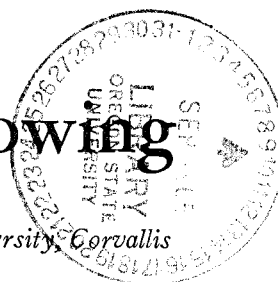


# Black Raspberry Growing

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Black raspberries ("blackcaps") are borne in clusters. The fruit is deep purple to nearly black in color and is not as juicy as red raspberries.

Oregon is one of the leading black raspberry states, with 3,000 to 4,000 acres in recent years. Clackamas County leads the production, with smaller acreage in Multnomah, Washington, Yamhill, Polk, Marion, Linn, Benton, and Lane counties.

Black raspberries are used mainly for jams, jellies, and for flavoring, so larger plantings normally are located near freezing or dehydrating plants. Most of the crop is marketed outside of Oregon and is used mainly in the eastern states.

## Locating the planting

Black raspberries do best in well-drained, loose-textured soils. The crop needs good drainage and moisture during the growing and ripening season. Most plantings are located on red soil areas in the northern part of the Willamette Valley, or on the lower foothills of the Cascade Range. Production costs for blackcaps usually are lower than for red raspberries. They need good fertility to produce a crop that will attract pickers and show a profit.

Raspberries are susceptible to crown gall and verticillium wilt. Crown gall often is found on the roots of orchard trees and cane fruits, so allow several years before planting on land where diseased crops of this kind have grown. Verticillium wilt often is found on the roots of tomatoes, potatoes, and eggplant, so raspberries should not follow these crops immediately.

Cane fruits are often attacked by the strawberry crown borer, so they should not directly follow an old strawberry planting. Hard-to-control weeds and grasses should be killed before planting raspberries.

Black raspberries can be intercropped in young orchards if the land is fertile. As the orchard trees become large and start to bear, remove the berries to avoid competition.

## Preparing the soil

Most land available for raspberries has been in cultivation for a long time and may have poor physical structure, with organic matter depleted.

Organic matter is essential to a fertile soil used for raspberry production. Both major and minor plant food elements become more available in a soil with high organic matter content.

Barneyard manure is an excellent source of organic matter, but it is hard to obtain in quantity.

Cover crops will *maintain* organic matter content, but they will not increase the amount in the soil greatly. Even so, two or three years of cover crops will improve the physical condition of the soil and aid in controlling weeds. Oats, barley, and rye are good cover crops. Application of 300 to 400 pounds of ammonium sulfate or ammonium nitrate will aid in a rapid breakdown of these materials and add to the soil fertility.

Hay or pasture land usually makes good berry soil. Allow a year between breaking up sod and planting berries to insure a good breakdown of the grass roots. Plow in the fall. On rolling land, plant an annual cover crop like oats, barley, or rye to help prevent winter erosion. Work this down in the early spring and prepare the soil for planting.

## Planting stock

Munger is the main variety of black raspberry grown in Oregon. Bristol, Dundee, Evans, and Morrison also are adaptable. Selected planting stock can be obtained from growers on the Oregon Register of Merit list. Registered plantings are inspected and rogued several times each year prior to the fall propagation season.

Tips of strong plants are covered with 2 to 3 inches of soil in September and October. These root and make top-quality planting stock the following spring.

## Planting operations

Normally, plants are dug in the early spring, leaving 8 to 10 inches of the original cane attached. Plants are hardy and will stand handling without damage until the new shoots start growth. The section of old cane serves as a handle to be used in handling and setting out. Then it can be cut back to only enough length to mark the row.

Plants dug early but not planted at once can be healed in close together in a furrow. Cover the roots with soil and firm it to prevent drying out. Plants can be held in cold storage (31 to 33 degrees F.) in a moist pack. Damp moss, sawdust, or peat moss make a good moist pack.

Planting in rows allows cultivation in one direction. Set plants from 3 to 6 feet apart, depending on moisture-holding capacity of the soil and the method of training. Use the closer spacing only where moisture supply will be adequate. Set rows 8 to 12 feet apart, depending on the equipment being used to care for the planting. Plan the spacing to avoid tractor and equipment injury to roots and canes during maintenance operations.



