Frontenac is a French-American hybrid grapevine that is a result of research and cross-breeding by the University of Minnesota. First released in 1996, the vines produce loose clusters of dark and highly acidic berries. Typically used to make red wines, Frontenac is highly resistant to both cold and disease. The variety is now the most commonly planted wine grape in Minnesota.

Frontenac is a very cold hardy vine and has borne a full crop after temperatures as low as -30 F. It has near-immunity to downy mildew. Frontenac's small black berries are produced on medium to large clusters that are usually slightly loose. As a result, berry splitting and bunch rot have been rare, even in wet years. Frontenac has been a consistently heavy producer and sometimes requires cluster thinning. Frontenac is a vigorous variety and usually becomes established very quickly. Typical spacing on fertile soils would be about 8' between vines. Frontenac ripens in late-midseason, about 10 days after Foch. It is important to let the fruit hang long enough to fully mature in order to reduce the acidity to workable levels. Frontenac is a good sugar producer with 24-25 brix not uncommon. Frontenac wine typically has a pleasant cherry aroma with berry and plum evident in many cases. The color is usually a garnet red. Malolactic fermentation is essential to reduce the wine's high acidity.
Landot Noir

Landot Noir (aka Landot 4511) is a very vigorous variety with moderate winter hardiness to about –20 F. It has late bud break and early maturity. Good downy mildew resistance. Has been made into medal-winning wines.
Marechal Foch

Marechal Foch is a vigorous, early-ripening variety, with good winter hardiness. It is well suited to cold-climate regions in Canada’s Niagara Peninsula and Nova Scotia. It is also popular in New York’s Finger Lakes, the north Atlantic States, and in viticultural areas of the northern Midwest. Still commercially important, this French-American hybrid developed by Eugene Kuhlmann is reportedly the result of a North American riparia-rupestris and a vinifera (Goldriesling) pairing. This is identical to the parentage of the Leon Millot grape. However, some believe the North American parent is really Oberlin Noir, a Gamay-riparia cross once commercially cultivated in Burgundy. Whatever the true genealogy of the cultivar, Marechal Foch is often considered to possess Burgundian characteristics, having a vibrant, deep purple color, with a light-medium structure and dark berry fruit characteristics. Some tasters find the similarities to Burgundy Pinot Noir become more pronounced with age.
St. Croix

Many award-winning red wines in Minnesota have been produced from St. Croix. It is also the main red wine variety at many wineries in Quebec. Clusters of St. Croix are medium and slightly loose, with the berries resembling those of Beta in size and color. St. Croix ripens in midseason in the St. Paul area of Minnesota. The acidity is moderate, but the grape struggles to make 20o Brix in sugar. This is true even in hot summer climates, such as in Missouri. The juice is a pale rose and the wines can be quite dark in color. The lack of tannins in St. croix wines is fairly common and needs to be corrected by blending. The wines often suffer from a tobacco-like nose. However, fruitier wines have been made from St. Croix grapes fermented with semi-carbonic maceration techniques. The press run fraction can produce some very special wines.

St. Croix tends to be vegetatively vigorous, but not terribly productive of fruit, so care must be taken in pruning to leave a sufficient number of buds to balance the vegetative vigor. Typically, St. Croix vines will survive mid-winter cold down to -32 to -33 o C without injury. The roots are a bit less hardy and need snow cover in really cold winters. Grafting on a superhardy rootstock may slightly enhance its hardiness and productivity. St. Croix was developed by Elmer Swenson in Osceola, Wisconsin from a cross of ES 283 x ES 193. Perfect flowers.
Swenson Red

'Swenson Red' produces large, crisp, high quality table grapes. The vines need winter protection. Like 'Edelweiss,' Swenson Red was introduced by Elmer Swenson and the University of Minnesota when Mr. Swenson was on the staff at the U of M Horticultural Research Center. This midseason, red, seeded grape is one of the highest quality selections produced by Mr. Swenson with its large clusters, refreshing flavor, tender skin, and crisp texture.
Baco Noir

Baco noir (pronounced BA-koh NWAHR; Baco noir is also called Baco 1) is a hybrid red wine grape variety produced from a cross of Vitis vinifera var. (Folle Blanche, a French wine grape) and an unknown variety of Vitis riparia (an indigenous North American grape species). Baco noir was first created by French wine hybridizer Maurice Baco (hence the name of the grape).

At one time Baco noir was commonly grown in France, but by European Union regulation, the commercial use of hybrid grape varieties is restricted. In 1951 the variety was brought to the cooler viticulture regions of the United States, such as New York, Michigan, Mississippi, Wisconsin, and Pennsylvania. In New York there are an estimated 240 hectares of Baco noir currently grown. In 1955 the variety was brought to Canada, where the "George" clonal variety is commonly used. Within Canada, Baco Noir is far more commonly grown in Ontario than in British Columbia.

