Vine Species

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**Family**: Vitaceae

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

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| **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 |