

Cultural Tips For The Successful Grower

Blackberries, Black Raspberries, Red Raspberries, and Yellow Raspberries



Blackberries, Black Raspberries, Red Raspberries, and Yellow Raspberries are very closely related. Botanists separate the raspberries from blackberries by determining if the core stays in the ripe fruit or if the core is lost during picking. Berries with the core intact are blackberries and berries that lose the core and resemble a thimble, are raspberries. A few berries are a cross between the two. The loganberry keeps its core intact and is classified as a blackberry. Tayberry has a core that sometimes sticks to the fruit and sometimes comes free of the fruit-especially if over-ripe. Both the Loganberry and Tayberry are a cross between a blackberry and a raspberry. Due to growth habits they are classified as trailing blackberries. Among the trailing blackberries we include many well known varieties such as Boysenberry and Marionberry.

Heritage

Though closely related there are several quite different growth habits found among the blackberry - raspberry family. All bear fruit on two year old wood, or in the of everbearing raspberries they also fruit on first year growth. Everbearing Raspberries are more accurately called Primo Cane Fruiterers-as they are not truly everbearing. They have also been frequently called two crop raspberries because they bear a late Summer or Fall crop on the first year growth (primocanes) and a second crop the following Spring on the two year old wood. It may help clear up a lot of confusion about blackberry and raspberry culture if one remembers that after flowering and fruiting, any cane that bore fruit dies back to the crown. When establishing a



Tayberry

new planting, whether a raspberry planting or a blackberry planting-it is very important to cut the top back on the bare root transplants, if this has not already been done at the Nursery or Garden

Center. All the new growth that will arise from the transplant will come from primary buds just below the soil line. If one examines the crown of the plant you will see 2-5 small buds or shoots just above the roots at the base of the crown. All top growth above the primary buds is cane that grew in the Nursery row the previous summer and is now two years old and programmed to flower and fruit. If one leaves this 2 yr. old top growth intact it will start blooming and try to fruit at the expense of the new cane growth that one is trying to encourage from the primary buds. Without a properly established root system the newly transplanted blackberry or raspberry can even end up dying in an attempt to ripen fruit on the excess cane. By cutting the tops back on your raspberry or blackberry transplants a much better survival rate can be expected and better growth will result.

Any plant being transplanted to a new site in the garden is going to undergo some stress. By cutting back your blackberry or raspberry transplant much of the stress is relieved. It takes 4-6 weeks for new growth to start showing so we normally leave 3-5 inches of the old top above the ground to "mark the plant" in the row.

In summary, it pays to purchase your plants from a professional Nurseryman who will ensure you are buying quality plant material. After bringing the new blackberry or raspberry plants home soak the roots in water for an hour or so prior to planting. One can plant the root system intact, But if the planting hole is smaller than the root system of the transplant, prune the roots to fit rather than "wad" them in the planting hole. Because the plant is dormant and no leaves are present to transpire moisture, avoid over watering. Over watering can only lead to root rot. Normally spring soil moisture is adequate to guarantee growth if the root system was soaked prior to planting. After growth starts and leaves appear some irrigation will be necessary in the same quantities one would use to establish a rose garden. Fertilizer requirements for raspberries and blackberries are the same as for roses also. Caution-don't use rose fertilizer that contain pesticides in addition to the fertilizer, as these pesticides may not be approved for use on berries.

Red Raspberries **Rubus Strigosus**

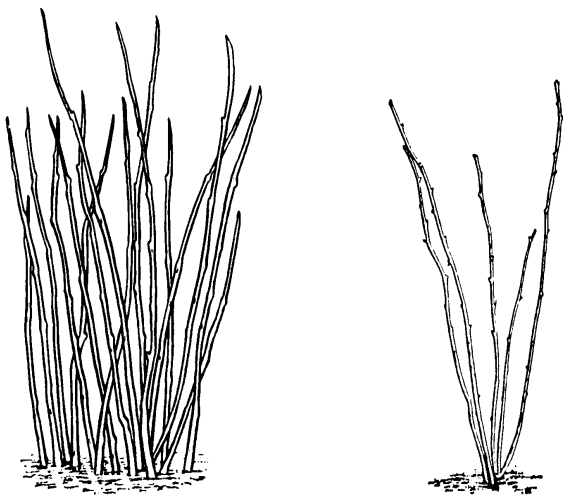
Cultural Requirements: Raspberries prefer a deep, well drained, fertile soil. Raspberries are deep rooted, and thus need good drainage. Keeping this in mind, raspberries are a very versatile plant, most varieties being hardy in the coldest climates where other cane fruits would fail.

