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Grape varieties for New York State

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In New York State, grapes are grown for use as juice, wine, fresh fruit, jelly, and jam. The purpose of this bulletin is to list and briefly describe both those varieties that are grown commercially for these purposes as well as additional varieties that have been found to be of interest to those with home vineyards and roadside markets.

LEADING COMMERCIAL VARIETIES

In the 5-year period 1973 through 1977, an average of 73 per cent of the New York grape crop delivered to processors consisted of the Concord variety. The leading wine varieties, Niagara, Catawba, and Delaware, totaled 16 per cent. Elvira and Ives accounted for 2.5 per cent, and the French hybrids 7.5 per cent. The remainder of approximately 1 per cent was composed of miscellaneous varieties, including some of *Vitis vinifera*. The acreage of all New York grape varieties is shown in Table 1.

Table 1. New York grapevine acreage of all ages in 1975 by variety¹.

Variety	Acres	Variety	Acres
1. Concord	27,568	18. White Riesling	123
2. Catawba	3,477	19. Chardonnay	107
3. Niagara	2,355	20. Colobel	97
4. Delaware	2,051	21. Rosette	95
5. Aurore	1,727	22. Isabella	87
6. DeChaunac	899	23. Chancellor	75
7. Baco noir	643	24. Vincent	47
8. Ives	596	25. Vignoles	46
9. Elvira	538	26. Leon Millot	41
10. Dutchess	345	27. Steuben	40
11. Marechal Foch	276	28. Vidal 256	35
12. Rougeon	225	29. Verdelet	24
13. Seyval	187	Other	314
14. Cascade	183		
15. Fredonia	166	Total	42,653
16. Chelois	156		
17. Diamond	130		

¹Source: N.Y. Orchard and Vineyard Survey 1975. N.Y. Crop Reporting Service, Albany, NY Release No. 31, June 1976.

Concord is grown on a greater variety of soils and under a wider range of climatic conditions than any other variety of American grape. Use of this fruit for many purposes gives it a large market outlet. It is the only important variety for sweet juice, jelly, and preserves, and it is also used in quantity for wine production.

Concord is a handsome blue-black grape. The berries and clusters are of medium size. It is a typically American-type grape with a rather tough skin that separates readily from the pulpy flesh (slipskin). The pronounced fruity flavor of Concord makes it a good dessert grape.

In a late season and in less desirable locations, the variety may fail to attain full maturity on heavily loaded vines.

It is slightly susceptible to powdery mildew and susceptible to black rot.

Niagara, the leading American-type white grape, is used for fresh juice and for wine. It is not as fully cold-hardy as

Concord, but it can be successfully grown in any of the grape districts in New York. Niagara is moderately susceptible to the major grape diseases.

Catawba is a late ripening, red, American-type grape. The variety requires the best vineyard sites in the most favorable locations in order to reach full maturity. The vines are vigorous, hardy, and productive, but the foliage is somewhat susceptible to fungus diseases which can be controlled by spraying. Because of its high quality, Catawba is an important constituent of New York State champagnes and table wines.

Delaware is one of the highest quality of the American grapes, both for table use and for white wine. The variety, which ripens two or more weeks before Concord, has small, compact clusters with small, red berries. The tender skin is subject to cracking when fall rains occur near harvest, and the variety is susceptible to fungus diseases, particularly on the foliage. Delaware requires a deep, fertile, well-drained soil for satisfactory vine growth, and on such soils, with good management may produce yields as high as those of Concord. On less favorable soils and on old vineyard sites, the variety should be grafted on a phylloxera-resistant rootstock in order to ensure vigorous growth. A discussion of the value of rootstocks in New York appears in New York Food and Life Sciences Bulletin No. 45, *Resistant Rootstocks for New York Vineyards*.

AMERICAN VARIETIES OF LIMITED ACREAGE

Elvira is a white wine grape with the American species *Vitis riparia*, the River-bank or Frost Grape, in its ancestry. The variety ripens at Concord season and is hardy, productive, and disease resistant. The thin skin and very compact clusters may result in cracking of the berries in some seasons.

