

Pruning Grapes in Home Gardens: Some Basic Guidelines

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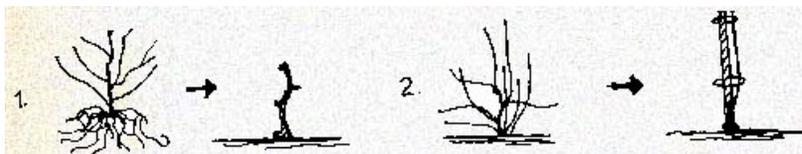
Standing in front of a mass of tangled grape vine and wondering what to do with it can be a scary experience for the novice or even for the more experienced pruner. Keep in mind two essential ideas:

1. **Don't be afraid to cut.** When you finish, about 90% of last year's growth will be cut.
2. **Grape plants are vigorous, and forgiving.** Even if you make a mistake, you'll get a chance to fix it next year.

With that said, you can approach your pruning in a **spirit of learning and adventure, not panic**. Grapes are best pruned in spring (February/March, or even as late as early April) because if pruned too early a hard frost in late winter can damage the canes and buds.

Starting Young Plants Off Right

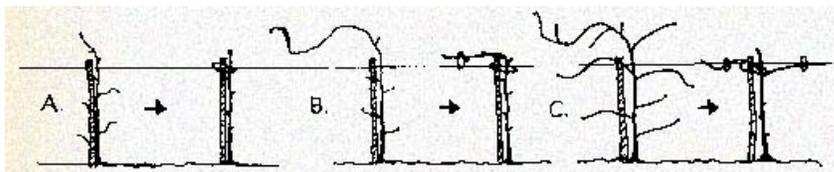
When you get your new grape plant it probably will not be pruned; instead you will find a vigorous root system and a lot of bare shoots rising out of the top. At planting time in spring you should **reduce these numerous shoots to one, and cut it back to three buds (Step 1)**. After planting, the vine will begin to grow, and push out new green shoots. When these shoots are 8–12" long, choose the best one and **support it by tying to a stake at top and bottom**. Look for a strongly growing shoot, upright or nearly so, coming directly out of the old stem (not from the underground root system). **Remove the other shoots (Step 2)**.



As the shoot grows throughout its first summer, **continue tying it up the stake to keep it straight** and prevent breaking in the wind. This shoot will be your **permanent trunk**, lasting the whole life of the vine, so it pays to keep it as straight and upright as possible.

First Dormant Pruning

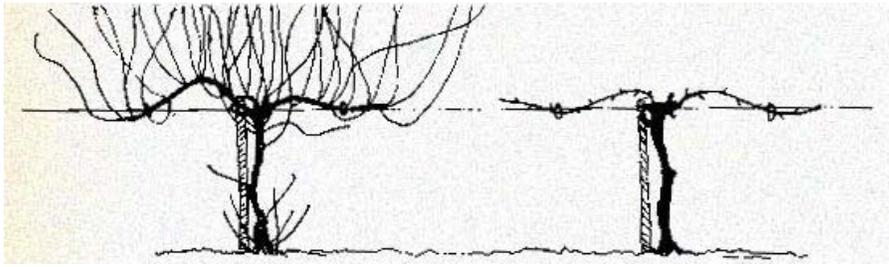
Your first-year vine should have reached **to or above the first trellis wire (about 30")** during the previous season's growth. If it hasn't, cut it back again to 3 buds, and repeat the previous year's treatment. This may seem drastic, but necessary to **establish a sound trunk**. Most plants are vigorous and will reach the wire easily. If the last year's shoot just reaches the wire or a few inches beyond, cut it at the first bud above the wire and tie the shoot to the stake and the wire (**A**). If the shoot is longer, tie it to the stake and wire, cut the vine four or five buds beyond the tie, bend the remaining length of shoot down to the wire and tie (**B**). Very vigorous shoots may go well above the wire and put out strong side laterals. Choose the two laterals that are closest to the wire, tie to the wire, and prune to 3-5 buds. Tie the main stem to the wire and stake, and cut just above the side laterals (**C**).



During the summer, train the new shoots up to the next wire, and remove any new shoots that sprout from the root area or lower trunk.

