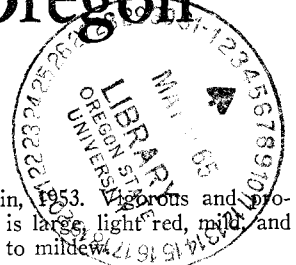


# Growing Red Raspberries in Oregon

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## Soil preparation

Raspberries do well on a fertile soil with good drainage but high water-holding capacity. They are deep rooted, so depth and texture of subsoil are important. A vigorous, high-yielding plant needs a healthy root system extending down 4 to 6 feet or more.

Soils that lose fertility quickly should not be planted to this crop. Depleted soils should be restored before planting, using manure, commercial fertilizer, and cover crops.

It will take at least 2 or 3 years to improve organic-matter content by the cover crop method. Plowing under heavy grass sod is helpful, but should be done a year prior to planting the berries in order to break down extensive root systems.

Work soil to a depth of 10 to 12 inches immediately before planting and roll to firm the surface.

## Previous crops

Crops previously grown on land may have diseases or insects that will injure raspberries. Potatoes, tomatoes, eggplant, strawberries, and black raspberries often are damaged by verticillium wilt. Crown gall, another serious disease, might be a carry-over from blackberries, black raspberries, or fruit trees. Crown borers and the various weevils that attack strawberries can do serious damage to red raspberries.

## Favorable climate

Red raspberries do best where the winters are mild, the summers relatively cool, and there is a rain-free harvest season. Injury often occurs where the winters are severe. Hot, dry, windy weather in the summer retards cane growth and produces small seedy berries. Heat at harvest time softens the berries before they mature. Rain during harvest causes soft berries and a rapid breakdown of the fruit.

## One-crop varieties

- **Canby.** Oregon origin, 1953. A thornless plant producing heavy crops of large, light red, mild-flavored berries. Canby will not succeed in heavy, poorly drained soils.
- **Fairview.** Oregon origin, 1961. A vigorous, high-yielding berry; bright medium red and mild in flavor. Especially good fresh and frozen.
- **Newburgh.** New York origin. A widely adapted home garden variety. The berry is large, medium firm, and light colored. Not a good processing berry.

• **Puyallup.** Washington origin, 1953. Vigorous and productive on well-drained soil. Fruit is large, light red, mild, and rather soft. Plants are susceptible to mildew.

• **Sumner.** Washington origin, 1956. A strong growing, productive variety; adapted to soils a little on the heavy side. Fruit is medium size, firm, medium-dark red, intense in flavor, and useful in all ways.

• **Willamette.** Oregon origin, 1942. The leading variety grown today in Oregon. The berries are large, firm, dark red, somewhat acid, but they lack an intense raspberry flavor.

## Fall and everbearing varieties

• **Indian Summer.** New York origin. A vigorous growing variety of good quality. Yields are not high.

• **September.** New York origin. This variety appears reliable for fall crops of attractive, bright red berries of fair to good quality. The spring crop is early, but the quality is not equal to spring-bearing varieties.

## Planting

Plants should be free of all diseases, true to name, and vigorous. Most of the listed varieties are being raised in Oregon under the "Register of Merit" program. See your local Extension agent for names of these growers.

Plants coming up during the summer and fall are best. Dig just before planting, leaving 4 to 6 inches of root attached. Cut cane 12 to 24 inches long for ease of handling, then cut back to not over 6 inches after plants are set.

If conditions are not favorable for immediate planting, plants can be "heeled in" or held in cold storage. In cold storage, protect the roots to prevent drying and hold the temperature at 30 to 32 degrees.

Plantings can be made from November to May, whenever the soil will work properly. Most Oregon plantings are made in the early spring. Set in rows from 30 to 48 inches apart. Allow only the canes that come up near the parent plant to remain. Rows vary from 6 to 10 feet apart, depending on the equipment being used.

Plants can be set with a spade or shovel. Open the hole large enough to allow the roots to enter and spread out; then firm soil against them. Set plants slightly deeper than they grew when dug.

