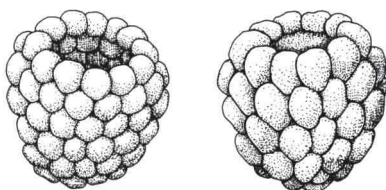




GROWING BLACKBERRIES IN YOUR HOME GARDEN

B.C. STRIK

It's easy to tell a blackberry fruit from a raspberry fruit.



In a raspberry far left, the fruit receptacle (core of the berry) remains on the plant when you pick the fruit.

In a blackberry (left), the receptacle is part of the fruit that you eat; the fruit has no opening as raspberry fruit does.

There are two names for a blackberry cane. The name depends on whether the cane is in its first year of growth or second.

Primocanes: first year of growth; no fruit is produced on this cane.

Floricanes: second year of growth; these produce fruit on branches.

There are two types of blackberries, erect and trailing. The primary difference is the growth habit of their canes. Erect blackberry types have stiff, arching canes that are somewhat self-supporting.

Trailing blackberries, also called dewberries in the East, have canes that are not self-supporting; they include the Marionberry, Boysenberry, Loganberry, Youngberry, and Thornless Evergreen.

Erect blackberries are more cold-hardy than trailing types. However, you can grow trailing types in colder areas if you leave the canes on the ground and mulch them in winter.

All of these are species and hybrids of the genus *Rubus*, and all have similar fruiting habits.

All blackberry plants are perennial, with roots living for many years. The canes are biennial; they grow one year (*primocanes*) and produce fruit the following year (*floricanes*). The floricanes die after they have fruited. New canes are produced each year from roots or the base of old canes. The floricanes need to be removed each year after harvest, but the new primocanes, which will fruit the following year, need to be thinned and trained.

SELECTING A SITE

Blackberries produce best in full sun, but they can tolerate partial shade. However, plants do not grow or produce well in heavy shade.

It's best to avoid selecting a site where potatoes, tomatoes, peppers, eggplant, other caneberries, or strawberries have grown within the past 3 years.

Blackberries are sensitive to wet soils. Therefore, drainage is an important factor to

Why is it important to rotate these crops?

Potatoes, tomatoes, peppers, eggplant, caneberries (blackberries and raspberries), and strawberries are susceptible to, or affected by, many of the same insects and diseases. So it's important to rotate these crops from one site to another.

Blackberry plantings aren't rotated often, because they live for a long time. However, it's best to plant blackberries in a site that hasn't been planted to any of these crops in the past 3 years. If you don't do this, fungus diseases and insect pests may still be present in the soil and infect the new planting.

consider when you're selecting a site. If blackberry plants are in waterlogged soils for more than a few days at a time, they normally die a slow death from lack of aeration (oxygen) or from subsequent attack by root diseases. Plants do best in a well-drained, fertile, loam soil with moderate water holding capacity. Avoid heavy clay or sandy soils.

Sometimes you can improve a less desirable site by tiling, increasing organic matter content, and building raised beds (see "Preparing the soil").

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SELECTING A CULTIVAR

Although there are few differences in the cultural requirements of the various types of blackberries, cultivars (varieties) differ greatly in fruit size, appearance, and flavor. In Oregon, blackberries ripen from mid-June to mid-September, depending on the cultivar. All types are self-fruitful, so you need only one cultivar for pollination or fruit production.

Cultivars differ in growth habit (trailing vs. erect, and vigor) and fruit characteristics. If you live in a region of the State with very cold winter temperatures, you'll need to consider other factors such as coldhardiness.

Erect blackberries generally are more cold-hardy than trailing types, although some cultural practices can decrease the risk of winter injury to the canes of trailing types.

What if you find a cultivar that's not on this list?

Find out some of the plant growth and fruit characteristics:

- What type is it (erect or trailing)?
- What time of year does it fruit?
- Does the description the nursery has indicate the plant is susceptible to any diseases such as root rot or viruses?
- Are the plants hardy?
- Are the canes thorny?
- What is the fruit like—is it large, firm, and does it have good flavor, texture, and color?

Remember: If you purchase a cultivar that's not on this list, it probably hasn't been extensively tested in Oregon. It's best to *try* a few plants in your garden first, to see if they grow well and if you like the fruit.

Erect cultivars

Cherokee. Midseason; berries medium large, black, firm, excellent flavor; bushes vigorous, thorny.

Cheyenne. Early; berries very large, firm, attractive, good flavor; bushes vigorous, moderately thorny, hardy.

Shawnee. Midseason; long fruiting season; berries very large, shiny black, medium firm, good flavor; bushes vigorous, thorny, very productive.

Trailing cultivars

Black Satin. Midseason, earlier than Hull; berries large, skin black, loses glossiness at maturity, good flavor; bushes semierect, thornless, hardy, vigorous.