Ives is a black grape of the *Vitis labrusca* type and is used in red wines. It is very subject to damage by the air pollutant, ozone, and is hence often relatively lacking in vigor and productivity. Vigor and productivity are often improved when Ives is grafted on a vigorous rootstock.

Dutchess is a late-ripening white grape related to *Vitis vinifera* or the European grape. It produces a white wine of high quality. The vine is susceptible to powdery mildew and frequently is injured by the low temperatures that occur during the coldest winters in New York. It should be planted only in the more favorable sites.

Isabella is an old, black, labrusca-type grape variety used for wine. It is one of the most common grapes of its type in other parts of the world, but in New York it has been largely replaced by other varieties. It is somewhat tender and subject to winter injury.

Diamond resembles Niagara in fruit and Concord in vine. As a dry table wine, it is one of the most distinctive and desirable of the American types.

Fredonia is a black Concord-type grape that ripens about two weeks before that variety. It lacks the pronounced and typical Concord flavor so desirable in juice and jelly. With recommended pruning, it may equal Concord in vigor and production. The fruit is susceptible to downy mildew.

FRENCH AMERICAN VARIETIES

The French-American varieties have been derived from crosses between *Vitis vinifera* and a number of wild American species. The crosses were made by French hybridizers who were seeking varieties that would be resistant to the phylloxera or root-louse and that would produce wines acceptable to French standards. These grapes are usually identified with the name of the originator plus a number. Many have now been given names.

While the American varieties nearly all contain *Vitis labrusca* in their parentage, the French have primarily used other American grape species with different fruit and plant characteristics. For this reason, the two groups of hybrids are quite distinct.

The shoots of most French-American varieties tend to grow more upright than American varieties. The leaves characteristically have deeper sinuses, generally appear to be more glossy, and lack the heavy tomentum so common on the underside of the leaves of *Vitis labrusca* and the American varieties. The flavor of the fruit is generally more neutral, lacking the fruitiness of our native varieties.

The following French-American varieties are listed according to color and season of ripening, from early to late.

RED VARIETIES

Marechal Foch (Kuhlmann 188-2) is a very early ripening, small-clustered, small-berried black grape that can produce an excellent red table wine. The vines are hardy and medium in vigor and production. Marechal Foch should be grafted on a resistant rootstock to ensure adequate vigor. Birds can be a problem.

Leon Millot (Kuhlmann 194-2) is much like Foch in fruit and vine. It is early ripening with a high sugar content. The wine is similar to that of Marechal Foch.

Castel 19-637 is a very vigorous, winter-hardy variety. It is early ripening and has large clusters of small, blue berries which are very attractive to birds. It produces a dark red table wine.

Cascade (Seibel 13053) is an early ripening blue grape with medium to large loose clusters. It is productive and hardy. The fruit is very attractive to birds. The wine is somewhat light in color. It is very sensitive to soil-borne virus diseases and for that reason is rarely planted now.

Baco noir (Baco No. 1) is an extremely vigorous and disease-resistant variety used for red wine. Buds begin to grow early in the spring and may be subject to late spring frost injury. It is only moderately resistant to winter cold damage, and is sensitive to attack by soil-borne virus diseases.

De Chaunac (Seibel 9549) is currently the most widely grown blue French-American variety in New York. The fruit matures well and wine samples have received high ratings. It is moderately hardy, is relatively free from fungus disease problems, and is less susceptible to bird damage than some other varieties. It is subject to damage from soil-borne viruses. Its vines will overcrop and lose vigor unless they are thinned.

Chelois (Seibel 10878) is a healthy, vigorous, and productive variety. Its fruit is used for red table wine. The vines are only moderately winter-hardy, especially if over-cropped. Its clusters are compact and consequently the berries may split in some years.

Rougeon (Seibel 5898) is hardy but somewhat erratic in production. The wine is of high color and is used for blending.

