooping fruit laden canes off the ground and to make harvesting easier.

Primocane-fruiting raspberry trellising – Since most gardeners will be obtaining a single late summer–fall crop from primocane fruiting raspberries a simple temporary trellis during the late summer-fall will work fine. One system that works well consists of T-shaped wooden or metal posts approximately 7 feet long with 3-foot crossarms (**Figure 1**). Dig post holes no more than about 25 to 30 feet apart in the center of each row. Make the holes slightly wider than the base of post being used. Make each hole 3 feet deep. Now take a 3 foot long piece of plastic pipe and insert this into the post hole. Be sure the inside diameter of the pipe is large enough so the wooden or metal post will fit inside this “sleeve.” As harvest approaches insert the posts into the holes – about 4 feet of the post should be above ground level. Now run baling twine (tied to screw eyes in the ends of the cross-arms) along either side of the row. The twine is inexpensive and will degrade over time, but is still strong enough to support the canes. After you harvest the raspberries you will cut and remove all of the twine and then lift out the posts from the plastic “sleeves” and store them until next season. The plastic pipes used as the sleeve should be set low enough so that they will not interfere with mowers when you mow down the canes in early spring.

Floricanes-fruiting raspberry and blackberry trellising – When gardeners grow floricanes-fruiting brambles trellising is needed to prevent interference from primocanes which are growing up in the row during the summer among with the floricanes that will be producing fruit during the summer as well. Without trellising you would need to cut fruiting canes short in the dormant season to prevent the canes from breaking and tipping over and this would reduce yields.

The use of a V-shaped trellis (**Figure 2 & 3**) is recommended for growing and can be made from wood, steel snow-fence posts, rebar, or similar materials. Refer to Figure 2 and set pairs of opposing posts about 1 ½ feet apart every 30 feet. The posts must be set on an angle away from each other. The angle should be about 20° to 30° from perpendicular to form the “V” as illustrated in Figure 2. The end of the post should stand about 6 feet tall above ground level. Run two “wires”

between the posts and secure them to the anchor posts at the end of the rows as illustrated in Figure 2. Materials used for the “wires” could be twine if the run is short, but the most popular choice is monofilament plastic wire, which is just as strong as steel wire, but is lighter and easier to install. Consult nursery and commercial fruit growing supply catalogs for more information on trellising materials. The top wire should be about 4 feet above ground level, and the second wire about 2 feet above ground level. Adjustments to the wire heights can be made if necessary.

After thinning in early spring as mentioned in the above section on **Cane Management of Floricane Fruiting Raspberries and Blackberries** you will tie the floricanes to the top wire. The primocanes that develop in the spring and summer are allowed to grow up in the middle of the “V” where they will not interfere or compete with the floricanes for light. This type of trellis will pull these floricanes to the outside along with the primocanes forcing them outside as well. Research shows that floricane-fruited brambles grown utilizing V-trellising have increased yields due to increased sunlight reaching the leaf canopy of the plants. This type of planting has the potential to remain productive for about 15 years so take this into consideration when purchasing materials to construct the V-trellis.

Pruning: Different types of brambles require specific pruning treatments.

Red Raspberries: Around mid-March, thin the planting so you leave 3 or 4 canes per linear foot of row. Next, prune off winter-damaged tips. Cut top canes no more than one foot beyond the top wire of the trellis, but below the point of any winter injury. If winter injury was severe you will need to lower the trellis wire. Tie canes loosely to the trellis wire to prevent wind damage.

Black Raspberries: During the summer when the primocanes reach about 2 feet tall, cut back the tips at least 4 inches to encourage lateral growth. By the end of the season, primocanes will be branched with long laterals. These should be supported by trellis wires in winter to prevent breakage from snow. In the early spring, remove any winter-damaged wood and shorten laterals to about 1 foot long to increase berry size. Thin canes so you leave 2 to 3 canes per linear foot of row.

Purple Raspberries: Since these are hybrids of red and black raspberries they can be managed like either. However managing them as red raspberries forces them to grow tall and this reduces yield. A better choice for home gardeners is to pinch primocanes when they are about 3 to 4 feet tall in June, which will produce stockier plants, with more laterals that will increase yields. If hot, wet weather follows such pruning there is a potential for increased disease. In early spring, remove any winter-damaged wood and shorten the laterals to about 1 foot long to increase berry size. Next thin the canes to about 2 or 3 per linear foot of row.

Thorny Blackberries: Prune these twice similar to black raspberries. Tip primocanes when they are about 3 to 4 feet tall in the summer to stiffen canes and encourage lateral branching. In early spring shorten the lateral branches to about 18 inches. Next thin the canes to 2 per linear foot of row. Perform alternate-year mowing as described under **Cane Management**.

Thornless Blackberries: In the early spring shorten fruiting canes to the top trellis wire, or weave them around the wire. Shorten laterals to about 18 inches. Low-growing laterals are less likely to suffer winter injury. For good production maintain 6 to 8 canes per clump.

Harvest: Raspberries do not keep well on the plant and must be harvested every 2 or 3 days. Production reaches its peak the third year after planting and slowly declines after that. Gardeners should replant a site after 10 years.

The resource for the information contained in this leaflet is the *Cornell Guide to Growing Fruit at Home*, Information Bulletin 156 revised edition, Cornell Cooperative Extension 5/03.

A useful web site: Fruit Production for the Home Gardener (Penn State University) <http://ssfruit.cas.psu.edu/>