Fertility: Raspberries benefit from high organic content in soils. Organic matter promotes drainage in heavy soils and increases the moisture-holding capacity of sandy soil. Farm manure worked into the soil prior to spring planting, though not essential, is a sound practice. If commercial fertilizers are used, one should apply a well balanced blend, such as 5-10-5, in early spring. One half cup per hill is usually ample. Another application after harvest is also important.

Planting Instructions: Raspberries should be planted in the spring or late winter. They are usually spaced 2-3 feet in the row with 8-10 feet between the rows. Plant raspberries

about one inch deeper than the plant grew in the nursery. The plant, as purchased from the nursery, may be cut back a few inches as most of the growth will arise from the roots or from the base of the planted cane.

Pruning and Training: Often only the shoots of suckers that start close to the original plant are allowed to grow, thus the canes are kept grouped together in the so-called hill. However, the home gardener may wish to let the hills grow together, thereby conserving space in the garden. Unwanted suckers arising too far from the mother plant may be grubbed out as they appear.



Left: Red raspberry plant before pruning and thinning. Right: Same plant after pruning and thinning.

One-crop raspberries fruit on two year old wood. After harvest, the two year old fruiting wood begins to die and can be removed. The one year old canes that are left can then be thinned the following winter to remove the weaker canes, and those selected to remain for the next summer's crop can be cut back to head height. Usually at least seven to ten canes are left per hill.

Two-crop or everbearing raspberries, as they are known in the trade, are handled much the same except that they fruit in the fall on one year old canes. The fruit will appear on the top foot or so of the cane, and it is a common practice to remove the portion of the cane that fruited after harvest, leaving the rest of the cane to produce next summer's crop. The everbearing raspberry thus produces a summer crop on two year old wood and a fall crop on one year old wood. As with the one-crop raspberries, the two year old canes die and are removed after the harvest or during the following winter.

Red raspberries can be supported either with tall stakes or ideally with a two wire trellis. The wires of the trellis are usually placed about one foot below the height at which the canes have been pruned. The wires are placed on each side of the post with large staples or nails. Sometimes cross pieces are nailed to the posts so that the two wires are 12 to 15 inches apart. A second set of wires may sometimes be placed a few feet below the top wires. The canes can be tied to the top set of wires. Certain varieties noted below may need no support at all! The everbearing raspberries fall into this category.

Spacing: Low density, individual hill system calls for planting 3 feet apart in the row and 8 to 10 feet between the rows. High density, solid hedge system calls for 2 feet between the plants and 8 to 10 feet between the rows.

Red Raspberries -- Spring Crop Varieties

Boyne: Developed in Morden, Manitoba for Northwest areas where extreme hardiness is needed most. Introduced in 1960. Medium, tender, juicy, dark red berries. The flavor is aromatic and medium sweet. Especially good for jams, jellies, and freezing. Very productive, strong, heavy, sturdy canes. Height will get 5 to 5 ½ feet. Adapted for fruit stand sales, pick your own, and the home garden. Ripens in early midseason. Zone 2-7

Canby: Developed in Oregon and introduced in 1953. Thornless Red Raspberry. Large, good flavored, firm, juicy, bright red berry with fine quality. This delicious flavored berry is one of the best in the Northwest for freezing, canning, cooking, and fresh eating. The canes are vigorous and productive. Heavy bearer. Canby does show a high level of virus resistance and aphid immunity. Sensitive to Root Rot so good soil drainage is required. Not adapted to heavy soils. Grows best in areas with cooler summers. Excellent winter hardiness in zones 4-7.

Chilcoten: Berry a bit larger than Willamette which used to be considered the largest berry of all. Firm berry has an attractive color and exceptional flavor. Another must for fresh market fruit stand sales. Hardier than Willamette or Meeker, about the same hardiness as Canby. Zone 4-7

Latham: The standard for springbearing, red raspberries; extremely popular and widely grown. Large to very large, round, often 1", deep red fruits. Wonderful texture; somewhat noncohesive. Full flavored and aromatic. Good for fresh eating, canning, freezing, jam, juice and pie. Strong, vigorous, heavily productive, upright, 4-5' plants; widely adapted. Disease resistant; mosaic free. Ripens evenly for three weeks in late June and early July. Exceptionally hardy; zone 3-8.