Rosette (Seibel 1000) was one of the first of the French-American varieties to be grown in New York. The vines are hardy and moderately productive. The fruit lacks the intense color of some other red wine varieties and is used for rose wines. Newer varieties are replacing this grape.

Chancellor (Seibel 7053) is widely grown in France. It is quite hardy and productive. The wine is of highest quality. The fruit is very susceptible to early downy mildew infection.

Colobel (Seibel 8357) is a "teinturier," or a variety with highly colored juice, used for blending with paler wines. The vines are moderately hardy and productive.

WHITE VARIETIES

Aurore (Seibel 5279) is the most widely planted white French-American variety in New York. The vine is hardy, vigorous, and productive. The fruit ripens early.

Vignoles (Ravat 51) makes a fine white wine. The clusters are compact and the berries are subject to cracking in wet seasons. The vine is of medium vigor and production, but hardy.

Verdelet (Seibel 9110) is a beautiful yellow-gold dessert and wine variety. The grape tends to overbear and requires careful control of the crop by thinning. The variety is also subject to winter injury so that it has been infrequently planted in recent years.

Seyval (Seyve-Villard 5-276) is a high quality, mid-season, white grape that produces a fine white wine. It tends to overbear and must be cluster thinned to ensure proper ripening and to maintain vine size.

Vidal 256 is a late ripening, white, hardy, heavy producer. The wine is neutral and is rated good to very good.

Villard Blanc (Seyve-Villard 12-375) is a regular producer of large, loose clusters and is highly recommended for areas with a somewhat longer season than Geneva; the wine is very good and the fruit is useful as a dessert type when ripe.

NEWLY INTRODUCED WINE VARIETIES

There is need in New York for grape varieties which are winter-hardy, which tolerate diseases and which produce high quality European-type table wines. The French-American varieties have been planted to meet this need; however, none of them were specifically selected for the growing conditions of New York. In order to better meet this need, there are active wine grape breeding programs in Vineland, Ontario, Canada and in Geneva, New York. The following varieties have been produced from these programs.

Cayuga White, formerly identified as New York 33403, or G.W. 3, was named in 1972 by the Geneva Station. It produces a fruity, European-type white table wine of very good to excellent quality. The vine is vigorous, very productive, moderately hardy, and worthy of wide trial.

Veeblanc is a white table wine variety named by the Horticultural Research Institute, Vineland, Ontario, Canada in 1977. It originated from the cross, CascadexSeyve-Villard 14-287. It is reported to be more winter-hardy than Chelois, and to have no special disease susceptibilities. There has been little experience in New York, as of yet, with this new variety.

Ventura was produced in Ontario, Canada. It is the result of the cross, Chelois x Elvira. Its fruit resembles Elvira, but is resistant to cracking. The vine is very winter-hardy.

Vincent from the Horticultural Research Institute of Ontario at Vineland, Canada, is a dark blue grape with dark juice. It produces wine that is useful for blending and its wine ratings have been high. Care must be taken to control powdery mildew.

VITIS VINIFERA GRAPES

Certain varieties of *Vitis vinifera*, notably White Riesling and PinotChardonnay, because of their relative winter hardiness and wine quality, are being grown commercially on a limited scale in New York. A combination of the best sites in areas that have the least extreme winter lows, plus the most skilled management is required to offset winter injury to buds and trunks and to ensure commercially consistent cropping. The vinifera varieties should always be grafted on resistant rootstocks when grown under New York conditions. The white varieties are more successfully grown than the red, but all must receive very special care for success.

Chardonnay is the variety from which the best of the famous white wines of the Burgundy area of France are produced. The quality of the wine made from these grapes grown in New York can be outstanding.

White Riesling is the grape from which the finest wines of the Rhine and Moselle districts of Germany are made. This grape, too, when grown in New York, may produce wines of characteristic varietal flavor and bouquet of the highest quality.