Some growers plow a furrow and plant in it. This requires careful placement for depth, and the soil must be firmed against the plant. Some growers set two plants in each hill to insure a stand and get a larger first season crop.



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## Care of the planting

Cultivation is primarily to control weeds. Never cut deeper than 1 or 2 inches, because feeder roots are numerous and near the surface. Weeds can be controlled chemically. (See OSU Fact Sheet 7 for recommendations.)

Irrigation is needed in eastern Oregon and in periods of drought in western Oregon. In western Oregon, irrigation just prior to harvest is all that is needed in many years, while in other years early and late irrigation will be helpful.

Mulching is seldom done, except in home plantings where weed control and moisture retention are problems.

## Maintaining fertility

Manure will help maintain organic content and fertility. Cover crops sown in the fall will help prevent decrease of organic matter in the soil, hold fertility from leaching, and retard soil washing due to the winter rainfall. They must be turned under or worked into the surface soil in early spring to avoid competition for moisture. Commercial fertilizers may be applied in March or April. Soil tests are helpful in determining how much to use. Usually around 40 pounds of actual nitrogen, 120 pounds of phosphate, and 80 pounds of potash per acre are needed if this is the only fertilizer applied. Soil tests may show other deficiencies.

## Plant support

Red raspberries need support to hold canes upright. Where plants are set far apart, canes can be tied to a stake with heavy twine. This is not a common commercial practice, but it is used in some small plantings and home gardens. Most growers prefer a system of wire supports, strung between posts. Heavy end posts are used, with lighter posts every 30 feet or so in the row. (Treat posts with a preservative.) Three-, four-, and five-wire (No. 10 or heavier) systems are used. Where three wires are used, two are left parallel,  $3\frac{1}{2}$  to  $4\frac{1}{2}$  feet above ground, with one about 8 inches above them. The lower ones are held 12 inches apart, on cross pieces fastened to the posts. Canes are tied to the single top wire. When four- or five-wire supports are used, the two extra wires are placed below others to help support more canes.

## Pruning

Red raspberry roots are perennial and should live for many years. The tops of the one-crop varieties are biennial in habit, growing one year and producing the

following year. Fruit bud formation starts at the tip of the cane about July, after most of the cane growth has stopped, and will continue downward until the end of the growing season. The fruiting laterals coming from tip buds are shorter and produce fewer and smaller berries. This is one reason for removal of tip growth at pruning time.

Fall-bearing varieties stop growth in mid-summer, differentiate tip fruit buds, develop flowers, and fruit rapidly. Bud formation does not develop downward rapidly, so the lower buds develop and fruit in the spring.

Most of the buds develop flowers and fruit, so any pruning will reduce the number of fruits produced. The object in pruning is to remove weak canes and tips of canes so that the strong growth left will produce a maximum of large berries. This also helps produce a strong new growth for the next year.

Prune in late summer, in winter, or in early spring. Shortly after harvest, the fruiting canes and weak growth can be removed. Late winter or early spring is the time for the main pruning operation. At this time, remove weak canes and any excess of the longer canes. Usually 10 to 12 canes are enough for maximum production. Tips of these canes are usually removed to a height of 5 to 6 feet. The type of pruning depends on the training system.

## Training

If plants are left growing in an upright position, a height of  $4\frac{1}{2}$  to 5 feet is about right for ease of picking.

If canes are extremely long, the weak tip can be removed. Bend canes over and fasten them to a top wire at around  $4\frac{1}{2}$  to 5 feet.

A newer and useful method is to spread the top wires to 30 inches and tie half the canes to each wire. New growth comes up in the middle of the row away from the picking operation.

## Harvesting

Pick every 2 to 4 days, as berries ripen. They ripen fast in warm weather. Mechanical harvesting is in the research stage, but may develop rapidly at any time.

## Diseases and insect control

The main sprays are a September 15 spray of Bordeaux 8-8-100, a dormant spray of lime-sulfur 1 in 10, or a fixed copper at 6 pounds per 100 gallons—followed by lime sulfur at  $2\frac{1}{2}$  gallons per 100 when new canes are 10 to 12 inches high. See your Extension agent for more detailed recommendations.