

GROWING GRAPES IN THE HOME GARDEN

Prepared by: *Marvin P. Pritts*, Extension Faculty, Fruit and Vegetable Science, Cornell University
 Electronic version edited by: *Tyrone W. Hall*, Extension Resource Educator, CCE, Tioga

Juice, jellies, wine and pies are all products that can be made from grapes. These fruits are also delicious when eaten fresh. It is not surprising that grapes are one of the most popular fruit crops for the home garden.

Site Selection: A favorable climate is essential for successful grape growing. Requirements are 1) a minimum growing season of 150 days, 2) winter temperatures above -25 degrees F, 3) an area which accumulates more than 2000 degree days above 50 degrees F, 4) a site which has good air drainage, 5) a site which is exposed to full sunlight, and 6) a site which is neither wet nor droughty.

Soil Management: Grapes are tolerant of a range of soil types, and are not as sensitive to extremes in drainage as other fruit crops. They are most successfully grown on deep, well-drained sandy loams. The site should be prepared the year prior to planting. All perennial weeds should be eliminated and organic matter (manure, compost, peat moss, etc.) should be incorporated into the soil. A soil test can provide recommendations for preplant fertilization.

Purchasing and planting vines: Grape vines should be purchased from a reputable nursery. Orders should be placed early to insure that the desired cultivars will be available. Request that the grapevines arrive in early spring, and plant them immediately. Remove any broken or damaged roots and place in the soil at the depth they were grown in the nursery. Do not use any fertilizer at this time. Vines should be a minimum of 8 foot apart both within and between rows.

Fertilization: No fertilizer should be used the first year. In subsequent years the following amounts of 10-10-10 should be spread around the vines in early spring before growth begins; 2nd year - 2 ounces, 3rd year - 4 ounces, 4th year - 8 ounces, 5th year and after - 16 ounces. If you are in doubt as to the nutritional status of mature plants, get a complete soil test and/or leaf analysis test.

Pruning and training: The 4-arm Kniffin system is recommended for home gardens although many other systems are used (see figure below). A trellis is required with a lower wire at 3 feet and a parallel wire at 6 feet. Usually galvanized wire (size 9, 10, or 11) is attached to durable wood posts set up to 24 feet apart.

Year 1: Remove all but the best single cane on each young vine at planting. Also remove all but the two uppermost buds on this remaining cane. This cane should be tied to the bottom trellis wire or to a stake to hold it erect. After several weeks the buds should begin growth. The weakest of the two new shoots should be removed when 10 inches long, as should any other shoots which may arise from the trunk. Any flower clusters or side

shoots should be removed as the single cane is growing. If this cane fails to reach the top wire, repeat the steps for year 1.

Year 2: In early spring tie the cane to the top wire and cut off just above the wire. Leave 4 to 6 buds in the vicinity of each wire and remove the rest. As the new shoots begin to grow from the remaining buds, remove any flower clusters which form.

Year 3: In early spring before growth occurs, select a total of 8 canes (4 for each wire) and remove the rest. One cane should be tied along each wire in each direction. These four arms will be allowed to fruit, but must be cut after the 6th - 8th bud along the arm. The remaining four canes should be cut back to a stub containing 2 buds.

Year 4 and Mature Vines: The fruit cane from the previous year should be removed and one of the two canes from the stub should then be tied to the wire and cut after the 10th bud. The remaining cane should be cut to 2 buds for next year's stub and arm.

The number of buds on each arm can be adjusted in subsequent years. Too many buds will result in poor quality fruit and vegetative growth. Too few buds will reduce the crop.

Fruiting canes selected during the dormant season should be dark brown and larger than 1/4 inch in diameter. Each cane should be wrapped once around each wire and loosely tied.

Insects and Diseases: The best control of insects and diseases is accomplished by planting in a sunny location with good air drainage. Several sprays may be needed to control black rot, mildew, grape berry moth, grape leafhopper, rose chafer, Japanese beetles, and grape cane girdler. The Cooperative Extension Service can positively identify these problems and recommend treatments.