Gewurztraminer is a red grape that is grown in Germany and Alsace to produce white wines with a pronounced spicy, aromatic flavor.

Pinot noir is one of the high quality wine grapes of the world. From it are made the best of the famous red burgundies. This is a variety of modest production and is more difficult to grow in New York than the white grapes listed previously.

Cabernet Sauvignon is another of the renowned red wine grapes of the world and is famous in the Bordeaux wines of France. It has been less winter-hardy than the best white vinifera varieties. The fruit may fail to ripen properly in some years in New York.

Table 2. Varieties for the home winemaker.

	Early	Midseason	Late
White Wine	Aurore Verdelet	Delaware Niagara Diamond Elvira Cayuga White Seyval Vignoles Veeblanc Ventura	Dutchess Catawba Villard Blanc Vidal 256 Chardonnay White Riesling
Red Wine	Marechal Foch Leon Millot Cascade Castel 19-637	Fredonia Buffalo Bath Baco Noir De Chaunac Chelois Rougeon Concord	Isabella Steuben Rosette Chancellor Vincent Ives Colobel

OTHER VARIETIES FOR THE HOME VINEYARD AND ROADSIDE MARKET

For the home vineyard and roadside market, a collection of varieties that mature over a season of from eight to ten weeks may be grown. Some varieties can be stored under refrigeration. A number of these varieties are listed in Table 3 and below.

Van Buren is an early ripening Concord-type grape. It is hardy, but somewhat susceptible to downy mildew.

Ontario is the best early ripening American-type white grape. It is vigorous and productive.

Seneca is an early ripening white grape with European-type fruit of the highest dessert quality. The vine is moderately hardy and is susceptible to mildew.

Schuyler is an early ripening black grape that ripens at least two weeks before Concord. The vine is very productive, but rather cold-tender and requires severe pruning and fruit thinning to prevent overcropping.

Alwood is an early ripening Concord-type variety released from the grape breeding program of the Virginia

Table 3. Dessert varieties recommended for the home vineyard and roadside market.

Fruit Color	Very Early	Early	Midseason	Late Mid-season	Late
White or green	Interlaken Seedless (E), (S)	Ontario (A) Himrod (E), (S) Seneca (E),	Niagara (A), Lakemont (E), (S)	Romulus (E), (S)	Golden Muscat (A)
Red		Canadice (A), (S)	Delaware (A) Suffolk Red (E), (S)	Naples (A)	Yates (A) Catawba (A) Urbana (A)
Blue, reddish-black or black	VanBuren (A)	Schuyler (E) Alwood (A) Price (A)	Bath (A) Buffalo (A) N.Y. Muscat (A) Monticello (A) Glenora (E), (S)	Concord (A) Steuben (A) Alden (E)	Sheridan (A)

A = American Type, Slipskin
E = European Type in Fruit Texture, Non-Slipskin
S = Seedless

Polytechnic Institute (VPI). It is hardy, productive and the fruit maintains its quality until late in the season.

Price is an early ripening American-type variety from VPI. It has moderate-sized clusters containing large berries. It is winter-hardy and productive.

Bath is an attractive, productive black grape with a mild labrusca flavor. It ripens about a week before Concord and may require careful pruning or thinning to prevent over-cropping. It is very subject to mite infestation.

Buffalo has the finest dessert quality of the early ripening black grapes. The vines are moderately hardy and the fruit holds up well in storage.

New York Muscat is a reddish-black grape with a rich muscat flavor. The fruit makes a pleasing red muscat wine. The vines are vigorous and hardy and the fruit ripens approximately with Delaware.

Monticello is a dark red grape also from VPI. It has a spicy flavor similar to that of Steuben. The vines are vigorous, productive and moderately winter-hardy.

Naples is a winter-hardy variety with larger clusters than Delaware, but it is otherwise similar in flavor, color, and berry size. It is only moderately vigorous and cluster thinning is required. The fruit stores well.