Boysen. Midseason; berries very large, deep maroon, rather soft, excellent distinct flavor; canes thorny.

Chehalem. Midseason; berries small to medium, bright black, very firm, excellent flavor.

Chester. Late; berries medium, black, good flavor; canes thornless, semierect.

Hull Thornless. Midseason to late; berries large, firm, good flavor and keeping quality; canes thornless, vigorous, productive; canes semierect, hardy.

Kotata. Midseason; berries large, glossy black, firm, good flavor; canes thorny, vigorous, productive.

Logan. Early; berries medium, long, dark red, soft, good flavor; thornless type available.

Marion. Midseason (early July to early August); berries large, bright black, medium firm, excellent flavor; plants produce fewer and longer canes than Boysenberry, thorny, productive.

Ollalie. Midseason; berries medium to large, bright black, firm, good shelf life; plants vigorous, productive, not hardy outside the coastal areas.

Silvan. Early to midseason; berries large, black, medium firm, excellent flavor; canes thorny, very productive.

Sunberry. Early; berries medium, dark red, poor to good flavor; canes thorny.

Tayberry. Early; berries large, medium red, soft, flavor distinctive, good; canes thorny.

Thornless Evergreen. Late (mid-August to mid-September); berries medium, dark black, firm, mild flavor; very productive; suckers from roots may be thorny.

Tummelberry. Early; berries medium to large, firm, poor to good flavor; canes thorny.

Waldo. Midseason (about 7 days later than Marion); berries medium, glossy black, firm, small drupelets, good, mild flavor; canes thornless, less vigorous than Marion (plant at 4 feet apart in the row), productive.

Drupelets. The blackberry fruit is made up of very many drupelets. Each one contains a seed.

Young. Midseason; berries very large, dark red or maroon, very sweet, excellent flavor; superior to Logan for jam and freezing; canes are prone to winter injury in colder regions.

ESTABLISHING YOUR PLANTING

Preparing the soil. You should be able to keep your blackberry planting productive for 15 to 20 years, so choose and prepare a site carefully before you establish the planting.

Eliminate all perennial weeds. Don't let weeds go to seed!

Almost any soil type is suitable for blackberries as long as the drainage is good. The Thornless Evergreen cultivar will tolerate heavy, more poorly drained soils.

A good supply of organic matter in the soil improves aeration and drainage, and it increases water-holding capacity. You may apply organic matter the summer or fall before you plant; manure applied at 2 to 3 bushels per 100 ft² is a good source. You can also use decomposed (rotted) compost, leaves, chopped hay or straw, peat moss, sawdust, etc.

Use only materials that you think are free from insects and weed seeds. Dig, plow, or rototill the material into the soil to ensure that it will be well decomposed by planting time. If you incorporate large amounts of non-decomposed material into the soil, add ammonium nitrate (33% nitrogen) at 1 lb per 100 ft² to aid in decomposition.

If your garden is slow to drain, or if the water table is high, you can improve the situation by installing a drain tile at least 25 inches deep near the row, or by planting in raised beds. Mix organic matter and fertilizer (see below) with the soil.

Blackberries grow best when the soil pH is between 5.5 and 7. Test the soil pH the year before you plant. If the soil is too acidic (pH below 5.5), add lime to the soil as recommended by the soil analysis.

Planting. It's best to purchase certified disease-free plants from a nursery. Plants from your neighbor's planting could introduce root rot organisms or viruses into your garden.

You can propagate plants of cultivars that produce suckers by transplanting rooted suckers. Propagate trailing cultivars, which produce fewer root suckers, by tip layering. Cover tips of canes with soil in the late summer or early fall. Cut rooted tips from the cane and transplant them the following spring.

If your soil is low in fertility, incorporate 1 lb of 5-10-5 (or equivalent) per 100 ft²; rototill this into the soil before you plant.

Plant as early as you can work the soil in the spring. If you can't plant immediately, heel bare-rooted plants into the soil to prevent the

roots from drying. Dig a shallow hole, large enough to accommodate the roots. Prune off any damaged root parts. Spread the root mass and set the plant at about the same depth as it was in the nursery. Cover roots with soil and press firmly to remove air pockets.

Water the plants to settle the soil.

Cut the cane(s) on newly set plants to 6 inches at planting time (this may have been done by the nursery). Don't produce fruit the first season—this will weaken the plants. Be patient! If you wait, you'll get more fruit the year after you plant.

Spacing. Space trailing cultivars 4 to 10 feet apart in the row, depending on cultivar, and erect cultivars 4 to 6 feet apart in the row. Leave 8 to 10 feet between rows.