Baco Noir was the victim of a vine-pull program in Canada in the early 1980s, which means that there are few older plots of this varietal left in Canada. Despite this, Baco Noir (single varietal or in blends) remains a commonly produced wine in many Canadian wineries; notable current examples of finely made Canadian Baco Noir include Henry of Pelham's and Lakeview Cellars' "Baco Noir Reserve".[1]

Baco noir produces a medium body, deeply tinted, acidic red wine which is fruit forward and often carries aromas of black fruits and caramel. Ageing potential is 5-8 years on average for good examples of this wine.
Leon Millot’s ability to ripen early in short growing seasons keeps it commercially important to wineries in Michigan, Ohio, and along the Atlantic seaboard as far North as Nova Scotia. Leon Millot typically produces structured red wines with rich color and round approachable tannins. This grape is the offspring of a North American *Riparia-rupestris* and *Vinifera* (Goldriesling) parents. Earlier in the 20th century, Leon Millot became a relatively important hybrid in northern French regions such as Alsace region, where it was known as "le medicin du vin" (or "wine doctor") for its ability to increase the color intensity of a red wine (e.g., Pinot Noir) without perceptibly altering the quality. Today, its use has all but been legislated out of existence in French vineyards, following the introduction of AOC regulations in the 1930s.

Some consider the wine to be superior to Foch because of more distinct berry aromas. The vigorous vines produce small, tight clusters of blue-black berries. Early ripening (veraison by as early as August 16, along with Foch and Severnyi) allows the grower and winery to coordinate harvest. Wine quality is good, with fresh berry aromas, and it blends well.
Concord grapes are a cultivar derived from the grape species *Vitis labrusca* (a.k.a. fox grape) which are used both as table grapes and wine grapes.

The skin of a Concord grape is typically dark blue or purple, and often is covered with a lighter colored "bloom" which can be rubbed off. It is a slip-skin variety, meaning that the skin is easily separated from the fruit. Concord grapes have large seeds and are highly aromatic. They are often used to make grape jelly, grape juice, grape-flavored soft drinks, and candy. The grape is sometimes used to make wine, particularly kosher wine, though it is not generally favored for that purpose due to the strong "foxy" (sometimes described as candied-strawberry/musky) flavor. Traditionally, most commercially produced Concord wines have been finished sweet, but dry versions are possible if adequate fruit ripeness is achieved.

Concord grapes may have health benefits, such as reducing hypertension and the negative effects of second-hand smoking, but the results of studies on these benefits are as yet inconclusive.
De Chaunac

Originally labeled as Siebel 9549, this French-American hybrid was later renamed De Chaunac after the Canadian enologist, Adhemar F. de Chaunac. At one time, it was the most planted hybrid in the cool vineyards of Canada, and the Northeast and Midwest United States. It can be very productive and winter hardy to -15 F (approx. -26 C.). De Chaunac yields a balanced and fruity wine of good quality, with generally low to mild tannin levels.
Delaware

Delaware is a Native American hybrid grape of largely unknown parentage although it is believed to have some *V. vinifera* somewhere in its lineage. Of considerable historic and commercial interest, the variety has been in cultivation since the middle of the 19th century in Ohio. Today, this versatile grape still finds itself commercially valuable in the Northeast and Midwest where it is widely used in the production of everything from dry, to sweet (notably ice wine) and sparkling white wines of good quality, often with spicy aromas. The vine can be very productive when grafted onto phylloxera resistant rootstock and planted on fertile, well-drained soils, but its susceptibility to fungal diseases has limited its use in more humid regions, compared to similar vines.
Isabella

Reportedly named after a famous southern belle, Isabella was allegedly discovered in North Carolina. This grape is believed to be a hybrid of a Vitis labrusca grape and an unknown Vitis vinifera.

In New York State, small acreages of Isabella can still be found. Here, it is used in the production of some varietal and sparkling wine and as a table grape. Cold resistant, Isabella's greatest success may be in the former Soviet Union. Here, it is used for both juice production and wine making.

