Vine Species

www.danielamasterswine.com

**Family**: Vitaceae

**Genus**: Vitis (wine and table grapes)

|  |  |
| --- | --- |
| **Species**  | **Description** |
| *V. Vinifera* | * Origin: Central Europe, Mediterranean, SW Asia
* Quantity: 5,000-10,000 varieties
* Description:
	+ Can thrive on varying soil types
	+ Vigor and ripening periods variable
	+ Rich in anthocyanins
* Disadvantages:
	+ Poor resistance to nematodes
	+ Not resistant to phylloxera
* Subtypes:
	+ *Vitis vinifera sylvestris* (wild European vines, not usually hermaphroditic. Mostly eliminated by phylloxera)
	+ *Vitis vinifera sativa* (cultivated vine, includes all of the classics. Selected to be hermaphroditic with relatively large berries and good fruit set)
 |
| *V. Labrusca*  | * Origin: United States
* Nickname(s): The Great American Concord Grape, Catawha
* Description:
	+ “Slip Skin”: skin easily slips off berries when squeezed
	+ Has a “foxy” musk due to compound methyl anthranilate
	+ Naturally resistant to phylloxera but not as high as other varieties, so not used as rootstock
	+ High in phenolics, so produce strongly-flavored wines
	+ Can withstand high continentality
* Disadvantages:
	+ Phylloxera-prone, sometimes (must look into this)
	+ Poorer grafting capability
	+ “Foxy” flavor no good for quality wines
 |
| *V. Riparia* | * Origin: North America (largest geographical range of any vitis N. America species
* Nickname(s): The River Bank Grape/ Frost Grape
* Description:
	+ Very cold hardy
* Disadvantages
	+ Sour and herbaceous
	+ Berries often sensitive to mildew and black rot
	+ Susceptible to chlorosis on chalky soils
* Advantages
	+ Great for rootstock
		- Is low vigor and can control vigor, encourages early ripening
		- Resistant to phylloxera
	+ Makes cold- and disease-resistant crosses (French-American hybrids)
 |
| *V. Aestivalis* | * Origin: Eastern North America
* Nickname: The Summer Grape/Pigeon Grape
* Description:
	+ Very vigorous
* Disadvantages:
	+ Does not propagate well through dormant cuttings (layering or using green cuttings works best)
	+ Does not like calcareous soil
	+ Poor resistance to phylloxera, so not used for rootstocks
* Advantages:
	+ Inter-specific hybrids of V. aestivalis (like Norton) have useful traits (lower in acid, “vinifera-like” flavor, good tannin structure, excellent disease resistance)
 |
| *V. Rotundifolia*  | * Origin: South of North America
* Nickname: The Fox Grape/Muscadine
* Quantity: Over 300
* Description:
	+ Well-adapted to warmth and humidity
	+ Has very tough skin, highly pigmented
	+ New self-fertile varieties with different aromatic properties are principal cultivars grown in commercial vineyards
* Disadvantages:
	+ Has low sugar content at harvest, usually requires chaptalization
	+ Pulpy texture, tough skin, differential fruit maturation, and separation of fruit from the pedicel on maturation complicate use in winemaking.
* Advantages:
	+ High phenolics so good health benefits
	+ Resistant to pests, Pierce’s Disease, and most resistant to phylloxera
 |
| *V. Rupestris* | * Origin: Southern and Western North America
* Nickname: The Rock Grape
* Description:
	+ Rather shrubby, rarely climbs
	+ Heavy use of grazing and herbicides have killed much of the population.
	+ Used for breeding French-American hybrids and many rootstocks
* Disadvantages:
	+ Poor lime tolerance, susceptible to chlorosis. Rupestris St. George rootstock once used in Europe but failed to provide lime tolerance needed
	+ Poor nematode resistance
* Advantages:
	+ Roots and grafts easily
	+ Rootstocks are vigorous, deep rooting system, good phylloxera resistance. Good choice for poor soils with limited water availability
 |
| *V. Coignetiae* | * Origin: Asia
* Nickname: Crimson Glory Vine
* Description:
	+ Very vigorous
	+ Rich in color and extract
	+ Used in Korean and Japanese wines
	+ Also used as ornamental plant in E. Asia because of vibrant color (see nickname)
* Disadvantages:
	+ Very bitter, but can be softened with addition of sugar
* Advantages:
 |
| *V. Amurensis* | * Origin: Amur Valley in Russia and China
* Nickname: The Amur Grape
* Description:
	+ Well suited to wetter areas normally too cool and wet for grapes (NW Europe, N Russia, Pacific NW)
	+ Prefers loose acidic soil with no excess lime
	+ Very acidic to sweet depending on ripeness, thick skins, 22-23% sugar at ripeness, berries can be sour
* Disadvantages:
	+ Not drought-resistant (requires 700 mm rain)
	+ Thicker skins and sour nature make winemaking difficult
* Advantages:
	+ Resistant to cold and frost (Can tolerate winter temps down to -45C and the root zone of the soil to -16C)
	+ Resistant to anthracnose and ripe rot
	+ Moderately resistant to downy and powdery mildew
 |
| *V. Vulpina* | * Origin: Eastern US
* Nickname(s): The Frost Grape, Winter Grape, Fox Grape
* Description:
	+ Found in moist or dry soils in woods, flood plains, and ravines
	+ “Vulpina” means fox-like; was believed that foxes were attracted to this type of vine (does not refer to foxy flavor)
	+ Doesn’t do well in cold temps below -23F
	+ Very round and tart/acidic
	+ Known as Frost Grape because it becomes sweet after a frost due to a drop in acidity levels as the grape decomposes
 |
| *V. Berlandieri*  | * Origin: S. USA and Mexico
* Nickname: The Fall Grape
* Description:
	+ Vigorous, deep-rooting
	+ Fruit high in sugar and acid
* Disadvantages:
	+ Cuttings have poor ability to root
* Advantages:
	+ Very lime-resistant, so often hybridized with *riparia* and *rupestris* to form lime-resistant rootstock
 |