

Grow mouth-watering raspberries in your backyard

Raspberries, also known as “brambles,” are wonderful plants for the home fruit garden. Easy to grow, a delight to the eye and palette, they can be a wonderful addition to your garden. If you’ve ever wanted to grow raspberries, but didn’t know where to start, this guide is just for you! Follow these step-by-step procedures for success.

Select your site and prepare the soil

In a perfect world, the planting site for brambles should be selected one to two years before planting. Whether you practice long-term planning or spur-of-the-moment planting, consider these factors when selecting your raspberry site:

- ❖ Soil fertility
- ❖ Moisture
- ❖ Topography
- ❖ Soil pH
- ❖ Exposure to light and wind

If your site selection is made well before planting, many factors can be altered and the site properly prepared to successfully grow bramble fruits.

Soil is extremely important in bramble production.

About 90 percent of a bramble root system is in the top 20" of soil where the roots must take up moisture and nutrients. Raspberries should be planted in deep, well drained, loamy soils with good water-holding capacities and high organic matter content. Sandy

loams can be successfully used for raspberry production if irrigated and mulched lightly to conserve soil moisture. If possible, soil preparations should begin at **least one** year before planting to build up soil organic matter and eliminate perennial weed problems.

Raspberry plants do not tolerate poorly drained soils.

Even temporarily water-saturated soil conditions can cause serious injury, including poor cane growth, increased incidence of soil-borne diseases and plant death. In addition to proper soil conditions, bramble plants require full exposure to sunlight and air movement, as well as adequate moisture and protection from wind and frost injury. The availability of water for irrigation should be an important consideration in site selection.

Good air movement through plantings is also necessary for brambles.

Poor air movement causes high humidity around the canes, favoring the development of many diseases such as spur blight, anthracnose, powdery mildew, and fruit rots. Good air movement in bramble plantings is desirable, but excessive wind exposure can be a problem. Cold, dry winds can increase winter injury. Windbreaks can provide some protection on exposed sites. The complete removal of problem perennials is necessary for successful bramble plant establishment.



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Test and correct for pH if necessary.

Soil acidity is another important factor, since brambles grow best in soil with a pH between 5.5 and 6.5. Most brambles do not grow well in soils with a pH below 5.5, and iron deficiency may occur in soils with a pH above 7.0. Therefore, soil should be tested and the pH corrected, if necessary.

Before planting, incorporate phosphorus (K) into the top 8" of the soil for better plant growth.

Plant in hills or rows

Dormant stock should be planted in the early spring after the danger of severe frost has passed. Plants should be kept moist during the planting operation. Fall planting is acceptable if plants are available.

Raspberries may be planted in hills or rows. In hills, plants should be spaced about 7' apart. In the row system, original plants should be spaced 2' apart in a line. These rows are spaced about 6'-8' apart. Set the plants 2" to 3" deeper than they were in the nursery, firm the soil around them and cut them back to 6" above the ground.

Raspberries spread quite rapidly and may present a confinement problem. To decrease this spread, a trench 2' deep should be dug around the planting area, walled with a double layer of 4 mil black polyethylene, and refilled. This will usually control the spread of the plants for several years. If plants appear outside the polyethylene, a second barrier should be constructed. This process may be repeated as needed.

Fertilize twice per year

Two fertilizer applications should be done per year. Apply one application in March and the other in May as band applications in the row. Generally, 1-2 pounds

of 10-10-10 per 100 square feet of row should be used. Fertilizers should not be applied to raspberries immediately after they are planted; root systems may be burned.

Harvest every few days

Raspberries are highly perishable and should be harvested every few days. The fruit is ready to pick when it separates easily from the "core" without crumbling. If the berries are harvested during cool, dry weather, they may be kept in the refrigerator for 3 to 4 days. If they are harvested during hot, wet or damp weather, they may mold within 24-36 hours after harvest.

Recommended Cultivars

A cultivar should be selected for its intended use (fresh, eating or freezing), hardiness, productivity, relative disease resistance, fruit quality and time of ripening. Currently, no bramble cultivar has all these desirable features, so gardeners generally select those that have the fewest faults on selected sites.

Raspberries are self-fruitful, so plantings of different cultivars are not necessary to ensure fruiting. Bees are the primary transporters of pollen.