In Eastern Europe, Isabella is called many names, such as Seksarda in Croatia, and Izabella in Hungary and Georgia. As Fragola, it is cultivated in the cooler areas of Italy and Australia. In New Zealand, the Kiwi version is called Albany Surprise. Large acreages of this grape are grown in Brazil, where it is easily the leading vine. It is found in other areas of South America, as well as in Portugal, and Japan. Altogether, the vine has more than 50 aliases and can be found in a number of far flung regions.
St. Vincent

Late ripening (Oct) harsh-cold hardy red wine grape variety grown in mid-Ohio that is thought by some to be a Dr. Hansen release from the Missouri State Grape Research Station at Mountain Grove. If the assumption is correct it is a V. vinifera/complex T. V. Munson american hybrid. Reported in the literature as a discovered well-adapted "provenance unknown" vine in Missouri during the mid-1970's. Has some ampelographic similarities to the DeChaunac variety. Used in Ohio to produce wine with mild tannins and elevated acid content best enhanced with french oak flavors. Finished wine is regarded by some as vaguely similar to a young Italian "Chianti" beverage.
Oberlin Noir

Oberlin Noir (595) is reportedly a hybrid created from the cross between a Gamay and American riperia variety. Reported by some to be one of the parents of Marechal Foch. Used to produce a tannic, somewhat rustic red wine with good aging ability. Quite widely grown in France due to its care-free hardiness.
Edelweiss is a very winter-hardy grape variety derived from crossing the Minnesota 78 and Ontario grapes. It was developed by Elmer Swenson in 1980 in cooperation with the University of Minnesota, and produces a green- to amber-colored, early-ripening fruit. Edelweiss can be used to make white wine and is also an excellent table grape.

The clusters are large and rather loose, weighing a pound or more. Early picking of the grape is essential for making a wine. Should Edelweiss not be harvested early, the completely ripe labrusca flavoring becomes too strong for the palate of most. Edelweiss was first developed as a table grape. This variety bears the Minnesota winters, but mulching is encouraged. During this process be wary when tying the shoots together because they break easily. Edelweiss has strong resistance to disease and fungus and can tolerate negative thirty-five degree temperatures. Edelweiss has best results as a semi-dry white riesling table wine.
La Crescent

Developed to be tough and cold-hardy, La Crescent is the result of a St. Pepin x Swenson cross. Described as making a Germanic-natured wine with some character reminiscent of Riesling, La Crescent has been successful in producing sweet white wines, and as a component of blends. As with all the Swenson and University of Minnesota vines, La Crescent’s best attribute is its winter-hardy nature. It is reportedly capable of withstanding temperatures as low as -36 F. (approx. -38 C). Only moderately vigorous and productive, La Crescent is only slightly vulnerable to Powdery Mildew and Black Rot, and somewhat susceptible to Downy Mildew on its leaves.
LaCrosse is a part of a long line of successful Elmer Swenson-created grapes. A hybrid of Seyval Blanc and the Minn. 78 x S.1000, the vine produces grapes capable of making good quality, fruity white wine. Compared to its parent Seyval, the vine is cold hardier, and ripens slightly earlier. Grown in Minnesota and Wisconsin, the high-yielding vine will do well in all the upper Midwest states with short growing seasons and cold winters. It has average susceptibility to the usual diseases.
Prairie Star

This is a mid-season white wine grape from Elmer Swenson. It is usually harvested at 20 to 22 Brix during the third week in September in the St. Paul area. Prairie Star has long, slightly loose clusters that, on heavy soils or on grafted vines, can average 177 g (range 120-240 g). On lighter or less fertile soils, cluster size will be closer to the lower end of this range and production will be less. Berries are small-medium, averaging 2.5 g. The fruit matures to excellent sugar and acidity for white winemaking. The typical wine from Prairie Star is neutral, but not foxy. It has a fullness in the mouth and finish that is uncommon among our hybrid grape varieties. In some years, wines from Prairie Star develop a delicate floral nose that allow them to stand as single variety wines. In most years, however, Prairie Star is best used as a blending component to add body and finish to thinner white wines. The vine is one of the hardiest white wine varieties, suffering little damage in all but the harshest, -40 F (-40 C) winters. At some Minnesota vineyards, it has survived even these conditions with little injury. Prairie Star also is rather resistant to mildew diseases, with the exception of Black Rot and Anthracnose, to which it is moderately susceptible. Poor fruit set has been observed in some seasons at a few sites. This variety has a tendency for its shoots to break off in strong winds early in the season. Low cordon training systems, using catch wires to secure the shoots, should be explored to prevent this problem. High cordon training systems should be avoided. It was developed from a cross of E.S. 2-7-13 x E.S. 2-8-1. Perfect flowers.
St. Pepin is a modern hybrid variety of wine grape, mostly grown in North America. It produces grapes suitable for making fruity white wines similar to Riesling or as a base for blended wines. The grapes also make a good seeded table grape for eating. It has the benefits of early ripening and when hardened properly in the fall it is winter hardy to at least -25 F. As such it best suited to growing in more northern climates.