Meeker: Developed at Washington State University. Large, thimble shaped, dark red fruit with high sugar content and good quality flavor. Good home garden variety for eating fresh, freezing, canning, and processing. Meeker is not particularly adapted to heavy soils but is a vigorous plant with long willowy growth. Very productive with long harvest season. Ripens midseason. Meeker has some resistance to Botrytis Rot. Zone 5-8

Nova: Nova was bred in Nova Scotia (1981). Very strong growing canes with medium to large fruit that is bright red and firm. Nova is, however, very dependable and productive, and tolerates the wide changes in spring weather. Yields are consistent. The canes of Nova seem to have the smallest spines. Nova is strong and vigorous, and suckers less than Prelude. Zone 3-8.

Tulameen: Nootka parentage. Very large, red fruit make it one of the largest of all reds. Well suited to both processing and fresh market. High yields. Long harvest season (approximately 50 days). Ripens in July. Introduced in 1990. Zone 4-7

Willamette: Originated in Oregon and is extensively grown in the Pacific Northwest. An extremely large berry, nearly round, dark red, very firm, and of excellent quality. Lower sugar content, rich, and slightly tart good flavor. Excellent quality for fresh eating, freezing, and canning. Holds color and shape well. The bush is vigorous, very productive, and suckers freely. Requires well drained soils and mild winters. Disease resistant. Ripens early. Willamette is one of the most popular commercial varieties in Oregon, Washington, and California. Zone 5-10

Red Raspberries -- Everbearing Varieties

Heritage: Introduced from New York State at Geneva in 1969. Large, sweet, dark red berries with a mild flavor. This superior quality berry is good for fresh eating, freezing, canning, and preserves. The canes are tall for an everbearing raspberry, but are very sturdy and seldom require support. Strong, vigorous, very productive, suckers prolifically and spreads rapidly. Fairly tolerant of heavier soils but will develop Root Rot in poorly drained areas. Moderate summer crop with heavier, superior fall crop. An excellent variety for the home gardener and also grown commercially in many areas. Zone 4-9

Amity: Developed at the Oregon Agricultural Experiment Station in Corvallis. Large, firm, dark red berries with classic raspberry flavor and superior quality. Excellent for fresh market. Amity is good for shipping, freezing, and canning. Compared to Heritage; Amity is more resistant to Root Rot and can take somewhat heavier soils. Amity is also aphid resistant. Amity involves two crops. One on the first year growth in the Fall (beginning in late August), and again the following June on the 2 year old wood that did not fruit the previous Fall. Commercial growers mow the canes off in the Fall and skip the Spring crop. The Spring crop is hard to pick due to new sucker growth that grows up through the 2 year old wood. The Fall crop will tend to be heavier if the canes are mowed, as the plant does not use any energy to ripen the Spring crop. Amity is a week or so earlier than Heritage but does not bear quite as heavily. Amity does not pick as well as Heritage because the berry sticks to the plug until quite ripe. We recommend Amity for the home gardener due to its excellent flavor. We recommend the Heritage to commercial growers due to the heavier yields, better storage, and picks easier in the field. Zone 3-9

Caroline: US Patent No: PP10412 Produces a moderate to high number of upright root suckers. During the growing season, canes are green with large areas of red. The erect canes will branch occasionally and are moderately vigorous depending on location. Thorns are numerous (20-50 per node on vigorous canes, more on non-vigorous canes), thinner than 'Heritage', 1-4 mm in length and dark brown. Young leaf color is slightly

darker than that of young 'Heritage' leaves, and without the red coloration often observed on expanding 'Heritage' leaves. Serration is similar to other 'Heritage' types. Fall fruit is borne on the top half to one third of the primocane or, in the lower half of the cane early in the summer florican season. Fruit trusses are cymose clusters. Flowers are perfect and indistinguishable from other raspberry cultivars. Fruit are red, firm, symmetrical, readily separated from the torus, truncated conic, and more cohesive than fruit of 'Heritage'. Fruit has R.H.S. color chart number 45A, is sweet to tart in flavor, more reminiscent of 'Glen Moy' than 'Heritage'. The plant is field tolerant to several diseases including: mildew, anthracnose, and verticillium wilt. JCR-fl leaves will develop late season rust however, its fruit is less susceptible than fruit of 'Heritage' to rust. Plant attitude at maturity is upright to slightly arching, requiring support with a full crop. Plants should be trellised on a simple 2 foot horizontal wire "containment" trellis typical of fall bearers. Pruning and training is typical for a fall bearing cultivar, i.e. February to March mowing to 4-6 inches in height Bark is green through the season, turning brown in fall and exfoliating thereafter. Flowers are indistinguishable from other raspberry cultivars. Plants are self pollinating. Internode length is highly dependent on light and time of year; in the shade, lengths can exceed 2 inches, while in the late fall and in full sun. lengths are often less than one half inch. Cane density is high, requiring mowing or tilling to reduce the size of the row. This results in a dense leaf canopy. Fruit are easily removed from the plant. The fruit are only moderately firm in warm weather. No mechanical harvesting tests have been performed.