Steuben is a bluish-black grape that ripens shortly after Concord. The clusters are long, tapering, and compact and the flavor is sweet with a spicy tang. The vines are moderately vigorous, hardy, and productive. Steuben is also of interest for wine.

Alden is a dark red variety with large clusters and berries. It has an adherent skin and good texture. It has a

pleasing flavor when fully mature, but unless it is cluster thinned, it will rarely develop its potential quality.

Yates is a hardy, late ripening red grape with juicy sweet flesh and tough skin. It is an excellent storage variety.

Urbana is a late ripening, large-berried variety with a tough skin. The fruit is subject to downy mildew infection. This variety stores unusually well.

Sheridan is a late ripening black grape that extends the season for those who like Concord-type fruit. The vines are vigorous, hardy, and productive.

Golden Muscat has beautiful golden fruit that ripens later than Catawba. The clusters are large and compact with large berries that are juicy and of high quality when fully ripe.

SEEDLESS VARIETIES

Varieties of seedless grapes that are hardy enough to be recommended for trial in any but the most favored locations in New York are of relatively recent origin and have been derived from crosses between American-seeded and seedless *Vitis vinifera* varieties. Most of the seedless Geneva introductions are only moderately winter hardy although much more hardy than their seedless parents. A few selections have been named while others that are very promising are still being tested under number. They may be available from the New York State Fruit Testing Cooperative Association, Geneva, New York 14456.

Interlaken Seedless is a cross between Ontario and Thompson Seedless. The clusters are medium sized and

compact with small, white, seedless berries that ripen a month before Concord. It is particularly subject to bird damage.

Himrod is another early ripening white seedless grape of the same cross as Interlaken and is one of the most delicious of the dessert grapes. The clusters are large and loose and inclined to be irregular. This, however, can be controlled by sprays of gibberellic acid, by cane girdling, or by thinning to increase berry set and improve berry size.

Canadice was produced from the cross, Bath x Himrod, and is therefore more winter-hardy than the other seedless varieties listed. It is similar in flavor, color, and berry size to Delaware.

Lakemont was named in 1972. It is a white variety of the same parentage as Interlaken. It produces large compact clusters. The quality approaches that of Himrod and it ripens a week or two later.

Suffolk Red, also named in 1972, is a large-berried, red seedless grape with good quality. It is, at best, only moderately winter-hardy. Like Himrod, it sets loose clusters and responds well to sprays of gibberellic acid shortly after bloom.

Concord Seedless is thought to be a seedless mutation or sport of the Concord variety. The clusters and berries are smaller than Concord, but the fruit matures earlier, has high flavor, and makes excellent pies and preserves. It is too unproductive to be recommended for commercial planting.

Glenora is a blue-black seedless variety with high quality and texture. It is only moderately winter-hardy.

Romulus is a late ripening, white, seedless variety. It has large, compact clusters. The vines should be cluster thinned to prevent overcropping.

BIRD DAMAGE

All varieties of grapes and particularly those that ripen early may be seriously damaged or completely destroyed by birds. With small plantings it may be helpful to enclose the ripening grape clusters in paper bags to prevent damage. An alternative is the use of netting to completely cover the vines. In commercial plantings noisemakers are the most widely used control.

INSECTS AND DISEASES

Any variety of grape may be subject to injury by insects or diseases. Do not reject a variety for that reason alone. Insects and fungus diseases are easily controlled by proper spraying.

ADDITIONAL INFORMATION

Publications available from the Mailing Room, Building 7, Research Park, Cornell University, Ithaca, New York 14853, are: *Cultural Practices for New York Vineyards* (charge); Extension Leaflet *Grape Pest Control - Culture Guide*; Information Bulletin 84, *Homemade Wine* (30 cents). Special Report No. 22, *Converting Mature Vineyards to Other Varieties* (\$1.00); and Food and Life Sciences Bulletin 45, *Resistant Rootstocks for New York Vineyards* (free) are available from the Bulletin Room, Publications Department, N.Y.S. Agricultural Experiment Station, Geneva, NY 14456.