Summer red raspberries

Boyne-- Plants are spiny and produce many suckers. Fruit ripens early and are small to medium in size and somewhat dark and soft, but have fair flavor and good freezing quality. Plants have excellent winter hardiness but are susceptible to anthracnose. Typically, *Boyne* yields very well and is recommended for colder climates.

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Titan Red Raspberry-Photo courtesy of Cornell University

Reveille-- Plants are vigorous and high yielding, producing many suckers. Fruits ripen early and are medium to large with good flavor, but very soft. Fruit has poor shipping and freezing quality and is recommended for pick-your-own markets. It is very hardy and recommended for colder climates.

Taylor-- Plants are vigorous, with some spines, and very susceptible to mosaic virus, leaf spot, and fungal diseases. Fruit ripens late and is medium to large with excellent flavor, good color, and firmness. It is moderately hardy.

Titan-- The plants produce large canes with very few spines. Suckers emerge mostly from the crown so it is slow to spread. Plants are susceptible to crown gall and Phytophthora root rot but are extremely productive. Fruits ripen mid to late season and are extremely large and dull red with mild flavor. Berries are difficult to pick unless fully ripe. Not very hardy.

Summer purple raspberries

Royalty-- This cultivar is considered the best purple raspberry. Canes are tall and vigorous, with thorns, and are extremely productive. Royalty is immune to the large raspberry aphid, which decreases the probability of mosaic virus infection, but is susceptible to crown gall. Fruits ripen late and are large and reddish-purple. Berries tend to be soft but sweet and flavorful when eaten fresh.

Everbearing red raspberries

In describing everbearing red raspberries, the plant's degree of hardiness is not included. The recommended cultivation of primocane-fruiting raspberries involves cutting canes to the ground at the end of the growing season, so winter hardiness is not a factor. However, since the primocane crop ripens in the fall, the length of the growing season is an important factor.

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'Royalty' purple raspberry- Purple raspberries are the result of a cross between red and black raspberries.-Photo courtesy of Cornell University

Heritage-- These tall, rugged canes have prominent thorns and are very high yielding. The primocane crop ripens relatively late. Fruit is medium sized and has good color and flavor, firmness, and good freezing quality. Due to its late ripening, this cultivar is not recommended for regions with cool summers or a short growing season with frost before September 30.

Autumn Bliss -- Produces earlier than 'Heritage'. This fall-bearing raspberry provides fruit with good flavor.

Redwing-- Canes are not vigorous and have moderate spines, but are moderately productive. The primocane crop ripens earlier than Heritage in some years and sites. Fruit is large and flavor is good, but fruits tend to be soft. It is suggested for trial in colder regions.

Ruby-- Plants are moderately vigorous with good productivity. The primocane ripens slightly ahead of Heritage. The fruit is large, but flavor is mild. Ruby is susceptible to root rot. The cultivar is suggested for fresh market, or shipping in areas with longer growing seasons.

Black raspberries

Black raspberries may winter kill to the snow line if temperatures drop to -5°F in combination with dry winds. They are also quite susceptible to virus infections, Verticillium, and rusts, and it is difficult to remove all viruses from the planting stock.

Allen -- Plants are vigorous and moderately high-yielding. Fruit ripens early to mid-season and very uniformly so the harvest period is short. Fruits are among the largest and most attractive of the black raspberries, but flavor is mild. Allen is a moderately hardy cultivar.

Bristol-- Plants are vigorous and high yielding. Fruit ripens early and is medium to large and firm with excellent flavor. Bristol is hardy but should not be grown north of Pennsylvania without testing on the site.

Jewel-- Plants are vigorous, erect and productive. This cultivar appears to be more disease resistant than others. Ripening in mid-season, the fruit is firm, glossy and flavorful. This is a hardy black raspberry cultivar.

Pruning and training

Raspberry canes are biennial, though their roots are perennial. The canes will die after 2 years of growth. There are 2 types of raspberries: the June-bearing and the fall or everbearing type.

❖ Canes of the June-bearing grow and set their flower buds in the early fall of the first year. The following summer, these buds produce fruit and the canes die.

❖ The fall bearing canes produce two crops. They grow in the spring and produce their first crop in the fall of the first year on the tip portion of the new canes. The lower portions of the cane then overwinter, bear the second crop the following summer, and die.

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Photo courtesy of Cornell University

To prevent overcrowding and a higher incidence of pest infestation, all weak and dead canes should be removed immediately after harvest or early the following spring. All spring pruning should be done after the danger of severe frost has passed but before the buds have begun to swell. If necessary to facilitate better management, up to 1/4 of the total length of each new cane may be removed.