Fall Gold: Large, conical, non-crumbling, very sweet, somewhat soft, golden berries. Excellent for processing and fresh eating. Canes are vigorous, productive, and adaptable to a wide variety of soils. Not recommended for extreme northern areas. First crop ripens in July. Second crop from late August until frost. Zones 4 - 8. Hardy to -25 degrees F.

Spiny canes are fairly erect and may be grown with little or no support. Moderate cane density. High yields. Autumn Bliss bridges the gap between late Summer and Fall varieties. This gives home gardeners, fruit stand operations, and fresh market producers the opportunity of continuous cropping throughout late Summer and early Fall. Zone 3-9

Autumn Britten (Great Britain, Patent Pending) is early ripening with large, firm, good flavored fruit. It is taller than Autumn Bliss with better fruit quality but slightly lower yields. It is a day or two later than Autumn Bliss. Zone 4-8

Blackcap Raspberries

Rubus occidentalis

Cultural Requirements: Blackcaps prefer a loose textured, well drained soil. The limiting factor is, as with red raspberries, a high water table for long periods of time, especially during the winter months. Keeping this in mind, blackcaps thrive on most soil types.

The blackcap raspberries grown commercially are native to the eastern and central states, making the blackcap cold hardy in most areas of the U.S.A.

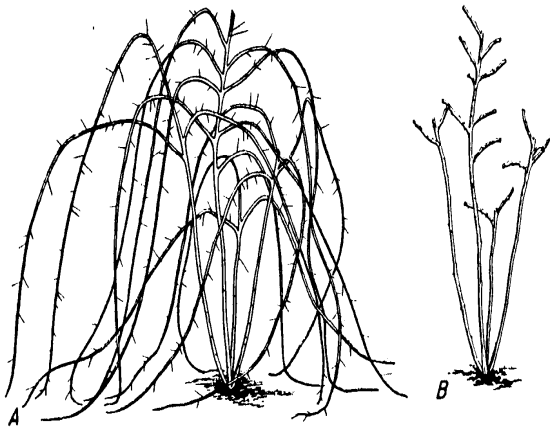
Fertility: Blackcaps prefer a naturally fertile soil. Soils high in organic matter always fall into this class. If commercial fertilizers are used, one should apply a well balanced blend, such as 5-10-5, in early spring. One half cup per plant is usually ample. The plants should be watered moderately during the growing season.

Planting Instructions: One year old tip plants should be planted in March or April. Two year old transplants may be planted earlier, one inch deeper than the plant grew in the nursery. Any white sprouts arising from the crown should be covered with soil to prevent burning by the sun.

The older stems or tops on transplants may be cut back several inches. Blackcaps should be spaced 3-4 feet in the row and 6-8 feet between rows.

Pruning and Training: When one year old canes arising in the spring reach a height of 18-24 inches, they should be pinched back 3 or 4 inches. This practice forces out strong fruiting laterals for next year's berry crop. No more attention is paid to the canes after pinching until time for pruning in late winter.

During winter, the old two year old wood that fruited the previous summer is removed, and the laterals or branches that arose after summer pinching of the one year old canes may be shortened to about 12 inches. Of course, any weak canes may also be removed at this time. The properly pruned plant has a globe shape, Hedge appearance with the fruit occurring on the outside surface of the bush.



Left (A): Blackcap raspberry before pruning.
Right (B): Blackcap raspberry after pruning

Staking may be beneficial for the first crop of a new planting, but is not needed after that.

Superior Blackcap Raspberry Varieties

Munger: (Black Raspberry) Developed in Ohio, Munger is a midseason bearer. Large, plump yet firm, shiny black berries that are not seedy. Munger has a delicious, sweet flavor that is excellent for jam, jellies, and preserves. Only satisfactory for freezing. Munger has stout canes that appear to be more resistant to Fungal Diseases than other raspberry varieties. Munger is the leading variety in the Pacific Northwest, Commercially and in the home garden. Very hardy. Zone 5-8

Jewel: Vigorous, erect, hardy, consistently productive, propagated by tip layers, slightly susceptible to mildew, no infections of anthracnose have been observed to date, winter injury has not limited production since selection. Ripens in mid-season, large, skin black, glossy, slightly woolly, coherent, good quality, and firm. Fruit forms a fairly tight cluster at the tip of laterals, exhibits concentrated ripening, most of the crop can be picked in two to three pickings. The consistent good performance of 'Jewel' merits its release for commercial planting or home gardens.