



CMG GardenNotes #764

Growing Grapes in Colorado Gardens

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Types and Cultivars

Types of Grapes [Figure 1]

- **Table grapes** are used for fresh eating. Most popular cultivars are seedless. Popular cultivars include Himrod, Interlaken, Canadice, St. Theresa, and Reliance.
- **Juice and jelly grapes** whose popular cultivars include Concord, Valiant, Niagara, and St. Croix.
- **Wine grapes.**
- **Raisin grapes.**



Figure 1. Grapes on a trellis.

Types of Cultivars

- **American cultivars**, *Vitis labrusca*, have a strong “foxy” (musty) flavor and aroma. They are used for juice, fresh eating, and some wines.
- **European cultivars**, *Vitis vinifera*, with tight clusters, thin skins, and a wine-like flavor, are used for wines. They require more heat units for maturity and have limited potential in Colorado.
- **French-American** hybrids are popular for wine. Characteristics depend on parentage.

Planting Grapes

Grapes need full sun and protection from wind. Space plants six to eight feet apart, in rows six to ten feet apart (depending on trellising system). Strong trellising systems are required to support the heavy vines and fruit. Use treated posts and 12-gauge or heavier wire.

Trellising and Pruning

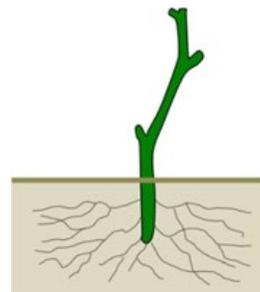
Grapes fruit on **one-year-old wood** (canes that grew the previous summer). Thus, pruning is a balance between growing fruit and renewing the one-year-old wood. Correct pruning is essential for production. Un-pruned or under-pruned grapes give many small clusters of tiny grapes. Correctly pruned, grapes give high yields of large clusters of large grapes. Over-pruning simply cuts the yield. There are many methods to trellis grapes. A simple method for the home gardener is the Single Curtain System which is explained below.

Pruning at Planting

At planting, prune back to two to three buds. Allow the summer growth to develop what will become the primary trunk.

[Figure 2]

Figure 2. Notice the three buds. This heavy pruning pushes growth of lone canes. One of the canes will become the trunk.



Pruning the Second Spring

In the spring, select one of last summer's canes to become the trunk. Remove the others, leaving one or two renewal spurs (buds close to the trunk). Renewal spurs allow for replacement growth of potential trunk wood if something damages the trunk. If growth was poor (not generating the desired trunk), start over by pruning back to two to three buds.

[Figure 3]

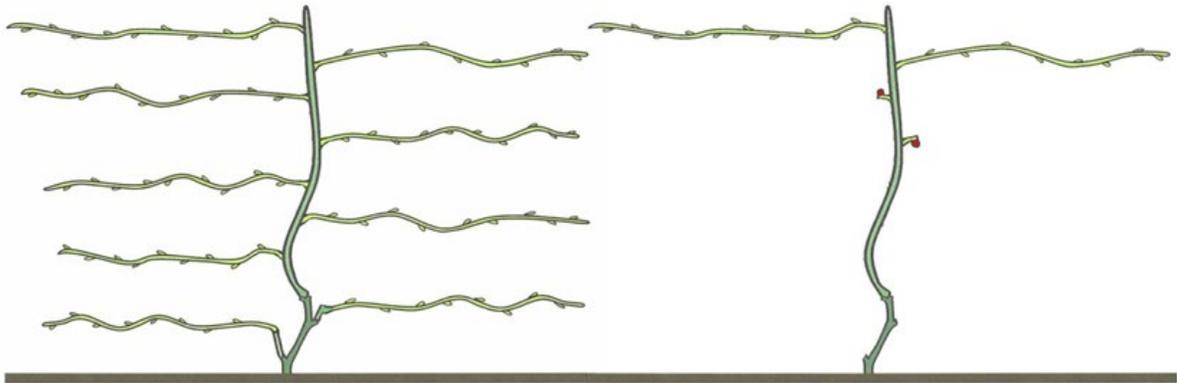
Figure 3. Second spring pruning: **Left:** Before pruning with three canes. **Right:** After pruning with one cane selected to become the trunk and other canes pruned back to a renewal spur (circled in red).