For best production, prune each cane to carry about 15 buds. Thin out weak canes (less than 3/8 inch in **base** diameter) and remove fruited canes if this was not done at harvest. Remaining canes should be thinned to stand about 6" to 8" apart (row system) or about 6 to 8 canes per hill. In the hill system, a sturdy 7' stake should be driven 2' to 3' into the ground about 1' from each hill early in the second year and the tops of the canes tied firmly to it after pruning.

Raspberry Problems

Integrated Pest Management (IPM) Considerations

IPM is a common sense approach to pest control and plant care. It uses a number of measures to prevent, control or reduce plant problems. These include: use of resistant plant varieties, proper plant selection and placement, good aftercare, use of biological or mechanical controls. Pesticides are typically used as a last resort; although an important tool in the IPM tool kit. When selecting a pesticide, consider the following points: pick one that is least toxic, consider humans, pets and natural predators. Make the application when it will be most effective in preventing, controlling or reducing the problem; as the saying goes 'timing is everything'.

Accurate diagnosis of a problem is key when determining control measures to employ. Bring a representative sample of the problem to your local Cooperative Extension office or garden center for diagnosis and recommendation. Pesticide laws vary from state to state; seek the advice of a professional.

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'Heritage' red raspberry-Photo courtesy of Cornell University

Diseases

Anthracnose or cane blight

Prune out and discard fruiting canes after harvest. Prune in early spring to thin the plants or plantings and allow air to circulate and fruit and leaves to dry off quickly after rains. Eliminate weeds around the plants to improve air circulation. Practice plant sanitation - when the plants are not wet, carefully remove and discard infected branches or fruit. Dip pruning shears in rubbing alcohol between cuts to disinfect them. Avoid wounding; make all pruning or tipping cuts during periods of dry weather (at least 3-4 days before next expected rain).

Fruit rots

Harvest regularly. Remove and dispose of rotten or severely damaged fruit throughout the season. Prune in early spring to thin the plants or plantings; allow air to circulate and fruit and leaves to dry off quickly after rains. If wet weather persists, a fungicide may be necessary. Consult your local garden center or Cooperative Extension office for recommendations.

Orange rust (black raspberries)

Rogue plants and wild brambles nearby. Remove and dispose of entire infected plant and surrounding soil or soil clinging to the roots.

Phytophthora root rot

Plant raspberries in well-drained soil. Rogue severely infected plants (remove and dispose of entire infected plant and surrounding soil or soil clinging to the roots.)

Spur blight (red raspberries)

Prune out and discard fruiting canes after harvest. Prune in early spring to thin the plants or plantings and allow air to circulate and fruit and leaves to dry off

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Verticillium wilt

Mostly associated with black raspberries, remove and discard entire infected plant and surrounding soil or soil clinging to the roots. Set new plants in a part of the garden different from where they grew the previous year. If that is not possible, remove infested soil and replace it with fresh soil. Do not plant black raspberries in a site where potatoes, tomatoes, eggplant, strawberry, cherry, squash or cucumber have been grown in past three years. Weeds such as nightshade and lambsquarters are also hosts for disease and should be controlled.

Viral diseases

Plant only virus-free stock from nurseries. Remove and dispose of entire infected plant and surrounding soil or soil clinging to the roots. Rogue wild brambles nearby. Control aphids, which spread the disease.

Insects

Raspberry crown borer

In spring, cut all weakened and infected canes close to the crown. In mid-spring, break over and crush old stubs; eradicate all wild brambles in the area.

Tarnished plant bug

Keep planting and surrounding areas free of weeds.

Raspberry fruitworm and sawfly

Consult your local Cooperative Extension office or garden center for recommendations of an insecticide to use when blossom buds appear and just before blossoms open.

Sap beetle

Promptly harvest ripe berries; remove and dispose of rotten or severely damaged fruit throughout the season. Do not leave overripe fruit in the garden because it attracts beetles.

Two-spotted spider mite

Consult your local Cooperative Extension office or garden center for a recommended miticide to use on raspberries.

Shopping List/Notes

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About Your Expert

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PlantAmerica Horticulturist Donna W. Moramarco (a.k.a. "Donna in the Garden") has been helping gardeners solve problems and achieve their dreams for over two decades. Donna has degrees in horticulture and education plus over 20 years as a Cornell University extension horticulturist.