

Black Raspberries

Black Raspberry or *Rubus occidentalis* is a species of *Rubus* native to eastern North America. The common name Black Raspberry is shared with the closely related western American species *Rubus leucodermis*. Another common names for *Rubus occidentalis* are Blackcap, or Scotch Cap.



Rubus occidentalis is a deciduous shrub growing to 2-3 m tall, with thorny shoots. The leaves are pinnate, with five leaflets on leaves strong-growing stems in their first year, and three leaflets on leaves

on flowering branchlets. The round-shaped fruit is edible, and has a high content of anthocyanins and ellagic acid.

Black raspberries are high in anthocyanins. This has led to them being very useful as natural dyes and, since anthocyanins are powerful antioxidants, to a great deal of interest in them for their potential nutraceutical value. Extensive work has been ongoing at Ohio State University to evaluate their benefit for cancer treatment in mammalian test systems and the first clinical trials on patients with esophageal cancer.

It is also closely related to the European Red Raspberry (*Rubus idaeus*), sharing the distinctively white underside of the leaves and fruit that readily detaches from the carpel, but differing in the ripe fruit being black, and in the stems being more thorny. The black fruit makes them look like Blackberries, though this is only superficial, with the taste being unique and not like either red raspberry or blackberry. In much of the Mid-Atlantic United States, black raspberries are simply called *Blackberries*, even though they are not. Hybrids between red and black raspberries are common under the name purple raspberries; 'Brandywine', 'Royalty' and 'Estate' are examples of purple raspberry cultivars.

This native perennial shrub produces little-branched canes up to 6' long during the first year. These canes are initially erect, but they eventually arch sideways and downward – their tips sometimes reach the ground. First-year canes are vegetative and do not produce flowers and fruit. They are initially green, hairless, and glaucous, but later turn brown and woody during the winter. Scattered along the length of each cane are prickles that are short and curved.

BLACK RASPBERRY QUICK GUIDE

Latin Name

Rubus occidentalis

Type

Cane Fruit

Site and Soil

Sunny (part shade is OK).
Soil well drained, well-dug and composted before planting.

Plant to Harvest Time

2 years

How Many?

2kg (4.5lbs) per plant



During the second year, these canes develop short branches that terminate in erect cymes or short racemes of flowers. Along the length of these canes, there are alternate compound leaves. These compound leaves are usually trifoliate; rarely are they palmate with 5 leaflets. The leaflets are up to 3" long and 2" across. They are cordate-ovate or ovate in shape and doubly serrate along the margins; some leaflets may be shallowly cleft. The upper surface of each leaflet has strong pinnate venation, while its lower surface is white tomentose (covered with white hairs that are very short and appressed). The terminate leaflet has a short slender petiole, while the lateral leaflets are sessile, or nearly so. The flowers are bunched tightly together on the cymes/racemes.

Each flower is about ½" across, consisting of 5 white petals, 5 green sepals, and numerous stamens that surround the multiple green carpels and their styles. The petals are elliptic or oblong, while the sepals are triangular-shaped and spreading; the petals are about the same length as the sepals.

The blooming period occurs during the late spring or very early summer and lasts about 2-3 weeks. Each flower is replaced by a compound drupe that is ovoid and about 1/3" long when fully mature. This compound drupe is initially white, later becomes red, and finally turns black-purple when it is mature. Each drupe consists of multiple drupelets, each drupelet containing a single seed. The fleshy drupes are sweet and slightly tart in flavor; they detach cleanly and easily from their receptacles. The root system consists of a woody branching taproot. Vegetative offsets are often produced by the canes rooting at their tips.

Where To Grow Your Black Raspberry Cane

The preference is partial sun, moist to mesic conditions, and rich loamy soil. In areas that are too sunny and dry, the fruit may not develop properly without adequate rain. The canes also fail to set fruit if there is too much shade.



