



J&L Garden Center

The All Season Gift and Garden Center

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Pruning Grapes

Pruning is the most important part of raising grapes. Proper pruning will not only help the plants grow the way they should, but proper pruning will also help the vine produce a better crop of grapes. Unfortunately, most homeowners do not know how to prune grapes properly, and they tend to neglect their grape vines. Proper pruning usually means that you are removing 90% to 95% of all the new canes from last year. Fortunately grape vines are very forgiving: if you prune them wrong this year you may lose your fruit crop, but you can prune them right the next year, and harvest fruit again. You may only lose one year's fruit crop. No pruning is sometimes worse than incorrect pruning.



Reasons for pruning:

1. Prune grape vines to keep them at a manageable size.
2. Prune to direct the energy of the vine into producing fruit, instead of stems and leaves.
3. Prune to keep the fruit growing close to the main stem. This way the sap doesn't have to travel far to produce fruit.
4. Prune to let in sunlight. The most fruitful canes will be those that are exposed to light during the growing season. Unlike most other fruits, grapes do not continue to ripen after being picked from the vine. It is essential for the grapes to get enough sunlight on the vine to fully ripen.



Types of Grapes

European grapes (*Vitis vinifera*) are the Old World species. These include many wine and table grapes. These have skin that adheres to the flesh when you eat them. Most of these are only semi-hardy in northern Utah. The vines often die back, killing the fruiting wood, so they do not produce crops every year.



Varieties: Thompson Seedless, Black Corinth, Black Monuka, Tokay, Flame.

American grapes (*Vitis labrusca*) are species that are native to the Americas. These grapes have a skin that separates from the flesh. These types of grapes are often referred to as slip-skin grapes. They are often seeded, and they are usually used for juice, jam or jelly.



Varieties: Concord, Catawba, Delaware, Golden Muscat, Niagara.

French/American hybrids are crosses between *V. vinifera* and *V. labrusca* species. They are usually cold-hardy. Most of these varieties have very few seeds (or a few undeveloped seeds). The skin adheres to the flesh of the fruit when you eat them.



Varieties: Himrod, Interlaken, Canadice, Lakemont, Suffolk Red, Glenora.

Types of Pruning

Cane pruning. Only the trunk is permanent. The cordons (arms) are formed by leaving several of last year's canes fairly long. American-type grapes can be pruned by either cane or spur pruning. Most table grapes produce the highest yield of good quality fruit when cane-pruned.



To cane prune, select two to four new fruiting canes per vine. Cut back each of these to leave about 15 buds per cane. Leave a one-bud or a two-bud spur near the main trunk. These "renewal spurs" will produce the fruiting canes for the following year, and maintain fruiting close to the trunk. All other cane growth should be removed.

Spur pruning. Both the trunk and the cordons are permanent. The current season's growth is cut back to short two-bud shoots (spurs). Wine grapes are typically spur pruned.

To spur prune, prune along main canes to leave two-bud to three-bud spurs. Space them four to six inches apart. Leave no more than 20 to 80 buds per plant, depending on the type of grape, and its hardiness. Remove all other one-year-old wood.

Timing

Prune your grape vines very early in the spring, before the vines begin to grow. The best time to prune grapes is in late-January or February, depending on the weather. Early-March is sometimes a little too late to prune grapes. **It is better to prune grapes a little too early, than a little too late.**



Pruning late, after the buds swell and the sap begins to flow, will make the plant "bleed" sap. This "Bleeding", although not desirable, will not hurt the plant enough to kill it. The plant will stop bleeding sap on its own within a few days to a week. Many people are very concerned when they see two or three gallons of sap drip from a grapevine, but there is nothing you can do to stop the bleeding, you just have to wait.

Which Grapes Need Pruning?



