



CMG GardenNotes #761

Growing Raspberries in Colorado Gardens

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Types and Cultivars

Fall-bearing (primocane-fruiting) red raspberry cultivars are typically hardier than summer crop cultivars. Suggested cultivars include *Autumn Britten*, *Polana*, *Jaclyn*, *Caroline*, *Fall Red*, *Fall Gold*, and *Heritage*. *Joan-J* and *Himbo-Top* have not performed well in Colorado trials.

Summer-bearing (floricane-fruiting) red raspberry cultivars have some winter hardiness problems in climates like Colorado, with frequent winter to spring and back to winter temperature swings. Suggested cultivars include *Nova*, *Boyne*, *Newburgh Titan*, and *Killarney*.

Black raspberry or “blackcap” – Suggested cultivars include *MacBlack* and *Jewel*.

Purple raspberries are a hybrid of red and black. Suggested cultivars include *Royalty*.

Yellow raspberries are a mutation of red. Suggested cultivars include *Anne*.

Planting Raspberries

With good growing conditions, a raspberry patch may last ten to fifteen years. [Figure 1] Viral diseases and hardiness problems frequently shorten the life of a patch. Raspberries need full sun, but avoid reflected heat in areas with hot summer temperatures. In open windy areas, wind protection is important as dry winds can dehydrate and kill exposed canes.



Figure 1. Raspberries are a good crop for the personal gardener.

Raspberries prefer a deep, well-drained, sandy loam soil. They perform poorly on compacted clayey soils and soils with poor drainage. On clayey soils, plant in a raised bed. Because raspberries are a long-term crop, extra efforts to improve the organic content of the soil to 5% gives good dividends. Due to soil borne diseases, do not plant raspberries where raspberries, strawberries, tomatoes, peppers, eggplant, potatoes, or vine crops (cucumbers, squash and melons) have been grown in the past four years. To reduce virus potential, do not plant raspberries next to blackberries. To help manage virus problems, purchase certified virus-free nursery stock.

In the home garden, raspberries are generally planted in a hedgerow. Place plants in a row twelve to eighteen inches between plants with four to eight feet between rows (depending on trellising system and equipment used). If planting bare-root plants, soak plants in water for a few hours before planting. Dig shallow holes large enough to spread out the root mass and set plant with the top root one to two inches below soil level. Water plants to settle the soil. Cut newly planted canes to six inches. Care of the new planting should be similar to vegetable transplants with frequent, light irrigation until the plants become established.

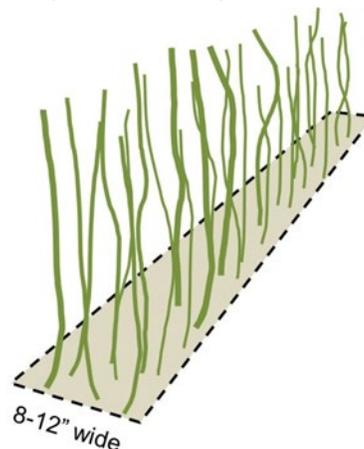


Figure 2. Red raspberries in a hedgerow. For higher yield, keep width of hedgerow to only 8 to 12 inches wide for fall bearing.

Allow canes to fill in making the hedgerow. By hoeing or cultivation, routinely remove any canes that come up outside of the hedgerow. For higher yields and reduced pest problems, keep the hedgerow width to only eight to twelve inches for fall cultivars and twelve to eighteen inches for summer cultivars. [Figure 2]

Pruning

Primocane vs. Floricane – The crown and roots system of raspberries are perennial. The canes are biennial. **Primocane** refers to the first-year canes; **floricane** refers to the second-year canes.

Fall-Bearing (Primocane-Fruiting) Raspberries

In fall-bearing cultivars, the fall crop starts at the top of the primocane (new cane this summer), working its way down the cane with each picking. Next summer, the crop starts at the point where the fall crop ended the previous season, continuing downward.

For best yields and high fruit quality, prune to a fall crop only. In February/March, prune all canes to the ground. This eliminates the summer crop, putting all the growth into the superior fall crop. This also helps eliminate winter injury problems and many common insect pests.

For fall and summer crops, prune the same as summer-bearing cultivars.

Summer-Bearing (Floricane-Fruiting) Raspberries

1. **Primocanes** (new canes the first year) are not pruned.
2. In spring (February/March), prune as follows:
 - Remove spindly canes, leaving stocky canes $\frac{1}{4}$ inch in diameter and larger. Thin stocky canes to about ten canes per foot of hedgerow.
 - For larger fruit size, tip canes at a convenient height where they will be self-supporting, typically around five feet. Canes may be tied in clusters to a trellis.
 - For larger yields, do not tip canes. Canes may be tied in clusters to a trellis.

3. Mid-summer when the fruiting is finished, remove all *floricanes* (flowering/fruiting canes) to the ground. They will not fruit again. This makes room for the new crop of primocanes.

Trellising

Raspberries are easier to manage if trellised. Examples of trellising systems are given in **Figures 3** through **5**.