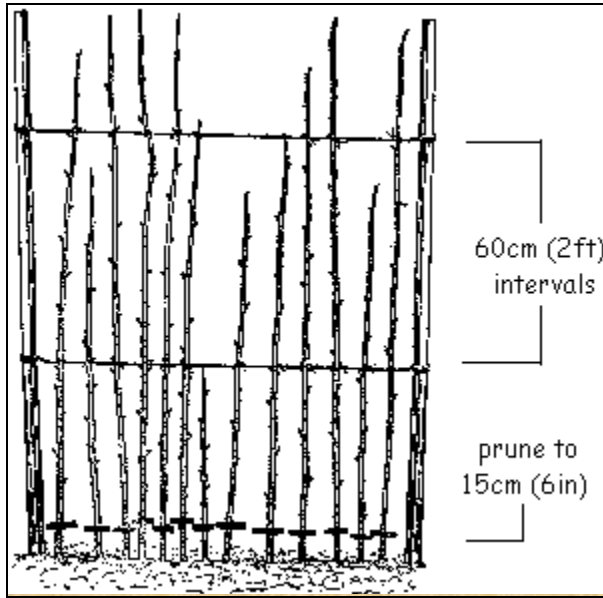
Range & Habitat

Black Raspberry is common in central and northern Illinois, but somewhat less common in the southern area of the state (see [Distribution Map](#)).

Habitats include openings in deciduous woodlands, woodland borders, savannas, thickets, fence rows, overgrown vacant lots, powerline clearances in wooded areas, and partially shaded areas along buildings. Black Raspberry adapts well to human-related disturbance; it also occurs in higher quality natural areas.

When and How To Plant Black Raspberries

October is the best month to plant raspberries, although planting can be done any time up to **March** if the weather and soil conditions are correct.



Most soils are suitable for raspberries, but a little preparation will pay rewards, especially because they will remain in the same position for 10 to 12 years. Dig a row 30cm (1ft) deep by 1m (3ft) wide, working in as much well rotted compost as possible. Where more than one row is being planted, allow 1.7m (5ft) between rows in order to let the roots spread freely and give room for you to harvest the crop in summer.

Summer fruiting raspberries (the most common for gardeners) will require support during the growing season. Put the support poles and wires in place after digging, but before planting.

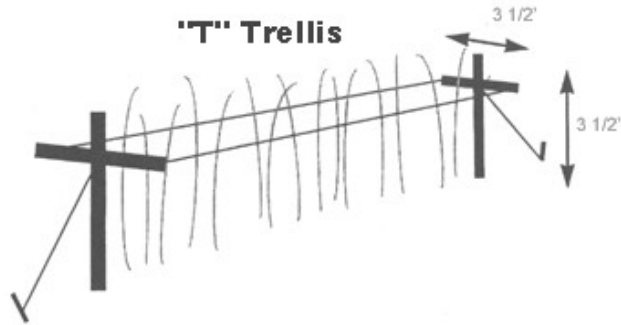
Secure two 2.2m (7ft) poles in the ground at either end of the row. Tie two or three horizontal wires at 60cm (2ft) intervals to the poles. Tie the plants loosely to the wires when they begin to grow.

Place the plants in the trench about 45cm (18in) apart, and cover the roots with soil 5cm (2in) above the existing soil mark on the stem. This will encourage more vigorous rooting. Work a handful of bonemeal per square metre (3ft) into the surface of the soil. Firm down the soil by lightly treading it down and water if the soil is not moist.

Finally, cut the plants to 15cm (6in) from the ground as shown in the diagram above. This may seem a bit drastic but if the correct pruning for the first year is not carried out, the plants will be seriously weakened.