Picture by: www.starkbros.com/growing-guide-how-to-grow-berry-plants-grape-vines-pruning.jpg

All grape vines need to be pruned to control their size. Most grapes will also produce better quality grapes if they are pruned correctly. Grape vines will either produce a lot of clusters of small grapes, or they will produce a fewer number of clusters with larger grapes: your choice. If you want the large grapes, you must prune your vines quite severely each spring.

Many people growing juice grapes (concord, muscat, niagara, etc.) don't care how big the individual grapes are, they just want a big crop. These types of grape vines don't have to be pruned, except to train them, and to control the size of the vines. However, the vines will produce a better quality fruit if you do take the time to prune them.

People growing seedless table grapes (Himrod, Glenora, Suffolk, Canadice, etc.) usually want large grapes to eat. These varieties must be trimmed heavily each spring if they are to produce large grapes.

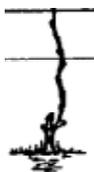
Professional grape growers will also trim their grape vines during the summer, to keep them under control. The vineyardists know that they must prevent grape vines from producing too many leaves. Each cluster of grapes must have a certain number of leaves to attain its best flavor. Too many leaves, or not enough leaves, influence how sweet the grape will eventually taste.

Seedless grapes do not grow extra-large naturally, even if they are pruned correctly. Professional grape growers spray the grape clusters several times during the summer with gibberellic acid, a plant hormone, to make the fruit grow larger. Thompson seedless grapes, for example, don't grow as big as you see them in the supermarkets by themselves. They have been sprayed with Gibberellic Acid. Gibberellic acid helps all seedless grapes produce larger fruit, but it has no effect on grapes with seeds.

Gibberellic acid is not a chemical. It is a natural growth regulator found in the growing tips of all plants. It can make plants grow faster, larger, and it can even stimulate plants to bloom differently, when applied in the correct dosage. Gibberellic acid is widely used in the plant industry; including grape production, african violet care, and in growing poinsettias.

First Year Pruning

There are many ways to prune grape vines. One method is called the **four-cane Kniffen System**. This method of pruning is not necessarily the best way to prune grapes, but it is a fairly easy way to prune them. If you are trying to cover an arbor, a fence line, or some other support system, you will want to prune



them differently. The principles of pruning grapes are the same for all pruning systems; just the final shape is different.

Prune all the side branches off the main cane when you plant it the first year. Let the main cane grow to the top of your support system and cut the top off. Do not let the main cane continue to grow; make the cane produce side branches.

Second Year Pruning

Select one or two side branches at each of four locations on the main cane.



Count five to ten buds on each branch. Cut each of the selected side branches off at this point, and remove all the remaining side branches at the main cane. You are not concerned about the plant producing fruit this year, so don't worry about selecting any particular buds. It will actually help the vine if you remove any fruit that may form during the second year.

Third Year Pruning

Grape vines produce fruit on "**this year's growth**" coming from "**last year's branches**". New growth coming from



Picture by: aces-nmsu-edu-pubs_h-H303-welcome.jpg

older branches does not produce fruit. However, this new growth is still beneficial to help the plant renew itself. You can choose some "Renewal spurs" from this type of growth.

You can see the difference in age by the color of the wood. Last year's growth is smooth, and has a tan color. Older wood is brown and rough. Keep this color difference in mind as you start selecting branches to prune.



Select two of last year's side branches at each of the four points you have chosen on your main cane. Make sure these side branches are last year's growth by checking the color of the wood. Leave ten to fifteen buds on each of these canes and remove the rest of the cane at that point.

Before removing all of the rest of the branches growing from the main cane, select at least two **renewal spurs** at each of the four locations. A renewal spur should be a side branch that only has one or two buds. It should be as close to the main cane as possible. These renewal spurs can be any age of growth: new wood or old wood.

These renewal spurs provide new growth right next to the main cane. If you don't keep new growth right next to the main cane, the side branches will have to get longer and longer each year in order to find new growth. Remember, you must always find 10 to 15 buds on the "new, tan canes".



