



Backyard Grapes

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More grapes are grown in the United States and worldwide than any other deciduous fruit (fruit from a plant that loses its leaves in winter). In most parts of Idaho, you can grow them at home for eating fresh and for processing into juice, jams, jellies, raisins, and frozen products. A few places in Idaho are warm enough for growing wine grapes.

Variety selection

Two classes of grapes can be grown in Idaho—Vinifera cultivars (*Vitis vinifera*) and American and American-hybrid cultivars (*Vitis labrusca*).

Vinifera cultivars

The Vinifera cultivars, the most important grapes of commerce, have been grown in the Old World, particularly the Middle East, for centuries. Included in this group are the wine grapes of Europe and California and table grapes such as Flame Seedless and Thompson Seedless. Vinifera grapes have a relatively thick skin, which adheres to a firm pulp.

These grapes require a long, warm growing season to mature quality fruit. Low winter temperatures can easily kill the plant to the ground. Thompson Seedless, the most popular white table grape and also the principal raisin grape, does not perform well in Idaho. Some Vinifera grape cultivars can be grown with moderate success in a few sites in Idaho, primarily in the Caldwell-Weiser area and in portions of the Clearwater River drainage.

American and American-hybrid cultivars

The American and American-hybrid cultivars grow successfully in many sections of Idaho. The

skin of American and American-hybrid, or *labrusca*, grapes does not adhere to the pulp and is called slip skin.

The American grapes are sometimes called the Fox grapes. They include Concord (blue), which is the best-known cultivar for juice and jelly, Delaware (red), and Golden Muscat (white).

The American grape is the most winter-hardy of those discussed here. Their trunks will usually withstand midwinter temperatures of -20°F before suffering winter damage. If damage is severe, it is possible to cut the damaged trunks to the ground and regrow the trunk from a sucker that emerges from the root.

American-hybrid cultivars are the results of crossing American and European grapes. Introduced by the New York Experiment Station, American hybrids include Interlaken and Himrod, both white and sweet with a skin that adheres to the pulp. They may be eaten fresh or dried for raisins.

The American hybrids are intermediate in freeze hardiness. A midwinter temperature of -20°F could reduce the crop by 50 percent. Many cultivars are being tested at the University of Idaho Parma Research & Extension Center for their adaptability in Idaho.

A good balance

A good balance for the home vineyard in warmer areas of Idaho would be Concord for juice and jelly and Interlaken or Himrod for table use and raisins. To ensure a reasonable chance of success, consult CIS 1043, *Selecting Grape Cultivars and Planting Sites in Idaho*. To get quality fruit, choose a cultivar that fits your climate, then train the vines carefully and prune them annually.



Site selection

Siting the home vineyard will involve compromises. Areas close to dwellings, for example, especially those on the south or southwest sides, are more suitable for grape growing because winter temperatures are generally more moderate than on the northern side, which minimizes the chances of vine kill. Grapevines also need a lot of sunlight to produce quality grapes. Best exposures are gentle slopes to the south or southwest, with the grape trellis built in an east-west direction.

For cool, short-season locations, trellis grapes against a south-facing concrete wall or other structures that trap solar energy and increase the heat available to the grapes. Trellised grapevines on or near the house also contribute to the overall landscape design.

Grapes planted in a lawn pose special problems. Grapes should be watered less often in late summer and fall to ensure the vines harden off properly, keeping winter damage at a minimum. However, late summer-early fall weather is good for lawn growth, and the growing lawn will need more water than the hardening-off grapes. As a result, your watering practices will favor either the lawn or the grapes.

Grapes are extremely sensitive to 2,4-D, a herbicide some homeowners use to control broadleaf weeds in lawns. If you plant grapes in or near a lawn that will be treated with 2,4-D, observe the following precautions: Plant the grapes upwind of the lawn and, if possible, in the highest area of a sloping yard. Spray in late afternoon or evening to keep volatilization and drift to a minimum. Avoid spraying on hot days, irrigating after spraying, and spraying from the 5th leaf stage through bloom (approximately 10th leaf stage).

—Watering Tip—

If late summer and fall precipitation is minimal and soils become dry, irrigate grapes just before the ground freezes to minimize winter injury from drying of the roots.

Constructing the trellis

Ideally, you should construct the trellis before planting rooted grape cuttings. Select sturdy, treated posts (see Preserving Wooden Posts below) long enough to allow each one to stick 55 to 65 inches above the ground when firmly anchored. Place them about 15 feet apart.

Attach staples to the windward sides of the posts 36 to 46 inches above ground level, and thread a No. 9 or 10 gauge galvanized wire through them. Placing staples on the windward sides of the posts minimizes the chances of a strong wind tearing a heavily laden grapevine and wire from the post.