St. Pepin was produced and patented by Elmer Swenson circa 1970. It is a hybrid of the male Seyval blanc crossed to a seedling of Minnesota 78 by Seibel 1000 (aka Rosette). Unlike most modern grapes it is a pistillate female and so needs to be planted next to male vines from a close sibling variety to achieve pollination.
Aurore

A 19th century French hybrid, Aurore was created by Albert Seibel and named after the Roman goddess of the dawn. At one time, Aurore was the most widely planted non-labrusca grape in New York State. In recent years, its acreage has been in constant decline, as producers have replaced it with other French/American hybrids and Vitis vinifera varieties. Aurore is used for a range of white wine styles including dry, off-dry and sparkling. This grape's early ripening tendency will be its saving grace, as it attempts to hold on to acreage in some climatically challenged states.
Cayuga White

Cayuga White, named at Geneva in 1972, is one of the most productive and disease-resistant varieties grown in the eastern U.S. Its wine, which has medium body and good balance, has been rated highly. This versatile grape can be made into a semisweet wine which brings out the fruit aromas, or, using oak aging, into a dry, less fruity wine. When harvested early, it may produce a very attractive sparkling wine with good acidity, good structure, and pleasant aromas. When overripe, however, it can develop strong hybrid aromas with slight American overtones. Its excellent cultural characteristics and high wine quality make it a promising variety for the future.
Elvira

Reportedly discovered in Missouri in 1870, this old-line complex american labrusca/riparia/vinifera parentage variety is now considered to produce very mediocre and strongly "fox" flavored sparkling white wine blends. Vulnerable to fruit cracking because of thin skin, the grape typically has high acidity. Ripening at same time as Concord, it is resistant to Mildew and its general hardiness recommends it for difficult growing areas. A new variety was released in the 1970's by the Ontario Horticultural Research Institute of Canada named Ventura that upgraded the older cultivar in its resistance to fruit cracking.
Golden Muscat vines are moderately cold-hardy and late-ripening with large, tight clusters of juicy berries producing a very distinctive, pleasant muscat flavor.
Kay Gray

Kay Gray was developed by the Wisconsin grape breeder Elmer Swenson circa 1980 and is named after a family friend. In some environments it can produce an odd flavored wine that is vastly improved by modest levels of blending. Had it not been for its exceptional disease resistance and winter hardiness it probably would not have been selected. In subsequent years Swenson used this grape as a parent for the more conventionally flavored cultivars 'Louise Swenson' and 'Brianna'.
Niagara grapes are a variety of the North American grape species *Vitis labrusca* and are used as table grapes and for wines, as well as jams and juice. Niagara is the leading green grape grown in the United States. The Niagara grape was created in Niagara County, NY in 1868 when C.L. Hoag and B.W. Clark cross-bred Concord grapes with white Cassady grapes. It was first sold commercially in 1882.

Niagara grapes are considered to be poor shipping grapes, and so are usually only found near where they are grown. They are most commonly found in the United States in New York, Pennsylvania, Michigan, Washington, and Ohio, and are also grown in Canada, Brazil, and New Zealand. While only rarely available fresh outside of these areas, Niagara grapes are well known to most American consumers as the source of most white grape juice.

The fresh grape is large and juicy, round to oval-shaped, pale greenish-white in color and has a sweet, very pleasant aroma. It also has a sweet and generally pleasant flavor, sometime being described as "foxy".

One reviewer attempted to characterize the "foxy" description. In analyzing the Niagara grape, he detected aromas like candied lemon rind, a Riesling-like diesel aroma, flowery jasmine-like notes, and what he called "a high-toned, candied muskiness." This latter descriptor he felt was the primary element of the term "foxy". His opinion of wines made with the grape is that they have unique and interesting properties that are not well-known due to Niagara's reputation as a less-than-optimum wine grape.

A diesel aroma in wine, surprisingly, is considered to be a positive attribute, but it can be excessive in wines made with the Niagara grape. One opinion is that Niagara grape skins should not contact the must for too long a time after pressing to avoid an excess of this characteristic.
Traminette

This white wine-producing hybrid, a cross of Gewurztraminer and Joannes Seyve 23-416, produces excellent quality wine with distinct Gewurztraminer characteristics, including a similar aroma. Only released at Geneva, New York, in 1996, Traminette has steadily grown in commercial significance in the Empire State, Michigan and Pennsylvania ever since.

Traminette is suited to several different wine styles, including dry and sweet versions, with the former displaying good viscosity. Aging well, wine produced from this grape develops honey and apricot flavors in two to five years. The grape’s fairly high acidity and low pH levels harmonize with its typically fresh fruit aromas and floral-spicy flavors. However, Muscat-like flavors may develop, if long skin contact is employed prior to fermentation.

Much more winter hardy than Gewurztraminer, Traminette is suitable for cool climates, and matures in late mid-season, usually early to mid-October. In warmer areas, increased bitterness and a high pH must can become a problem. If so, shorter skin contact time is recommended. Bearing large clusters, the grape has good yields in the vineyard, delivers excellent fruit quality, and has good disease resistance to Powdery Mildew, black rot, and Botrytis.