Picture by: www.ipm-instate-edu-ipm-hortnews-1995-3-1995-prune.gif

After choosing 80 to 120 buds (total), and 4 to 8 renewal spurs (total), remove all the rest of the branches and canes. As you can see, you are removing 95% of last year's growth. It is a hard job to do, but you must remove the necessary canes to keep the plant under control.

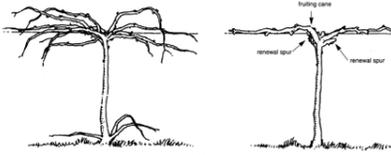
Mature Plants

Pruning an old, mature grapevine requires severe pruning that removes about 90 percent of the plant's total growth. Severe pruning directs the plant's roots toward producing fresh new growth. Fortunately, grapevines are such hardy, vigorous and forgiving plants that just about any mistake made can be corrected the following season.



Prune mature plants just like 'third year' pruning.

1. Choose 10 to 15 buds on each of the side branches or canes (remove any weak and old canes).



Picture by: www.aces.edu/pubs/docs/A-ANR-0053-L-Index2.gif

2. Make sure the buds you choose are on the new (1 year old), tan wood; not on the older (2 year old) brown wood. The buds you choose will probably be on the side branches growing from the renewal spurs you chose last year.

3. Choose several renewal spurs as close to the main cane as possible. These buds can be on the two year old wood from previous years or they can be on new wood from last year; it doesn't matter.

4. Remove all the remaining canes, even those that produced fruit last year.

5. Prune during the summer to maintain the correct size. This reduces the amount of pruning needed in the spring.

6. Fruit thinning is sometimes necessary to assure maximum quality and ripening. It is possible to control excessive cropping by removing fruit during the growing season. The earlier this is done the more effective it will be. To have large berries and large clusters, excess flower clusters can be removed as soon as they appear.

Restoring an Out of Control Vine

A mature, unpruned grapevine can have more than 400 buds. Improper growth, and over-production, could occur if all of the buds are allowed to grow and bear fruit.



Picture by: ext106.wsu.edu-maritimefruit-grape-research-pruning-grapes-in-home-gardens-some-basic-guidelines.jpg

To bring overgrown vines back to a manageable plant will not be an easy job. It can be done, but if the vines are extremely overgrown, you may need to spread out the work over several years.

The main goal should be to get the vine back to a single trunk (or as few as possible), with only four strong, well-spaced branches (or as few as possible). At that point, you will be able to train it into a manageable vine.

To reshape the old, overgrown vine, start pruning when it is dormant. Choose a main trunk (or as few as possible) and remove all of the competing-size stems. Next choose two canes (or as few as possible) on each side (these should be last year's growth), mark them, and cut them back to 10 buds. These canes will bear the fruit in

the current season. Choose, and cut back, two more canes on each side and leave two buds on each cane (these will be the renewal spurs).

Prune out everything except the spurs and marked canes. Now the vines should be in good shape to bear fruit, and you can start a routine of annual pruning to remove the old wood.

If the grape vine is basically ornamental, and you only want a few grapes hanging from it for effect, simply prune to keep it from becoming too overgrown. If you want both the looks and the fruit, you will need to plan to prune annually to get rid of all the wood more than one year old; leave only enough to cover the support and to produce fruit the following year.

Throughout the year you will want to stop vigorous new growth by pinching or pruning the shoots as they develop.

Fertilizer and Water

Grape vines do not need much fertilizer or water, especially if they are near a lawn or garden. In fact, don't give grapes any special water or fertilizer if they are near a lawn or garden. Grape vines have large root systems that will find plenty of fertilizer and water. Too much water and fertilizer helps the plants produce a lot of long canes (you will have to do more pruning), and makes the fruit less flavorful.



Try not to water grapes in the late-fall, while the grapes are ripening. Grapes taste better if they are a little dry during the final stages of maturing. Excessive moisture during the ripening stage can also make the grape skins split.