Erect cultivars tend to produce suckers from the roots and will fill in the row to form a hedgerow; you can also maintain a planting in a "hill system" by removing suckers that develop between plants.

Trailing cultivars tend to produce few root suckers, but they need more space because of their long canes.

Trellis. It's advisable to trellis all blackberries. You can grow erect blackberries without support, but trellises keep the planting neater and make both cultivation and harvesting easier.

A simple trellis system of wire supports strung between posts is preferred. You may use either wood or metal posts for the trellis. Treat wood posts with a copper-based preservative. Use heavy end posts with lighter posts spaced 20 feet apart in the row.

About 4½ to 6 feet of post should show above ground. A two-wire (12-gauge or heavier) system with the top wire at 5 feet and the other 18 inches lower is common for trailing types (figure 1).

If you're growing only a few plants, train canes to stakes placed beside each plant. Wrap and tie the canes spirally around the stake. Training the canes to a multiple-wire trellis (figure 2) or an existing fence are other options.

CARE OF ESTABLISHED PLANTINGS

Fertilizing. Apply fertilizer in early spring when new growth is starting. You can apply fertilizer as a broadcast application (spread over the surface of the soil in the row) or as a band application in a shallow trench 1 foot on each side of the row and 3 to 4 inches deep.

Apply 5 to 6 lb of 10-20-20 fertilizer per 100 feet of row (or equivalent rate of a similar fertilizer). If plants lack vigor, apply an additional 1 to 1½ lb of ammonium nitrate (33% nitrogen) per 100 feet of row at bloom.

If you use manure, apply it in the late fall or early winter. Reduce the rate of nitrogen fertilizer applied by one-half. Manure applied early in the fall may cause blackberries to grow later in the season and make them more susceptible to winter injury.

Cultivation is necessary to control weeds and primocanes that develop between plants and in the row aisles. Cultivate no deeper than 1 to 2 inches to prevent root damage. Check with your county office of the OSU Extension Service or a garden supply store for herbicides registered for blackberries in the home garden.

You may apply a mulch once plants become established. Sawdust (*not cedar*) or bark mulch can be applied in a 3-inch layer over the row. Additional nitrogen may be required to assist in breakdown of organic mulches.

A good guide for fertilization is to observe plant growth. Leaves should be a healthy green; a pale green or yellow color may indicate nitrogen deficiency. Canes should grow well and be stout rather than spindly.

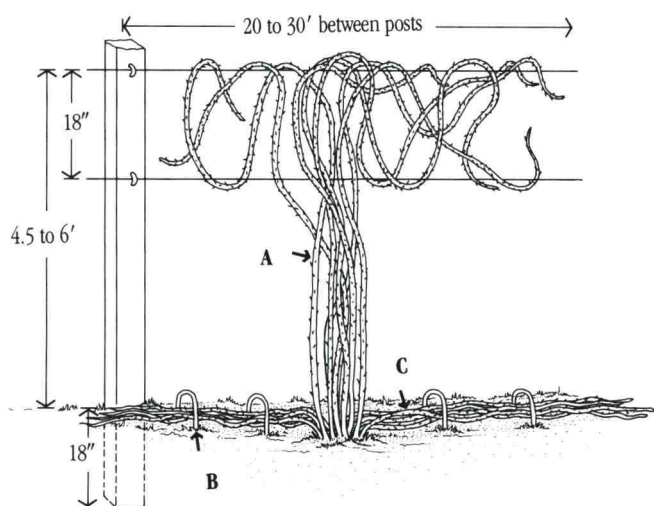


Figure 1. — Two-wire trellis for trailing blackberries, in the growing season (leaves not drawn for clarity): **A.** Canes that just bore fruit and will die. **B.** Wire guide for new cane growth. **C.** New growth that will bear fruit the following year.

