



Brambles

Blackberries and raspberries belong to a group of small-fruit crops called brambles. Brambles have perennial root systems and biennial canes. Canes produced during the first growing season are called primocanes and produce fruit the following summer on floricanes. The floricanes then die back to ground level during the winter.

Blackberries are easy to grow and very rewarding at harvest time. Your level of success will depend on good site selection, soil type, and cultural practices which include fertilization, irrigation, and pruning. The payoff is a four-week harvest period of delicious fruit that can be eaten fresh during the growing season, baked in desserts, made into syrup, or frozen for later enjoyment. Blackberry canes are generally prickly with small to large thorns, although some thornless cultivars have been available for many years.

Blackberries grow best in sandy loam soil. Otherwise, they can be grown in soils that are at least one-foot-deep, have good drainage, and have a pH between 4.5 and 7.5. Organic amendment (compost) should be added at planting time. On soils with a pH of 8.0 or above, soil sulfur may be incorporated into the soil before planting or when thinning canes. Otherwise, plants may experience zinc or iron deficiency and applications of zinc sulfate or iron chelate may be necessary. If soil drainage is inadequate, grow blackberries in a raised bed filled with mineral soil. They perform best in full sun when grown at elevations above 2,500 ft. Blossoms may be damaged at temperatures below 26 degrees F and drying winds can damage canes between 20 and 24 degrees F. For this reason, select a wind-protected location.

Blackberries are described as erect, semi-erect, or trailing and are either thorny or thornless. Erect varieties tend to have square stems and trailing varieties have rounder stems. 'Navaho' and 'Choctaw' should perform well in north central Arizona. 'Brazos' and 'Roseborough' are other erect varieties that should also do well here. 'Black Satin' is a semi-erect variety and 'Olallie' is an excellent trailing variety.

New blackberry plants should be purchased from a reputable nursery to ensure they are free of root knot nematodes and fungal pathogens. Plant vines between February and April. Do not allow the roots to dry out before planting. Cut plant tops back to 6 inches before planting and any broken or damaged roots should also be pruned back. Spacing between individual vines within a row should be 2 to 3 feet for erect varieties and 4 to 6 feet apart for trailing varieties. Rows should be spaced at least 6 to 8 feet apart.

Both erect and trailing blackberries should be trained to a trellis. Trellises for trailing varieties are constructed by stretching two wires (3 and 5 feet above ground level) between steel or rot-resistant wooden posts. Erect varieties may be adequately staked with one wire 3 feet above the soil. End posts will need to be strong and well anchored.

Proper pruning is essential for good production. Erect varieties should be topped at 3 feet during the first summer. This encourages lateral branching, which is where the fruit will be produced the following year. These laterals should be pruned to 12 inches the following spring. Erect varieties should be thinned to 5 or 6 strong canes per foot of row in the spring. Trailing varieties should be thinned to 6 to 12 strong canes per foot of row and trained to the trellis wires in spring. For both trailing and erect varieties, old canes that have produced fruit the previous year should be removed after they have died back.



Blackberry, healthy fruit at various stages of maturity (Gerald Holmes, California Polytechnic State University at San Luis Obispo, Bugwood.org).

Nitrogen is the most critical nutrient for blackberry production. Apply from 1 to 1½ oz. nitrogen per plant (6 to 10 oz. 16-16 per plant) per year. Weekly irrigation should be applied by flood, furrow, drip, or other method that wets the soil to a depth of 1 foot. Sandy soils may require more frequent irrigation. Avoid aerial sprinklers that wet foliage as this could promote disease.

Raspberries are an easy to grow, very productive, perennial crop. A well-tended raspberry patch will often be productive for 10 to 15 years. They need full sun, but do not thrive in reflected heat such as a south or western exposure against a wall or building. In open windy areas, wind protection is important as dry winds can dehydrate and kill exposed canes. Raspberries prefer deep, well-drained, sandy loam soils and struggle on clayey soils and soils with poor drainage. Raspberries should be grown in a raised bed where clay soils exist. Incorporate 2 to 3 inches of compost to a 1 foot depth prior to planting. They will require regular irrigation which can easily be applied using a soaker hose.

Raspberries are susceptible to Verticillium wilt and Phytophthora root rot, so avoid planting them in areas where raspberries, strawberries, tomatoes, peppers, eggplant, potatoes, or cucurbits have been grown in the past four years. To reduce virus potential, do not plant raspberries next to blackberries and purchase only certified virus-free nursery stock.

In the home garden, raspberries are generally planted in a hedgerow. Place plants in a row 12 to 18 inches apart with at least 4 feet between rows. Bare root plants should be soaked in water for a few hours before planting. Plant them in shallow holes large enough to spread out the root mass and set the plant with the top root 1 to 2 inches below soil level. Water plants well after planting. Cut newly planted canes to 6 inches and apply frequent, light irrigation until the plants become established. Allow canes to fill in making the hedgerow. By hoeing or cultivating, routinely remove any canes (suckers) that come up outside of the hedgerow. For increased yields and reduced pest problems, keep the hedgerow narrow (about 8 to 12 inches wide).

When purchasing raspberry canes for planting, you will see descriptions for fall-bearing (primocane fruiting) and summer-bearing (floricane fruiting). Fall-bearing types are recommended for the mid- to high elevations of northern Arizona. These are easier to prune, do not require extensive trellising, and produce reliably each fall. The variety 'Heritage' does quite well in our climate.

Once established, raspberries need about 1 inch of water per week during blooming/fruiting. Depending on soil type, this may require irrigation once to twice a week. Raspberries work great with soaker hose or drip tape under a wood chip mulch.

Raspberries benefit from seasonal nitrogen fertilization. Fertilize all raspberries in the spring as growth starts and repeat in early June. For fall bearing cultivars, make a third application in August. Apply ½ to 1 cup of ammonium sulfate (21-0-0) or double this amount if using 10-10-10 per 10 feet of hedgerow. The fertilizer may be broadcast over the hedgerow area and watered in or placed in a band a foot to the side of the row. Raspberry pruning is simple with fall-bearing types – simply cut the canes to the ground each February or March (prior to initiation of growth).

Some insects and mites are pests of raspberries. These include grasshoppers, spider mites, plant bugs, and leaf rollers. Viruses can also infect raspberries over time. Simply remove the patch when the fruit becomes small and the patch is less productive. Start the new patch in another area of the garden using new, virus-free plants.

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