Harvesting: Grapes should be harvested only after they are fully ripe. Unlike many other fruits, the grape does not improve in sugar content after it is picked. Often grapes have good size and color one week before the sugar content is sufficiently high. The quality of grapes deteriorates rapidly after sugar content has peaked.

Yield will depend on cultivar, climate, and vine vigor. In the third year vines can be expected to produce 5 to 10 pounds of fruit. Mature vines can produce up to 30 pounds in a good year under ideal conditions.

For more information, obtain a copy of:

Cultural Practices for Commercial Vineyards

For commercial growers and backyard enthusiasts. Includes topics such as site selection and preparation, when and how to plant, trellis systems, pruning specifics, and harvesting guidelines. 68 pp. 155S111 \$5.50

The Home Fruit Planting

Information on apple, cherry, peach, plum, and pear trees, grapes, strawberries, brambles, blueberries, currants, gooseberries, elderberries, and hardy kiwifruit. 46pp. 142IB156 \$5.95

Distributed by your county Cornell Cooperative Extension office or on-line at: [CCE On-line Catalog](#)

Grape Cultivars: A wide variety of cultivars are available, and these differ in time of ripening, size, productivity, vigor, hardiness, color and flavor. All these characteristics influence cultivar preferences, so each must be evaluated for the circumstances of the individual.

The following traits are based on average performance and may vary under different environmental conditions and cultural systems. No attempt was made to evaluate the flavor as this is subject to individual preference. Values range from (1) early to (5) very late for season, and from (1) poor to (3) excellent for other characteristics. (W) indicates wine, (T) table, and (P) juice and processing.

<u>Cultivar</u>	<u>Season</u>	<u>Color</u>	<u>Use</u>	<u>Hardiness</u>	<u>Vigor</u>	<u>Berry Size</u>	<u>Relative Yield</u>
Foch	1	Black	W	2	2	1	2
Interlaken*	1	White	T	1	2	2	2
Schuyler	1	Black	T	1	3	2	3
VanBuren	1	Blue	T, P	3	1	2	2
Aurore	2	White	W	2	3	2	3
Candice*	2	Red	T	3	2	2	3
Himrod*	2	White	T	2	2	2	1
Ontario	2	White	T, W	2	3	2	3
Reliance*	2	Red	T	3	3	2	2
Seneca	3	White	T	2	2	2	2
Alden	3	Blue	T, W	3	3	3	3
Buffalo	3	Blue	T, W, P	2	3	2	3
Cayuga	3	White	W	3	3	2	3
Challenger*	3	Red	T	2	2	3	2
Delaware	3	White	T, W	3	2	1	3
Fredonia	3	Black	T	2	3	2	3
Glenora*	3	Blue	T	1	2	2	1
Lakemont*	3	White	T	1	3	2	3
Niagara	3	White	W, P	2	3	2	2
Suffolk Red*	3	Red	T	1	3	3	1
Vanessa*	3	Red	T	3	2	2	2
Concord	4	Blue	T, W, P	3	3	2	3
Elvira	4	White	W	3	2	2	3
Remaily*	4	White	T	1	2	3	3
Romulus*	4	White	T	2	2	2	2
Steuben	4	Blue	T, W	3	2	2	3
Catawba	5	Red	W	3	3	2	3
Dutchess	5	White	W	1	2	1	1
Golden Muscat	5	Yellow	T	3	3	3	2
Sheridan	5	Blue	T	3	3	3	3

* Indicates Seedlessness.

French-American hybrids such as Baco Noir, DeChaunac, Chancellor, and Seyval can also be grown in the Northeast on the very best sites. Vinifera cultivars such as Chardonnay, White Riesling, Gewurtztraminer, Pinot Noir, and Cabernet Sauvignon can be successfully grown if canes are buried under mulch during winter, and the site is relatively warm. The fruit of these cultivars makes exceptional wine, but is prone to fungal infection.

This article and articles like this can be found on the Internet at:

**The South Central New York Agriculture Program's
Commercial Vegetable and Fruit Production Web Site**

www.cce.cornell.edu/scnyag/vegfruit/

Figure of the 4-arm Kniffin training system establishment and maintenance.

