

## GRAPES IN THE HOME GARDEN

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Low winter temperatures and a short growing season generally limit grape production to the southern half of New Hampshire. Grape production in northern New Hampshire is limited to extremely well-protected sites with short-season varieties and even under the best of circumstances, success is limited.

### **Site and Soil**

The ideal vineyard site provides full sunlight, protection from prevailing winds and freedom from late spring frosts. Plant grapes on a southern slope for best results. Grapes will grow in a wide range of soils but do best in a deep, well-drained sandy loam with a pH of 5.3 to 6.0. Clay soils can be made more suitable for grape production with the addition of sand and organic matter (well-rotted manure, compost, peat moss or a green manure crop).

Vineyard site preparation should begin a year ahead of planting to allow for soil pH adjustment and fertility-building (Contact your county Cooperative Extension office for soil testing information) and eradication of perennial weed problems such as quackgrass. Cultivated soil should be planted to a fall cover crop such as spring oats (2 to 3 pounds of seed per 1,000 square feet) by early September to provide protection against soil erosion. The use of animal manures in soil-building is desirable where available. Apply cow or horse manures the fall before planting at the rate of 50 to 75 pounds per 100 square feet.

### **Establishing the Vineyard**

Vigorous one-year-old plants should be planted in early spring; about May 1 is ideal. Handle these young plants carefully to prevent drying of roots. If they cannot be planted immediately upon receipt from the nursery, place plants in cold storage until planting time. Plants should be spaced 8 feet apart in rows 8 to 10 feet apart. Be sure to pack soil firmly around the roots. Set plants at about the same depth they were planted in the nursery. Prune newly-set plants to a single cane and head back to 2 buds.

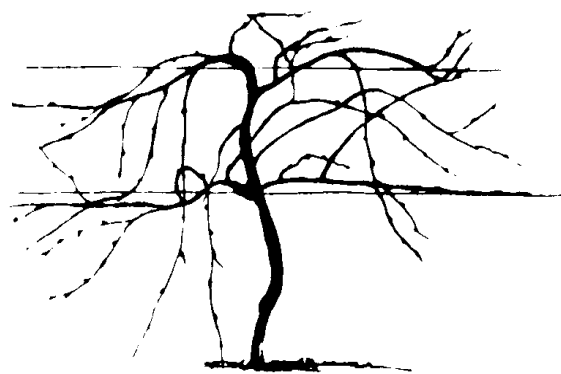
During the first growing season, shoots that develop should be tied to a stake. Tie shoots loosely to avoid the possibility of girdling.

### **The Grape Trellis**

The trellis consists of firmly-set, well-braced posts at intervals of 10 to 15 feet along the row. Two strands of No. 9 or No. 10 wire are attached to the posts--one 5 to 6 feet and one 3 feet above the ground. Set end posts at least 3 feet deep leaving 6 feet above ground. End posts should be well-braced to prevent pulling by the taut wire coupled with the weight of the grape vines.

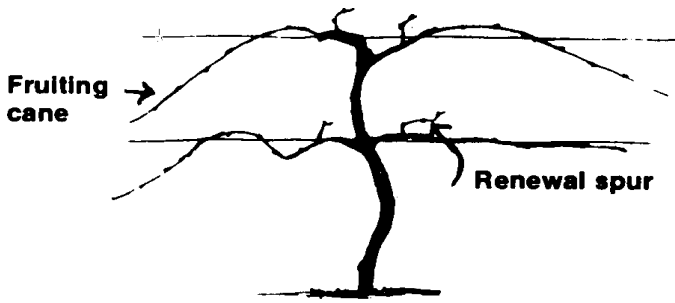
### **Pruning and Training**

The four-arm Kniffin system (Figs. 1 and 2) is a common system used for home grape vines. It provides for good production of high-quality fruit and is well-adapted to vigorous varieties. The two-wire trellis described earlier is used for the four-arm Kniffin system.



**Fig. 1. A vine before pruning which has been trained to the Four-Arm Kniffin System.**

In early spring, the year after planting, select the most vigorous cane (the trunk) and tie it to the top wire. If the cane is not long enough to tie to the top wire, tie it to the bottom wire and extend it to the top wire the following spring.



**Fig. 2 The same vine as Figure 1 after pruning.**

The spring following the second growing season, select 4 vigorous canes for the arms. The arms (2 on each side of the trunk) are developed from just below the point where the wire and trunk meet. Prune the canes (arms) to 10 buds in length and tie them loosely along the wires. For each of the 4 arms, 2 two-bud-long renewal spurs are left on the trunk to produce fruiting canes for the following season. Remove all other canes.

Each dormant season thereafter replace the arms with canes and leave new renewal spurs. This annual pruning will help insure consistent production and high fruit quality and will keep the vine at a manageable size and shape. Pruning should only be done in late winter or early spring since early winter or fall pruning can promote winter damage. Vines pruned in late spring just prior to bud break will "bleed" but this is not injurious. Fruiting canes should be tied to wires before buds begin to swell because buds are easily rubbed off once growth begins.

### **Fertilizing Grapes**

In the planting year, apply 1/4 pound of 10-10-10 garden fertilizer (or its equivalent) by scattering it in an 18-inch circle around each plant 3 weeks after planting. In succeeding years, double this amount yearly until a total of 1 pound of 10-10-10 (or its equivalent) is applied per year. Fertilizer should be applied in late April through early May.

### **Weed Control**

Complete weed control around grape vines is essential to ensure adequate vine growth and high yields. Frequent shallow cultivation is generally best although mulches may also be employed. An organic mulch such as bark or sawdust will help suppress weed growth and conserve soil moisture. However, it will also delay

ripening of the grapes in the fall and may encourage rodent populations that can damage vines.

### **Harvesting**

Grapes should not be harvested until they are fully mature. Color is a poor index of maturity since many varieties change color long before they are fully ripe. Almost all varieties become sweeter and less acid as they mature.

Tasting an occasional grape is a good method of determining when grapes are ready. Also, seed color, which changes from green to brown as grapes mature, is a good maturity index for the homeowner.

The danger of fall frost, bird or raccoon pressure or rot and cracked berries may force an early harvest in some seasons.

### **Insects and Diseases**

Problems with several diseases and insects can cause excessive fruit and fruit quality losses in most years. Information on the control of these diseases and insects is available from your county Cooperative Extension office.

### **Varieties**

Seedless Table Types (Most seedless grapes are not hardy except in southern New Hampshire on sites where winter temperatures do not fall below -10 to -15°F).

*Canadice* - Red, excellent fruit quality. Hardy to -15 to -25°.

*Reliance* - Red seedless with excellent fruit flavor. May be as hardy as Canadice.

*Concord Seedless* - As hardy as Canadice. Blue seedless grape with good fruit quality.

### **SEEDED TABLE TYPES -**

*Valiant* - Blue seeded grape that ripens early. Good fruit quality. Hardy in Northern NH.

*Edelweiss* - White seeded type. Flavor excellent. Hardy in Southern NH.

*Delaware* - Red seeded type. Excellent for dessert, wine, and juice. Will ripen crop on frost-free sites in extreme southern NH only.