Figure 3. The one-line trellis system has wires running at 30 inches and 4½ to 5 feet. Canes are tied to the lines in bundles.

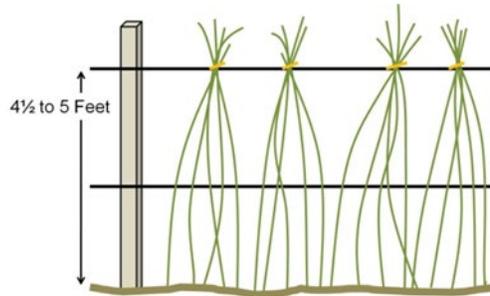


Figure 4. The two-line trellis system added an 18-inch cross arm at 4½ to 5 feet. Wires are run at the edge of the cross-arm forming a box. Canes are tied in bundles on the two lines.

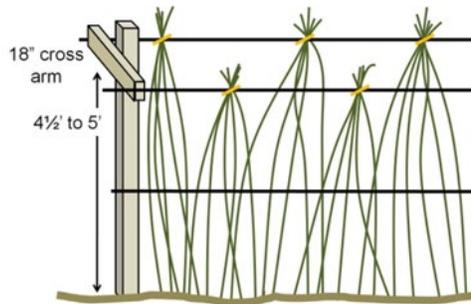
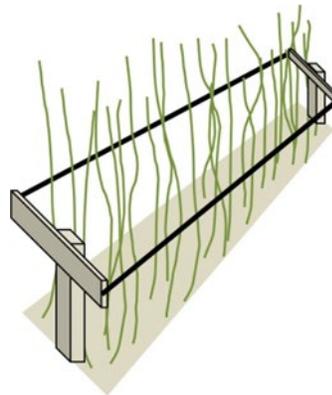


Figure 5. The T-trellis system is popular for fall bearing (primocane-fruiting) cultivars. At knee height, a cross arm and wire form a box. Canes are free floating inside the box.



Irrigating

Raspberries need about one inch of water (rain and irrigation) per week during blooming/fruiting. Depending on soil type, this may require irrigation once to twice a week. When watering, avoid wetting the leaves and fruit as this can cause disease problems. Raspberries work well with drip irrigation under wood chip mulch.

Water use is significantly less during nonfruiting times. Iron chlorosis (yellowing of leaves with veins remaining green) is a common symptom of over-watering. **[Figure 6]**



Figure 6. Iron chlorosis (yellowing of leaves with veins remaining green) is a common symptom of over-watering. Raspberries are commonly over-watered in the spring.

Fertilizing

A good guide for fertilization is to observe plant growth. Leaves should be healthy green and the primocane should grow to five to eight feet. Adjust actual fertilizer rate if plants grow too tall or are too short.

Fertilize all raspberries in the spring as growth starts and repeat in early June. For fall bearing cultivars, make a third application in August. Apply $\frac{1}{2}$ to 1 cup of ammonium sulfate (21-0-0) or similar fertilizer per ten feet of hedgerow. The fertilizer may be broadcast over the hedgerow area and watered in or placed in a band one foot to the side of the row.

If using compost or manure, make application in the late fall or early winter, but avoid early fall applications which can push late fall growth.

Common Raspberry Pests

Abiotic

- **Winter dehydration** is less of a problem in fall bearing cultivars where they are pruned to the ground each spring.
- **Sunburn of fruit** (light color patches on the top side of fruit) is common in hot weather. Raspberries prefer cooler temperatures.
- **Iron chlorosis** (yellow leaves with veins remaining green) is a common symptom of springtime over-watering. See **Figure 6**. Correct watering problems. For additional information on iron chlorosis, refer to CMG GardenNotes #223, *Iron Chlorosis of Woody Plants*.

Insects and mites

- **Spotted wing drosophila flies** can affect ripening raspberries, in particular fall bearing cultivars.
- **Grasshoppers** eat raspberries.
- **Spider mite** populations explode in hot summers and following the use of the insecticide Sevin (carbaryl). Leaves appear bronzed. For additional information, refer to CSU Extension Factsheet #5.507, *Spider Mites*.
- **Cane borer, crown borer, and stem borer** are common borers of cane crops. These are less of a problem in fall bearing cultivars where the canes are removed to the ground each spring. For additional information, refer to PlantTalk Colorado #1478, *Raspberry Cane Borers*.
- **Plant bugs** cause misshapen fruit.
- **Raspberry sawflies** are caterpillar-like insects that feed on leaves.
- **Leaf rollers**.

Diseases

- **Virus complex** – Raspberries are prone to a variety of viruses. Simply remove the patch when the fruit becomes small, and the patch is less productive. Start the new patch in another area of the garden using new, virus-free plants.

Authors: David Whiting, CSU Extension, retired, and Merrill Kingsbury, CSU Extension. Artwork by David Whiting. Used with permission. Revised August 2018. Reviewed March 2023 by Merrill Kingsbury, CSU Extension.

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Reviewed March 2023