Pruning the Third Spring

1. Select two one-year-old canes (one to the left and one to the right) to become the **fruiting canes** and **cordon arms** along the trellis. The ideal cane is about pencil diameter with moderate spacing between buds. [Figure 4]
2. Select two canes (one to the left and one to the right) to become **renewal spurs** by pruning them back to two buds each. The purpose of renewal spurs is to give more options near the trunk in selection fruiting canes in future years.
3. Remove all other canes!
4. Prune the two fruiting canes back to 40-60 buds per plant (more buds for smaller fruit clusters, or less buds for larger fruit clusters).

Figure 4. Pruning the third spring. **Left:** Before pruning. **Right:** After pruning. A one-year-old fruiting cane is selected to go to the left and another to the right. These become the cordon arms along the grape trellis. Another cane to the left and to the right (near the trunk) are pruned back to two buds as renewal spurs. All the other wood is removed. This heavy pruning balances fruit production with renewing the one-year-old wood for next year's crop.



Spring Pruning the Fourth Spring and Beyond

1. Select two, one-year old canes (one to the left and one to the right) to become the new fruiting canes and spread them out along the trellis as cordon arms. The ideal cane is about pencil diameter with moderate spacing between buds. To keep the fruiting wood near the trunk, these could be selected from the first couple of canes on last year's cordon arm or from the renewal spurs. **[Figure 5]**
2. Select two canes (one to the left and one to the right) to become renewal spurs by pruning them back to two buds each. These could be selected from the renewal spurs of the first couple of canes on last year's fruiting cane. The purpose of the renewal spurs is to give options to select future fruiting canes/cordon arms close to the trunk.
3. Remove all other canes! This heavy pruning balances fruit growth with growing new fruiting wood for next year's production.
4. Prune the two fruiting canes back to 40-60 buds per plant (more buds for smaller fruit clusters, less buds for larger fruit clusters).



Figure 5. Fourth spring and beyond pruning. **Left:** Before pruning. One-year-old fruiting canes shown in yellow. The one-year-old fruiting canes that have been selected to become the new cordon arm are shown in orange. **Right:** After pruning. A one-year-old fruiting cane is selected to go to the left and another to the right. On the left, a cane from the renewal spur was selected. On the right, a cane from last year's cordon arm was selected. These become the cordon arms along the grape trellis. Another cane to the left and to the right (near the trunk) are pruned back to two buds as renewal spurs. All the other wood is removed. This heavy pruning balances fruit production with renewing the one-year-old wood for next year's crop.

General Care of Grapes

- Grapes perform best with a four-foot wide weed-free bark/wood chip mulch strip under the grape trellis. They perform poorly with lawn competition.
- Avoid over-watering. Iron chlorosis is a symptom of springtime overwatering.
- Go light on grape fertilization. Apply one-fourth cup of 21-0-0 (or equivalent) per established plant. Broadcast it under the trellis and water in.
- For home gardeners, flavor is the best method to evaluate harvest time.

Common Grape Pests

Fruit

- **Birds.** Bird netting over the plants may be necessary.
- **Botrytis bunch rot.** Generally becomes a problem with excessively heavy canopy, due to inadequate pruning, and the lack of good air circulation.
- **Spotted wing drosophila flies.** These can affect ripe grapes.

Plants

- **Powdery mildew.** Read more at CSU Extension Fact Sheet #2.902, *Powdery Mildews*.
- **Iron chlorosis.** A symptom of over-watering. Read more at CMG GardenNotes #223 *Iron Chlorosis of Woody Plants*.
- **Poor soil drainage.** Related to root rot.
- **Inadequate control of weeds and diseases.** Grapes do not tolerate competition.
- **Japanese Beetle.** Damage is probable.

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