Use staples large enough to support the wire and fruit-laden vine without pinching down on the wire. Lateral movement of the wire must not be restricted. Attach the wire to the end posts with turnbuckles so it can be loosened with the onset of cold weather and tightened each spring.

Add a second wire 55 to 65 inches above ground level any time before the developing trunk of the grape plant grows above the lowest wire. Again, place the staples on the windward side of the post and use turnbuckles for tightening and loosening the wire.

Training and pruning American or American-hybrid grapevines

4-Cane single-trunk Kniffin system

Not the only method of training and pruning American or American-hybrid grapevines, it is, however, a tried and true system that will produce large quantities of quality grapes in a small area.

First growing season. The newly planted grape cutting will develop several canes in the weeks following planting. Pinch off all but one and loosely tie this selected cane to a stake, one end of which has been pressed into the ground and the other tied to the lower wire of the trellis. An old broom handle works well as the stake. The selected cane will form the trunk of the grapevine.

Preserving wooden posts

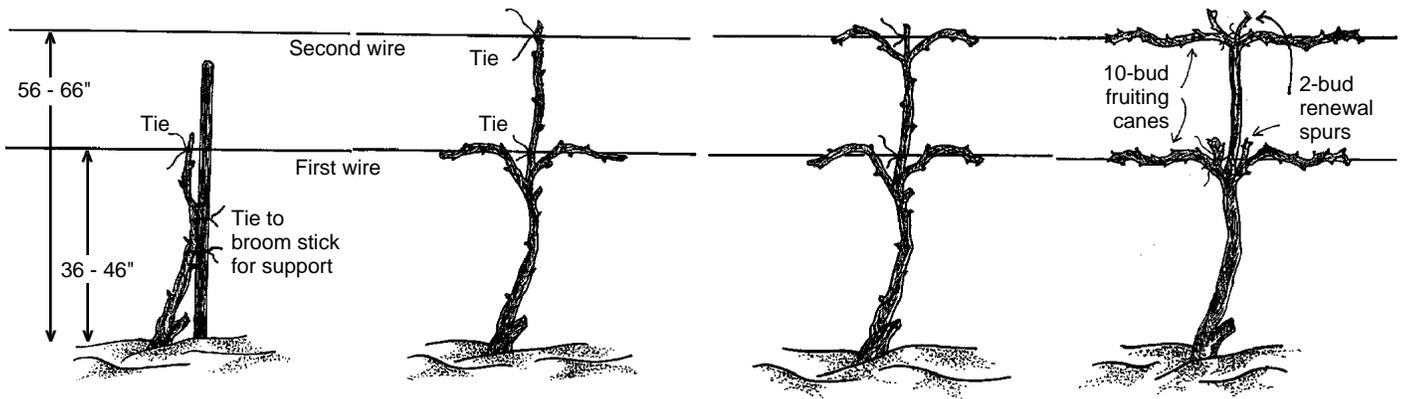
Chromated copper arsenate (CCA) pressure-treated posts resist rotting in the soil. CCA is not effective in home treatment but is the best commercial treatment for posts used in a grape support system. There is no evidence of uptake or

translocation of CCA from treated posts in the soil to grape leaves, stems, or fruit.

The best chemical for use in home treatment is copper naphthenate. Wood treated with copper naphthenate should

weather for at least one week after treatment before plants are placed near the wood.

Two other wood preserving chemicals, creosote and oil-impregnated pentachlorophenol, can damage grape roots.



First growing season.
Pinch off all but one cane from each cutting. This cane forms the trunk of the grapevine.

First growing season.
When the cane reaches above the lower wire, pinch out the terminal bud. Select two of the resulting branches 2 to 4 inches below the wire. Train one to the left and one to the right. Select a third to grow toward the upper wire.

Mid-March of first dormant season.
Prune the two lower arms so four to six buds remain on each. Prune upper arms to leave three to five buds on each.

Second dormant season.
On each arm, select two canes originating close to the trunk. Cut one back to about 10 buds and cut back the other one, the renewal spur, to two buds. Each dormant season thereafter, prune the two canes that arose from the renewal spur into a 10-bud fruiting cane and a two-bud renewal spur.

When this cane reaches above the lower wire, pinch out the terminal bud to about two buds above the wire (use your thumb and index finger or cut with pruners). This forces several buds near the top of the single cane to develop into branches. Select two of these branches 2 to 4 inches below the lower wire. Train one to the right and one to the left along the wire. Select a third cane to continue vertical growth toward the upper wire. Pinch off all other branches that appear. When the vertically growing cane reaches

the top wire, again pinch out the terminal bud. Select two of the resulting branches that grow immediately below the top wire and train one to the right and one to the left along the wire. This process of selecting four “arms” will probably take two growing seasons; adhere to the plan and allow no other branches to develop.