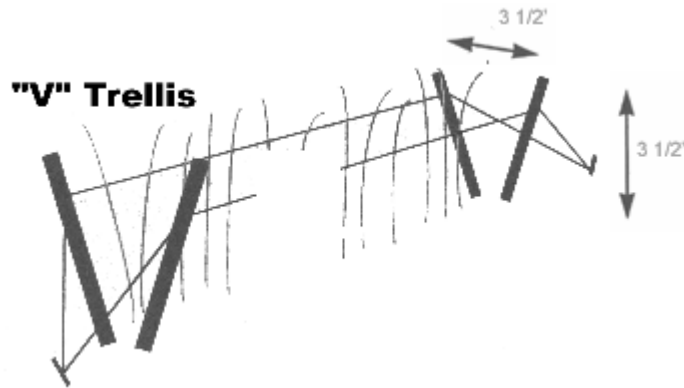
Autumn fruiting raspberries do not require strong supports, and therefore do not need to be planted in rows. Simply devote an area to them and let them grow as they want. The plants will mostly support themselves with only the odd bit of help from some sticks in strategic positions.

Figure 1.



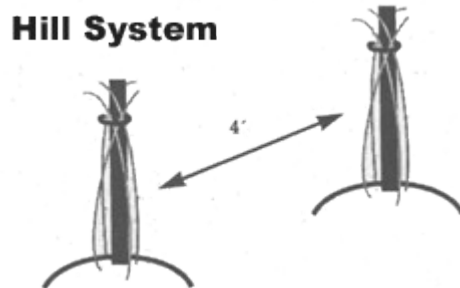
For the **T trellis**, sturdy posts should be set in the row with 3½-foot-long cross arms affixed at a height of 3½ to 4½ feet. The posts should be set at least two feet deep in the ground and anchored at each end of the row. Secure heavy-gauge wire along the length of the row on each side of the cross arms (Figure 1).

Figure 2.



For the **V trellis**, two posts should be set at each end of the row at about a 30-degree angle so that they are 3½ feet apart at a height of 3½ feet. Run the wire from each post at 3½ feet (Figure 2). After pruning, tie the fruiting canes to the wires on each side.

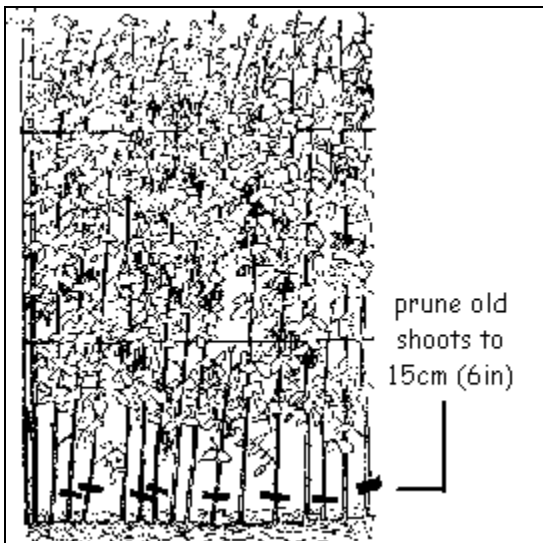
Figure 3.



For black and purple raspberries and blackberries grown using the **hill system**, set a sturdy post next to each plant (four feet apart in the row). A wire can be run along all the posts in the row, about 4½ feet above the ground. The fruiting branches of each plant should be spread along the wire, or the canes of each plant can simply be tied to the post next to them (Figure 3).

Care For Your Raspberries

Summer fruiting raspberry fruits grow from this year's shoots on last year's branches. The aim of the first year's pruning of raspberry canes is to encourage the plants to establish a good root system and prevent them from producing fruits. During June if any fruits appear, pinch them off. If you do this, you will not get any fruit the first summer but the root system will be encouraged to grow well.



For summer fruiting raspberries, prune from the second year onwards by cutting down all of the previous year's branches to 15cm (6in) from the ground as soon as possible after the fruit has been harvested - this will be around July time. Any weak looking new shoots should also be cut down. Tie in the remaining shoots to the support wires as they grow throughout the summer.

Autumn fruiting varieties produce fruit on branches grown this year, Pruning of these consists of cutting all growth to 15cm (6in) from the ground each February.

