INTRODUCTION
Grapes have been cultivated since ancient times. Many European grape varieties, brought to California in the 19th century, have provided the basis for today’s thriving grape industry. Today home gardeners still grow some very old European varieties such as Muscat of Alexandria and Mission. Plant breeders have also developed some outstanding new varieties including Flame Seedless and Perlette.

SELECT A CULTIVAR
In our area, Perlette grapes ripen in mid July, are seedless, medium in size, and white in color. Flame Seedless grapes ripen in late July, are medium in size, red in color, and have very firm, crisp berries. Thompson Seedless grapes ripen in mid August to September, are elongate to oval in shape, and white in color. Black Monukka grapes ripen in late August, are elongated, purple to black in color, and are seedless. Concord grapes ripen in September, are green to blue-black, and tend to ripen unevenly. Muscat of Alexandria grapes ripen in mid September, are green to golden in color, and have strong flavor; this variety tends to produce large crops in some years and less in others.

PLANTING AND GENERAL CARE
Good drainage and full sun exposure are key elements in the successful cultivation of table grapes. Raised mounds are recommended if the soil is too heavy.

Land Preparation. To determine soil moisture level, take a handful of soil and squeeze into a ball. If the soil forms a loose, crumbly ball, it can be worked safely without destroying soil structure. Construct your raised mounds so that water will not accumulate at the base of the trunk, as this will prevent serious root rot problems.

Planting. Vines should be set out in January or February. Trim off any broken or damaged roots just above the point of injury. Trim off all canes except the most vigorous one, and prune it back to two buds. Plant adjacent to at least a six foot stake placed 20 inches into the ground for future support. Vines should be spaced 8 feet apart. Irrigate the soil to settle the soil around the roots, which eliminates air pockets. Protect the new vine from rodents with a milk carton or plastic jug.

Care and nutrition. Practice clean cultivation by hoeing and hand pulling weeds the first year, or use mulches. Herbicides should not be used until the trunk develops mature bark in the second or third growing season. Given good drainage, grapes are well adapted to a wide range of soils and generally have few nutritional needs, with the exception of nitrogen, zinc, and possibly potassium. Be careful with nitrogen as high levels of this nutrient may produce excessive vegetative vigor and reduce fruit set, fruit
quality, or both. For nitrogen, use ammonium sulfate at one half pound per vine at fruit set stage (i.e. berries are \(\frac{1}{4}\) inch in diameter). Zinc should be applied as zinc sulfate in a foliar spray, at a concentration of one tenth of a pound per gallon per vine, 2 weeks prior to bloom or at full bloom. Potassium is applied only in a deficient situation, determined by soil testing, as potassium sulfate, 3 to 5 pounds per vine. Apply six inches deep, 18 inches from the trunk, and water in well.

**INSECT AND DISEASE MANAGEMENT**

Powdery mildew and bunch rot are the two diseases of main concern for garden grapes in our area. **Powdery mildew** is a fungus that first appears as small, white or gray, circular patches on leaves or stems. This fungus causes grapes to shrivel or fail to mature. Treatment consists of dusting with sulfur, beginning when shoot growth is 4-6 inches and continued every 10-14 days as long as temperatures stay below 100 F.

**Bunch rot** is a fungus that produces a gray mold, often beginning with a single berry at the middle of the bunch, and spreading to adjacent fruit. Grapes are infected at the flower stage, but the fungus remains dormant until fruit matures. Bunch rot can be reduced by thinning out leaves near bunches or using an appropriate fungicide between bloom and pea-sized berries.

For in-depth discussions of these diseases, please refer to Pest Management Guidelines (PMG)[http://www.ipm.ucdavis.edu/PMG/GARDEN/FRUIT/grapes.html].

**REFERENCES**