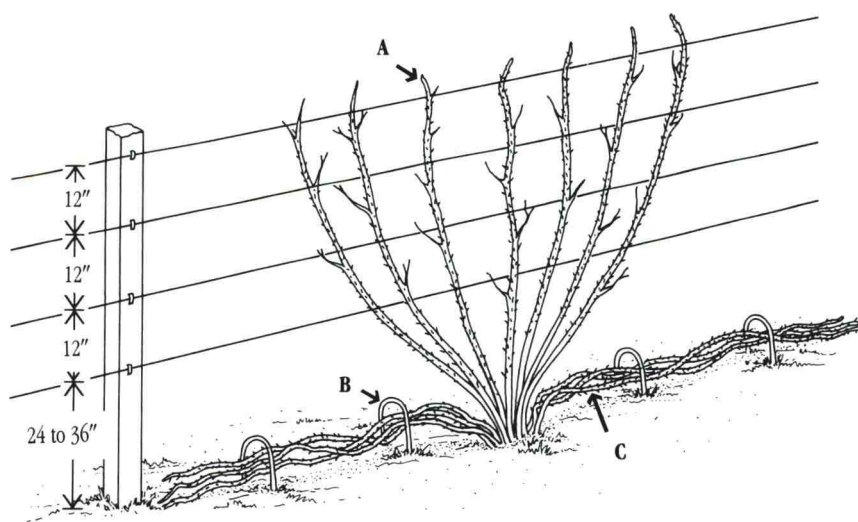


Figure 2. — Multiple-wire trellis for trailing blackberries, in the growing season (leaves not drawn for clarity): **A.** Canes that just bore fruit and will die. **B.** Wire guide for new cane growth. **C.** New growth that will bear fruit the following year.

Watering. Blackberry plants require about 1 inch of water per week from mid-June through harvest. When rainfall doesn't provide this amount, you should irrigate. Extremely warm and windy conditions make greater amounts of water necessary.

PRUNING AND TRAINING

How you should prune erect and trailing blackberries varies slightly.

All cultivars require very little pruning or training during the planting year.

Erect cultivars. In the summer, remove the top 1 to 2 inches of new primocanes when they're 3 feet tall. This causes canes to branch, and these branches will produce fruit the next year. After harvest, remove the floricanes; these 2-year-old canes will die by the end of the growing season.

In late winter, when plants are dormant, thin primocanes to three or four of the

Why should you thin out canes from a hill or hedgerow and shorten lateral branches?

If you prevent canes from becoming too dense or crowded in the hill or hedgerow, fruit quality will be better, and you may reduce the amount of fruit rot. In addition, fruit from pruned laterals is larger and of better quality than that from unpruned laterals.

strongest canes per plant. If you have plants growing in a hedgerow, thin to one large cane every 5 inches in the row. Prune lateral branches on these canes to 12 to 18 inches long.

If you grow erect cultivars in a hedgerow, a trellis consisting of two wires, one on each side of the row, at a height of 3 to 5 feet will prevent canes from bending into the aisles.

Differences in pruning and training between erect and trailing blackberries:

- Top the primocanes of erect cultivars during the summer.
- Don't top trailing cultivars during the growing season.
- Shorten the laterals of erect cultivars.
- In trailing blackberries, laterals don't need to be pruned.
- If you live in a region with extremely cold winter temperatures, protect canes of trailing cultivars from winter injury by leaving them on the ground and covering them with mulch; train canes on the trellis once risk of cold temperatures has passed.
- Erect cultivars are usually more winter-hardy than trailing cultivars; they don't need to be protected in the winter.

Trailing cultivars. In most trailing types, new primocanes are produced in the spring at the crown of the plant. After growing upright for a time, these canes turn down and grow along the ground. To avoid injury to new primocanes, keep them trained in a narrow row beneath the bearing canes as shown in figures 1 and 2.

When harvest is over, remove the floricanes. Thin primocanes, leaving 6 to 12 of the sturdiest canes on each plant to bear next season. If you live in western Oregon, train these canes up onto the trellis right after harvest. However, in eastern Oregon, leave them on the ground and mulch with straw after the first hard frost.

Trellis the canes once the danger of severe cold temperatures has passed; training canes during cold temperatures is not advised — brittle canes break easily.

Wrap the canes, one or two at a time, in a spiral around the wires of the trellis, working each way from the plant (figure 1). Wrap the longer laterals the same as main canes. Prune shorter, broken, or kinked laterals to leave a stub of 8 to 10 inches. Don't leave any stubbed laterals on the basal 18 inches of main canes.

Don't top the primocanes of trailing berries during the growing season.

HARVEST

Pick berries every 3 to 6 days, depending on weather and cultivar. When the berries are ripe, you can pick them quite easily. Use a breaking motion rather than pulling. Pick into a shallow container to prevent fruit from crushing.

To extend shelf life, avoid picking when berries are wet and refrigerate as soon as possible.

PESTS

If any diseases or insect pests become a problem — such as leaf and cane spot, blackberry rust, fruit rot, redberry mite, and root weevils — check with your county office of the OSU Extension Service for control recommendations.

Use pesticides safely!

- **Wear** protective clothing and safety devices as recommended on the label.
- **Bathe or shower** after each use.
- **Read** the pesticide label — even if you've used the pesticide before.
- **Follow closely** the instructions on the label (and any other directions you have).
- **Be cautious** when you apply pesticides. **Know** your legal responsibility as a pesticide applicator. You may be liable for injury or damage resulting from pesticide use.



This publication replaces EC 765. Trade-name cultivars are listed as illustrations only. The OSU Extension Service does not endorse any listed cultivar or intend any discrimination against others not listed.

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