First dormant season. In mid-March of the first dormant season, when all four canes are in place along the wires, prune the two lower arms so that four to six buds remain on each, and prune the

Rooting and planting cuttings

Grapes are grown on their own roots in Idaho. No benefits, such as additional insect or disease resistance, can be gained by grafting the desired grape to a different rootstock. In addition, winter temperatures can kill grapes to the ground about every 10 years. You can regrow grapes growing on their own roots from a sucker that emerges from the root.

Gathering cuttings and inducing them to root is a simple procedure that requires no special equipment. In late winter or early spring, when mature vineyards are being pruned, select pruned-off, medium-sized canes that are 5/16 inch in diameter—about as thick as a pencil—and cut

them into 3-bud to 6-bud sections. So you can readily tell the top of the cutting from the bottom, make a square cut about a quarter inch below the lowest bud, then make a slanting cut an inch above the upper bud.

Tie the cuttings in bundles of 10 or so bud sticks and bury them upside down in damp, well-drained soil or peat moss. Completely cover the bundles with 4 to 6 inches of soil or peat moss. Mark the location with a stake.

When the weather warms up, usually between mid April and the first week of May, check the lower cut for callusing, sometimes accompanied by rooting. It should be well callused.

Plant the cuttings about 6 to 8 feet apart below the prepared trellis. Plant the cuttings right side up, with the uppermost bud above the soil surface. If this bud is yellow or light green, protect it from sunburn for a few days. Take care not to damage the buds as you plant. Do not fertilize.

If you prefer to buy rooted grapevines rather than root your own, plant them at the same depth they grew in the pot, then prune each cane back to two buds.



Canes that will root have cauliflower-like calluses below the bottom bud.

two upper arms to leave only three to five buds on each. Allow the grape plant to bear fruit without pruning during the ensuing growing season.

Second dormant season. Late in the second dormant season prune each of the four arms as follows: Select two canes originating close to the trunk. Cut one back to approximately 10 buds and the other to two buds. The four 10-bud canes will produce fruit during the coming growing season and the four two-bud canes will be the renewal spurs.

Following dormant seasons. The two canes arising from the buds on each renewal spur should be pruned in mid-March of the following year to leave a 10-bud fruiting cane and a two-bud renewal spur.

A healthy vine can support about 30 to 40 fruiting buds. Leaving more buds is a serious mistake, because the plant produces too many berries. This limits the plant's ability to build up food reserves, which may lead to winter injury and may also reduce the amount of sugar in the individual fruit.

If a grape arbor is your goal, the single-trunk Kniffin system of pruning, with two arms at each support lattice and 20 inches between supports, will yield a maximum amount of high-quality fruit.

Spur pruning

European wine grapes are not trained to the Kniffin cane system, but rather to a spur pruning system. In spur pruning, some canes are cut back to two or three buds, leaving 3- to 6-inch remnants called spurs. The rest of the canes are removed. To be a candidate for spur pruning, a grape cultivar must have fruitful buds near the base of its canes.

Fertilization

Grapes are fertilized according to their nutritional needs, so pay careful attention to foliar symptoms.

Nitrogen may be limiting in Idaho soils, resulting in poor vigor, low yields, light green foliage, and

small leaves. When vines show a need for nitrogen, distribute about 3.5 ounces of ammonium sulfate per vine evenly in a 2-foot circle on the soil around the trunk. Don't overfertilize. Too much nitrogen will produce excessive vegetation, delay fruit maturity, and increase the risk of winter injury.

Iron may be unavailable to grapes, especially in the southern, arid sections of Idaho. Iron deficiencies result in leaves with green veins and yellow areas between veins. In severe cases, the vine will have entirely yellow, small leaves that turn brown (necrotic) at the edges and then completely brown.

Iron problems can be corrected with a single spring application of a synthetic iron chelate manufactured for the soil in question, either acidic or basic. Dissolve the recommended amount of chelate in water and apply it to the soil at the trunk, following the instructions on the label. Excessive irrigation, especially in the spring, will aggravate the problem of iron availability.

Spring frost protection

Buds, flowers, and small fruit may be killed by spring frosts. After buds have swelled, minimize frost damage by sprinkling the vines with water when temperatures are expected to fall to 32°F or below. A conventional lawn sprinkler will do the job. The vines are protected by the heat released when ice forms.

Turn sprinklers on when the temperature drops to 34°F and sprinkle until all the ice melts. Shoot tips and flower clusters are damaged at 32°F. A small amount of cooling occurs when a sprinkler is turned on, and the 2 degrees from 34°F to 32°F provide a margin of safety.

Harvest

Harvest timing depends on how you intend to use the fruit. For jelly, harvest the fruit somewhat early to avoid sugar crystals that may cloud the product. For table use, pick the fruit when color and flavor are at their peaks and before the fruit drops from the bunch. For juice, leave fruit on the vine until it is fully mature.

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