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Set plants as early in the spring as the soil can be worked. Most planting is done with a shovel, spreading the roots out and firming the soil against them in order to avoid air pockets. Set the plants about one inch deeper than they were originally growing.

In large fields, plants may be set along one side of a furrow. Spread roots out and draw soil over them and firm it, so as to leave no air pockets to dry out.

### **Cultivation and weed control**

Cultivation is primarily for weed control, since weeds compete for moisture and fertility. Raspberry roots grow near the surface, so cultivation should be shallow.

In new plantings, annual weeds can be controlled with Simazine. In established plantings, Diuron (Karmex), heavier applications of Simazine, CIPC or DNBP (Dinitro general) plus CIPC can be used to control weeds. To avoid build-up of any chemical, it is usually a good idea to alternate, using one material one year and another the next year.

While moisture is necessary to good growth of black raspberries, little irrigation is done on commercial plantings. Moisture is maintained by use of moisture-retentive soils and proper handling of them.

### **Soil fertility**

Start with a good soil and maintain its fertility. If available, fall application of 10 to 15 tons of manure will help. It is hard to use cover crops for maintaining fertility because of the arching habit of the black raspberry plant.

Black raspberries start setting buds for next year's crop in November and later, so little development takes place until spring. Any added fertilizer should be placed in the early spring. While nitrogen gives the most visible response, there is evidence that a complete fertilizer is best. A common application is 800 to 1,000 pounds of 5-10-5 fertilizer per acre. The potash should be in the sulfate or nitrate form, since muriate of potash is not good for raspberries. Soil tests are helpful in determining materials and amounts to use, especially where growth and production are not good.

The area 18 to 24 inches from the base of the plant contains the most roots, so fertilizer should be applied in this area.

### **Pruning**

Black raspberry plants produce from 3 to 12 arching canes. By pinching these canes back, you get many side branches that will produce fruit. Where no support is used, a low heading at about 15 to 17 inches will force out a strong low plant. This may require several trips over the field, cutting or pinching off 3 to 4 inches of the tender tops as they reach the desired height.

Some growers prefer high heading at 30 to 42 inches to make picking easier. Heading is done just before berry harvest. These tall plants usually are supported with a strong stake for each plant or by wire trellises, with posts set every 20 to 30 feet.

Remove old fruiting canes and cut back new branch canes or laterals in January, February, and March. The length to leave depends on vigor of the plants. Strong laterals may be left 12 to 18 inches long, while weak ones may be cut to 3 to 4 inches.

Pruning wood can be left on the ground between the rows if a heavy disc or rotary tiller is available to break it up and work it into the surface soil.

### **Harvesting**

Harvest starts in late June and extends into late July. Altitude affects ripening time. Valley plantings ripen first, and those in the hills later.

Black raspberries do not deteriorate as fast as red raspberries, and often the crop can be harvested in two or three pickings.

Several types of mechanical pickers have been developed. These range from simple catching frames and a flail that shakes the plants to large machines that employ some type of plant agitation. These large machines pick fast, but they are expensive and require large fields with plenty of turning room. The picking cost is relatively low, and some growers with large acreages feel that machines are a wise investment.

### **Disease and insects**

The main fungus diseases are taken care of by use of clean planting stock, clean soil, and a dormant lime sulfur spray at 1 part in 10 strength.

Weevils, mites, and crown borers are the main insect pests. Control weevils with a preplant treatment of the soil with aldrin, chlordane, dieldrin, or heptachlor.

Mites are controlled by a delayed dormant lime sulfur spray of 8 to 92 gallons of water. Use when laterals are 2 to 6 inches long.

Crown borer control requires an early March drench of Diazinon or Guthion at 2 pounds per acre in 200 to 300 gallons of water.

Your county Extension agent can supply additional information on specific insect or disease problems.

### **Use pesticides safely**

Use only recommended pesticides at approved rates. Observe time limitations on use of pesticides to avoid illegal residues at harvest. Avoid exposure to hazardous chemicals by wearing an approved mask, gloves, and water-repellent clothing. Store pesticides out of reach of children. Dispose of empty pesticide containers immediately by burning or burying deeply in a remote area.