Grapes are ready to harvest when they taste good. Some varieties of grapes ripen before Labor Day and others barely before killing frost. Once the leaves are killed by frost the grapes will not develop further and might as well be picked.

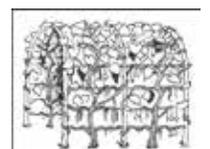
Alternative Pruning Methods

Grape vines can be pruned effectively in many different ways. You can prune them in a fan shape, curtain shape, umbrella shape, or cordon shape. The ultimate shape you prune your grape vines depends on the support system you have built for the grapes.



Picture by: www2.co.arky.edu-age-pubs-id-id126-id126.gif

Many people prefer to grow grapes on an arbor. Providing this amount of foliage cover requires a larger and taller plant than is necessary for an ordinary trellis. In this situation, the tendency is to prune too lightly, if at all. Often the result is a tangled mass of multiple trunks, numerous canes, weak growth and poor fruit production. Training the plants to a single trunk and leaving relatively short horizontal fruiting canes is one method that could be used for most situations.



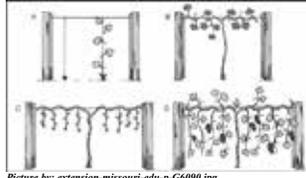
Picture by: extension-missouri.edu-p-G699arbor.jpg

Develop a portion of the trunk

each year by tying an uppermost vigorous cane in a vertical position. At the same time, select fruiting canes at intervals of 2 to 3 feet. These should be limited to five or six buds to favor development of the upper trunk and canes. The selection and use of renewal spurs is also valuable for maintaining a source of fruiting wood close to the trunk.



If your grape vine is basically ornamental, and you only want a few grapes hanging from it for effect, simply prune to keep it from becoming too overgrown. Each year cut back part of the year-old wood, and leave only enough to cover the support to produce fruit the following year. Prune the vigorous new growth as needed.



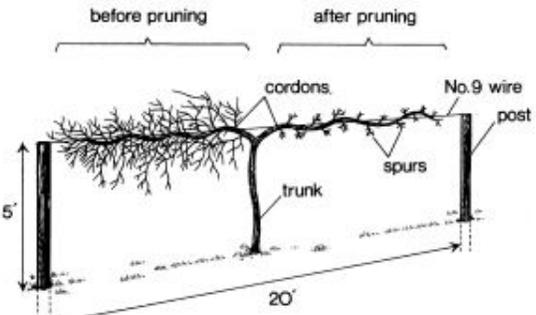
Picture by: extension-missouri-edu-p-G6090.jpg

- The important things to remember are;**
- 1. 'No Pruning can be worse than Incorrect Pruning'.**
 - 2. 'Be sure leave 80 to 90 buds on last year's growth in order to have a good crop of grapes this year'.**

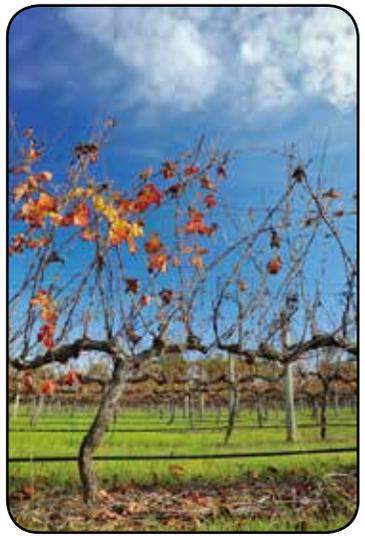


More Resources:

- <http://www.gardening.cornell.edu/fruit/homefruit/4grapes.pdf>
- <http://ext100.wsu.edu/maritimefruit/grape-research/pruning-grapes-in-home-gardens-some-basic-guidelines/>
- <http://content.ces.ncsu.edu/chapter-6-pruning-and-training>
- https://extension.usu.edu/files/publications/publication/HG_363.pdf



www.clemson-edu-extension-hgic-plants-vegetables-small_fruits-hgic1403



Fan



Umbrella



Curtain