Pruning of summer fruiting raspberries

Autumn fruiting raspberries are very versatile because as well as pruning in the traditional manner in February, you can also have an earlier crop in early summer if you prune only the top 10 cm (6 in) from some of the canes. These canes will give a much earlier crop but at the same time allow the traditionally pruned canes to push through and crop in autumn.

The plants need a ready supply of water to produce good fruits. Depending on the soil type, watering throughout the summer on a weekly basis may well be needed. All raspberries will appreciate a layer of well rotted compost being applied to the soil in **February** each year. Because raspberry roots are very near the surface, do not dig the compost into the soil - this will damage the roots. In the absence of compost, scatter a handful of bone meal to each square metre (3ft).

Raspberry Picking or Harvesting

Raspberries which have been picked do not store well at all - they will only last a day or so. They are also easily damaged during picking and in storage. The best solution is to pick them on the day they are required and do not let them be crushed by their own

weight. The fruit does not all ripen at the same time, so harvesting can take place over several weeks.

Raspberries freeze very well. Initially freeze them spread out on a plate or dish to stop them all freezing into a mass. When frozen they can be put in plastic bags or containers and stored in the freezer for a couple of months.

New Raspberries For Free

New growths will spring up from around the base of existing raspberries during the summer.

These should be dug up including some parts of their root system in [October](#) and transplanted to their new place - the chances of success are very high.

Raspberry Diseases

It is recommended that raspberry canes are always sprayed with derris and copper fungicide at the beginning and end of [June](#) to prevent common raspberry diseases.

Raspberry Beetle is a pest where the beetle larvae feed on the berries, leading to badly formed fruit - it becomes dry and shriveled. The larvae fall off after a time, and can be seen on the soil at the base of the plant.

Spur Blight is a fungal infection and is best controlled by regular pruning of overcrowded branches and burning them. The first symptoms are purple areas appearing on the branches in August which quickly turn into silver patches marked with black fungus. If the infection is not prevented, spray with copper fungicide such as Bordeaux mixture (available from most garden centres).

Aphids (several types) often infect raspberries and the only successful course of action is to spray with a good insecticide immediately they are noticed. The varieties 'Malling Orion', 'Malling Delight' and 'Malling Leo' are surprisingly resistant to aphid attacks.

Birds love raspberries, and can be a real problem in some areas where they are numerous. Netting is the only real solution, although there are a variety of 'scaring' mechanisms available at garden centres.

Recommended Black 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.

Cumberland

(Black Raspberry) Developed in Pennsylvania, Cumberland is a midseason bearer. Large, round, firm, glossy black berries that are never seedy. Excellent, sweet, rich, delicious flavor. Good quality. Excellent for freezing, jam, jellies, syrup, preserves and pies. Vigorous, strong, upright, heavily rooted plants. Cumberland is the leading variety in the Central and Northern region.

Royalty

(Purple Raspberry) Developed at the Geneva Station in New York and introduced in 1982. Large, firm, round, very sweet purple berries. Royalty has a dual picking time. Full red stage with a real red raspberry flavor, or a later purple stage with a stronger, sweet purple raspberry flavor. High quality fruit that is good for fresh eating. The tartness of Royalty also make it good jams, jellies, and freezing. Vigorous, productive canes with only an occasional strong sucker. Royalty has multiple insect resistance, including immunity to the large Raspberry Aphid which transmit Mosaic Virus. Also resistant of raspberry fruit worms. Hardy is zone 4-8

Brandywine

(Purple Raspberry) Developed at the New York Fruit Testing Cooperative Association in Geneva and introduced in 1976. Large, conic, firm, round, glossy reddish purple berries. Tart, pleasant tangy flavor, highly aromatic. Good for fresh eating. Unsurpassed for jams, jellies, and preserves. Tall vigorous canes, very thorny, strong and erect. Brandywine will not sucker like red raspberries. Best if propagated by tipping or tissue culture. Very winter hardy. Grows well in zones 4-9.