

## Growing Grapes in the Home Garden

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:

- a minimum growing season of 150 days
- winter temperatures above -25° F.
- an area which accumulates more than 2000 degree days above 50° F.
- a site which has good air drainage
- a site which is exposed to full sunlight, and
- a site which is neither wet nor dry

**Soil management.** Grapes are tolerant to 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 pre-plant fertilization.

**Purchasing and planting vines.** Grapevines 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-feet 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.

- Second year – 2 ounces
- Third year – 4 ounces
- Fourth year – 8 ounces
- Fifth year & after – 16 ounces

**Pruning and training.** The four-arm Kniffin system is recommended for home gardens although many other systems are used (see diagrams on last page).

- **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 weaker of the two new shoots should be removed when 10 inches long, as should any other shoots that 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 it 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 that 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 6<sup>th</sup> bud along the arm. The remaining four canes should be cut back to a stub containing two buds.

**Mature vines.** The fruiting 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 10<sup>th</sup> bud. The remaining cane should be cut to two 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 ¼-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.

**Every effort has been made to provide correct, complete, and up-to-date pest management information for New York State. Changes in pesticide regulations occur constantly, and human errors are still possible. These recommendations are not a substitute for pesticide labeling. Read the label before applying any pesticide. Trade names used herein are for convenience only. No endorsement of products is intended, nor is criticism of unnamed products implied.**

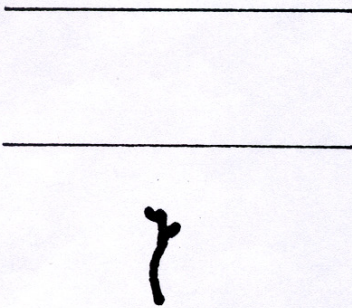
**Cornell Cooperative Extension and its employees assume no liability for the effectiveness or results of any chemicals for pesticide usage. No endorsement of products is made or implied.**

**\*\*HOME REMEDIES: These remedies are not endorsements by Cornell University of any product or procedure. They are not recommendations for use either express or implied. Neither Cornell University, nor its employees or agents, are responsible for any injury or damage to person or property arising from the use of this information.**

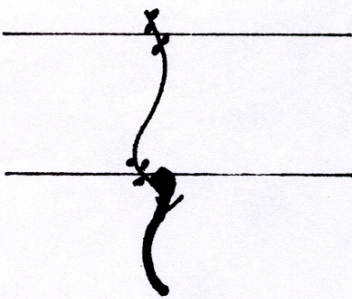
**For more information, obtain a copy of "Cultural Practices for Commercial Vineyards" (155S111) or "The Home Fruit Planting" (155IB156) from your local Cooperative Extension Service or from the Media and Technology Services Resource Center, 7 Research Park, Cornell University, Ithaca, NY 14850.**

TRAINING GRAPES TO A 4-CANE KNIFFEN

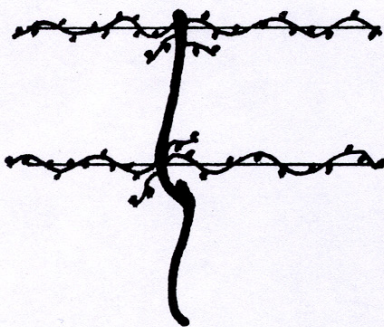
Spring



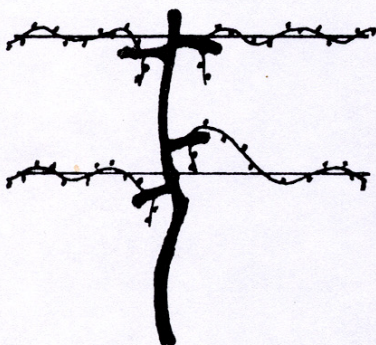
Spring



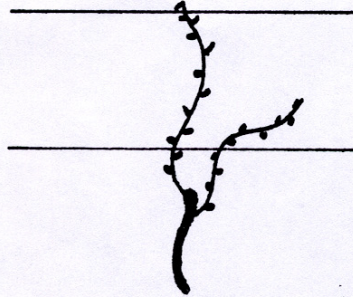
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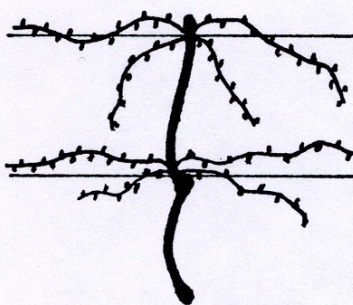
Spring



Year 1  
Fall



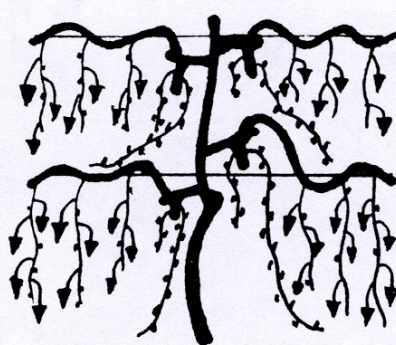
Year 2  
Fall



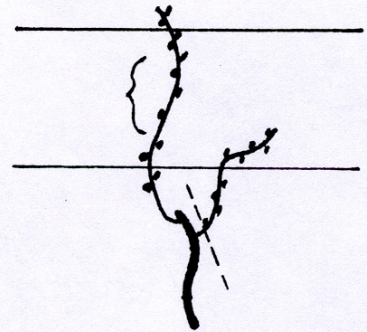
Year 3  
Fall



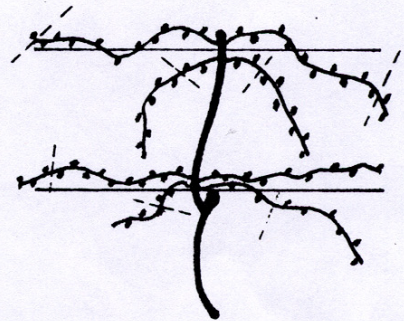
Year 4  
Fall



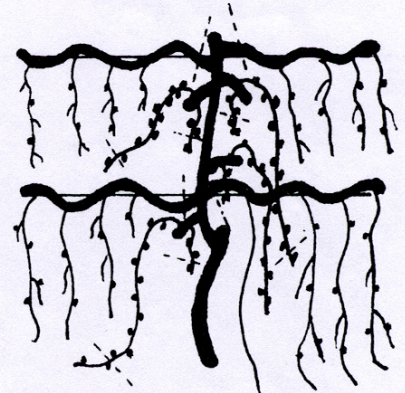
Early Spring



Early Spring



Early Spring



Early Spring