Pruning Established Vines

Grapes bear fruit on the green shoots that arise from **one-year-old canes**. Pruning is based on producing fruit in the current season, and **renewing young canes** for the next year. The old canes that produced fruit this season will not produce again. There are several methods used in pruning established grapevines. **Cane pruning** is the usual system in climates like ours where heat units may not be high and vigorous vines can shade the fruit. In this system a permanent trunk is established, and every year new canes are selected from the **head** of the vine, where trunk and wire intersect. One or two canes on either side, each **8-10 buds long**, are selected and tied to the wire, and all other canes cut out. Choose canes that are about the thickness of your little finger, that come out as close to the head as possible, and that have buds fairly close together. Try to avoid large thick canes with buds spaced far apart. Also **leave one or two spur canes, cut to two buds each**. They will provide additional canes to select from for the next year's pruning.



The **kniffen** pruning system is similar to cane pruning, except that the main trunk has two levels, one at the lower wire height and the other about 30" above it. In our climate conditions, too often the upper level shoots are so vigorous that they shade out the lower level, so the kniffen system is not much used. The third method sometimes used is the **cordon** system. Some wine grape varieties produce better when trained to this method, though it is not recommended for American types such as Concord. In the second season, one cane is trained to each side of the trunk, and they become permanent arms that remain as the base on which short spurs are established to produce new fruiting canes each year. These spurs are two or three buds long. In pruning a cordon-trained vine, it is sometimes necessary to cut back old spurs that have grown too long. Select the cane that is closest to the cordon arm, cut it to two buds, and remove the rest of the old spur.

Shoot Thinning & Training

In many areas with deep soils and high nitrogen content, grape vines are very vigorous and produce too many shoots. Even when vines are not too vigorous, some shoot thinning is usually needed to take out unproductive shoots with no fruit clusters, or those that are too closely spaced. This is called **canopy management**. The aim is to balance the productivity of the vine and the amount of leaf and shoot growth.

Each grape shoot needs **14 to 16 well exposed leaves** to properly ripen a grape cluster. If too many shoots are crowded together, the leaves do not get enough light for effective photosynthesis. It is important that all the leaves get good sun exposure, because shaded leaves only function at about 6% of their capacity, and may not be contributing at all to ripening the grape cluster. Thinning grape shoots in the early stages eliminates shoots that are unproductive and provides light and space for the productive ones.

- Begin thinning shoots as early as possible -in June or as soon as clusters can be seen.
- Shoots are soft and can easily be removed by hand. Space the shoots 3" to 4" apart.
- If there is more than one fruit cluster per shoot, the lowest one (closest to the old cane) will usually ripen earliest.
- Unless clusters are very small it's usually best to thin down to 1 cluster per shoot, especially if there are 3 or 4 clusters.

Training and tying the shoots upward on the trellis wires should also **begin fairly early**, to maintain spacing and keep the shoots from trailing on the ground or breaking off in the wind. Plastic grape clips are good for this and last for years, or a Max Tapener of the kind used for tying up tomato plants. Later in the season, if shoots are long and vigorous, with more than 14 - 16 active leaves, shoots can be topped or cut back on the ends to prevent shading the lower vine. Also, new shoots may emerge where a leaf joins the main shoot. These side shoots should be removed.

Just before harvest the lower leaves surrounding the grape bunches can be removed to provide better sun exposure. This helps to ripen the grapes and also improves air circulation, which helps to prevent disease infection.

Arbors

Grape arbors can add both **fruit and shade to the garden**. With their vigorous growth, grape plants will cover an arbor in a few seasons. For consistent fruit production, however, some judicious pruning is required. Basic guidelines are similar in that you establish a main permanent trunk going up over the arbor, with short laterals or spurs from which you select the new fruiting canes each year. If too many old, non-fruiting canes have accumulated, thin about half of them out completely. In most cases a lot of new shoots will result, to provide renewal canes for the next year.

Handy Hints

- Take time to **look over the vine** before you start
- Pick out **several** well-placed canes that look like good prospects.
- Cut out old wood and canes that are obviously unsuitable – canes that are **small and weak**, or **too far out** from the main trunk. This will clear up some of the confusion as you go.
- Always **leave at least one alternative cane** until the last, in case you break one.
- Bend canes **gradually** into place before tying. Canes that grow in a direction other than where you want them can often be persuaded to cooperate by cracking them **gently**. Use both hands to bend the cane at the point where you want it to change direction, and apply pressure just until you hear the fibers crack.