

## Grapes for Central Arizona (5000-7000 Foot Elevations)



At high elevations of Arizona, fruit blossoms are often killed by late spring frosts. Grapes generally bloom later than many other fruits and will often miss the frosts. Even when the first blossoms are killed, they frequently produce some fruit on secondary growth.

Two main climatic factors determine where grapes can be grown: winter coldness and length of growing season. Low winter temperatures can kill the canes, preventing fruit production, as 1-year-old wood produces the fruit. Also, where the growing season is too short, fruit will not ripen.

### SITE SELECTION

A fertile, deep, well-drained soil where there is good air drainage is ideal. The site should be in an area where sunlight is abundant. If available, a north-to-south slope with rows running the same direction is desirable in providing maximum sunlight. Grapes will tolerate moderate alkalinity but not excessive amounts. Adobe (tight) soils are not well suited for grapes; sandy loam is best.

### PLANTING POINTERS

Plant vines 6 ft. to 8 ft. apart. If you have more than one row, plant vines 12 ft. apart between rows. Grape vines need some kind of support for annual growth and production.

Experts advise that tops of vines should be pruned back to 2 buds at planting time. The roots should be pruned only if damaged, as they contain stored food. Roots must be kept moist at all times for good results.

Dig the planting hole wider and deeper than needed to accommodate the root system. Fill in the hole with native soil so the plant will be at the same depth as it was in the nursery. Water thoroughly. Do not add any fertilizer at the time of planting. Mulch the vines with compost, well-rotted manure, straw, hay or leaves.

### CARE AFTER PLANTING

No fertilizer needs to be added during the first year, as new plants are easily burned. It is very important to control weeds, as the competition will slow growth of the vines.

Irrigate newly planted grapes often enough to keep the soil moist but not waterlogged. Timely irrigation, possibly once per week, is especially critical during the first growing season. Once established, water grapes deeply every 2 to 4 weeks. Apply enough water to wet soil 3 to 4 ft. deep. Allow the soil to dry out between waterings.

The only fertilizer element that needs to be applied regularly is nitrogen. If using commercial fertilizer, apply about 1/2 pound ammonium sulfate per year to bearing vines.

### TECHNIQUES FOR FIGHTING COLD INJURY

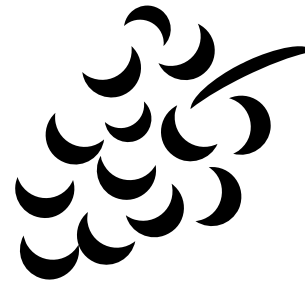
- Double Trunking: Develop vines with 2 trunks so when there is severe cold damage the least injured may be saved.
- Delay final pruning until after the extent of winter injury can be estimated.
- Do not allow excessive fruit load or vine size which delay maturity.
- Maintain healthy vines to promote earlier and more complete maturity of fruit which increases cold hardiness.
- Plant the most cold-hardy varieties.
- Select sites proven by experience to be warmer.

### VARIETY RECOMMENDATIONS

The American varieties (*Vitis lubrusca*), which are most likely to succeed in Central Arizona, are developed from native species found growing wild in North America. Generally, American varieties are recommended because of their cold hardiness.

There are American-European hybrid varieties (*Vitis lubrusca* x *vinifera*) which have sufficient cold hardiness to succeed in certain locations. These hybrids are fast

growers, susceptible to iron deficiency, and generally used for wine. The fruit is of good quality but has a foxy taste. Examples include Baco Noir (red-fruited), Chelois (black-fruited), de Chaunac (black-fruited), and Verdelet (white-fruited).



The mild-climate European varieties (*Vitis vinifera*), such as Thompson Seedless, may be less successful due to winter-killing and shortness of growing season. However, in a variety trial in Chino Valley (elevation 4700 ft.) Thompson Seedless produced vines equal in length to many American varieties.

RED FRUITED VARIETIES

VARIETY	CLUSTER SIZE	BERRY SIZE	VIGOR	USE	COMMENTS
Agawam	large	medium	medium	table	
Caco	medium	large	medium	table, jelly	
Catawba	medium	medium	good	table, juice	late ripening
Captivator	medium	large	good	table	best seeded red dessert grape
Suffolk Red Seedless	medium	medium-large	good	table	sweet and spicy; long loose clusters

WHITE/YELLOW FRUITED VARIETIES

VARIETY	CLUSTER SIZE	BERRY SIZE	VIGOR	USE	COMMENTS
Diamond	medium	medium	medium to good	table	
Golden Muscat	large	very large	medium	table, jelly, juice	good keeper, resembles Niagra
Himrod seedless	medium	medium	medium to good	table, raisins	very productive; late ripening
Interlaken seedless	small-medium	medium	medium to good	table, raisins	early, long, loose cluster
Lakemont seedless	large	medium	good	table, raisins	less cold hardy than Himrod; very early
Niagra	large	large	medium to very good	table, raisins	related to Interlaken and Himrod
Ontario	medium	medium	medium	table, jelly	one of most widely planted
Romulus	medium	small	good	table	related to Interlaken and Himrod
Portland	medium	medium	good	table	requires well-drained soil

BLUE FRUITED VARIETIES

VARIETY	CLUSTER SIZE	BERRY SIZE	VIGOR	USE	COMMENTS
Alden	very large	very large	good	table	
Buffalo	medium	large	medium-high	table, juice, jelly	excellent quality fruit
Beta	medium	small	high	jelly	hardy as wild grapes
Concord	medium-large	medium-large	good-very good	juice, jelly	most popular juice variety
Concord seed-less	very small	very small	good-very good	jelly	low yielder
Fredonia	large	medium-large	good	table, juice, jelly	
Sheridan	large	medium	good	table	
Steuben	large	medium-large	medium	table, juice, jelly	highest quality and most attractive blue
Van Buren	small-medium	medium	medium-good	table, juice, jelly	short season required; very early
Worden	medium-large	medium-large	good	juice	

COLD HARDINESS CHART

VERY HARDY	HARDY		MEDIUM HARDY		LOW HARDINESS
1	2	3	4	5	6
Beta	Concord	Niagra	Steuben	Golden Muscat	Interlaken
	Fredonia	Van Buren	Buffalo	Alden	Romulus
	Worden	Ontario	Portland	Himrod	
	Caco	Catawba	Agawam	Suffolk Red	
	Concord seed-less	Diamond	Captivator	Lakemont	
	Sheridan				

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<http://cals.arizona.edu/yavapai>