

White Winegrape Varieties for Long Island Vineyards

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Contemplation of winegrape varieties is always a fascinating and challenging exercise. A variety must be viticulturally suited to a region. It must also have the potential to produce the style, quality and quantity of desired wine. The varieties listed herein are offered as potential alternatives to the white wine varieties widely planted in the eastern U.S. - Chardonnay, Pinot Gris, Gewürztraminer, Riesling and Sauvignon Blanc. Properly sited and managed, these five varieties are capable of producing high quality fruit. However, many in the wine industry have expressed an interest in diversifying their wine portfolio. Clearly, there is room for exploration and by doing so, businesses can distinguish themselves from a marketing and stylistic viewpoint.

The intent of this article is to introduce a selection of varieties that have potential for Long Island. This is by no means an exhaustive list. These suggestions merit further investigation by the winegrower. This could involve internet/print research, tasting wines from other regions and/or correspondence with fellow winegrowers. Even with a thoughtful approach, it is important to acknowledge that vine performance may vary due to site, soil type and management practices. Fruit quality and quantity will also vary from season to season. That said, a successful variety will be capable of quality fruit production despite seasonal variation in temperature and rainfall.

The most prominent features of each variety are discussed based on industry experience, observations and results from the winegrape variety trial at the Long Island Horticultural Research and Extension Center, Riverhead, NY (cited as 'LIHREC vineyard'). For detailed yield component data on varieties in the LIHREC vineyard, please visit <http://ccesuffolk.org/agriculture/grape-program/grape-research>. Distinguished wine writer Jancis Robinson and colleagues produced an excellent reference book 'Winegrapes' which is referenced throughout this article. Many thanks to helpful comments from viticulturist Mark Chien, formerly the Penn State grape specialist, currently working at Oregon State University.

Considerations for selection of a variety

- **Winter cold tolerance** – A limiting factor in some regions, less so in more moderated climates such as Long Island. Note that the vinifera varieties discussed here are relatively winter tender and not well suited for regions with temperatures <5°F. The hybrids mentioned in this article are more cold hardy though fact sheets should be consulted to determine the extent of the cold tolerance.
- **Disease susceptibility** – On Long Island, vinifera varieties are susceptible to black rot, downy mildew, powdery mildew and phomopsis. Most hybrid varieties have some degree of resistance to downy and powdery mildew but not black rot and phomopsis. Many white varieties are also susceptible to post-veraison cluster rot, most commonly manifested as *Botrytis* bunch rot and/or sour rot. This

point should not be taken lightly as late season cluster rot can cause substantial reductions in yield and fruit quality.

- Availability of plant material – If a variety is not available in the U.S. on at least a small scale, it is not included.
- Marketability of a new variety – Suitable wine styles, versatility (ability to make different styles/types of wine), blendability, ability to age - these and more are important considerations when choosing a variety.
- Vine vigor – Knowing the inherent vigor of a variety is essential in order to determine an appropriate rootstock, to select the most suitable site and to plan vineyard management strategies.
- Ability to fully ripen the variety consistently – Some varieties require more heat than we can provide in the northeast and should be considered only for warmer regions.
- Productivity – Some varieties are very productive; others are prone to alternate bearing or to disorders such as coulure (poor set). In some cases, careful selection of clones can address the issue. However, varieties with perennial problems may not be economically viable.

Albariño

First vines on Long Island were planted in 2009 in the LIHREC vineyard and in one commercial vineyard; now successfully grown by several growers. From NW Spain (Galicia) region and Portugal, regions with a cool, maritime climate. It is a flavorful variety with lemon, peaches and crisp acidity. Wine styles can vary from lean and minerally to more fruit driven and aromatic. Berries are small, thick-skinned and clusters are loose, thus susceptibility to late season rots is low to moderate.



Arneis

Aligoté

A sibling of Chardonnay, Aligoté is an outstanding white wine variety. It makes a complex but also fresh, clean white wine. Aligoté has been grown in the LIHREC vineyard on Long Island for >15 years. Vines are easy to grow and crop consistently, in fact heavy cluster thinning is required annually. Clusters are large and extremely compact, rendering the fruit very susceptible to cluster rot, particularly sour rot. Fruit flavors tend toward citrus, especially lemon, again with prominent acids. It is naturally high in acidity, sometimes excessively so, but aging in old barrels can help soften edges and smooth out texture. Aligoté is worthy of a small planting if there is a commitment to proper site selection, canopy and crop management, particularly cluster thinning.

Arneis

A Piedmont (NW Italy) variety, wines are full-bodied with crispness and distinctive pear flavors (Robinson, et.al., p.54). There are a few US plantings, notably in California (Christensen, et.al., p.174). Planted in the LIHREC vineyard in 2013, vines have been moderate in vigor. Clusters are medium size and well-filled; berries are small. Fairly compact clusters with moderate susceptibility to late season cluster rot.

Auxerrois

Auxerrois, another sibling of Chardonnay, is an important variety in Alsace. It is often blended with Pinot Blanc, Pinot Gris and other varieties. Planted in the LIHREC vineyard in 2009, production has been consistent. Clusters are small to medium in size and compact. Ripening is slightly earlier than Chardonnay. Auxerrois is very susceptible to both *Botrytis* bunch rot and sour rot, thus sorting will be necessary in most years. Wines from the LIHREC vineyard have been flavorful (apples and peaches) and balanced. This is produced as a varietal in other eastern US states; there is one commercial planting on Long Island.

Chardonnell

A Seyval x Chardonnay cross from Cornell University, Chardonnell is more cold hardy than Chardonnay and produces good yields of high quality fruit (Reisch, et.al). It is late to break bud and late to ripen (Robinson, et.al., p.220). It is less susceptible to downy and powdery mildew than its vinifera parent Chardonnay. Notable Chardonnell wines are made in Virginia and other areas of the mid-Atlantic region and the upper mid-west, representing a range in wine styles.

Chenin Blanc

Thought to be a sibling of Sauvignon Blanc and therefore an aunt/uncle of Cabernet Sauvignon (Robinson, et.al., p.236) The wines from the Loire (Anjou-Touraine) and Delta area of California are very clean, fruity, bright and light. There are late harvest versions in the Loire as well. Clusters are tight and susceptible to rot. Early in the winemaking process, citrus flavors particularly grapefruit predominate, sometimes evolving into quince. The clean flavors and natural acidity of Chenin Blanc makes it a good companion to seafood, particularly shellfish. Several Long Island wineries successfully grow this variety.



Grüner Veltliner

Grüner Veltliner

Grown on Long Island, in cooler areas of the Mid-Atlantic, and in upstate NY. The Austrian versions are fresh, crisp, fruity with green apple, and citrus flavors but moderate aromatics. Robinson describes Grüner wines as 'dry and full-bodied with a peppery perfume and firm, mineraly, citrus and sometimes spicy flavours...' (Robinson, et.al, p.450). Like Riesling it can make a nice wine from a range of ripeness levels but may be best as an early drinking, fruity white wine. Grows well even on moderately vigorous sites. Clusters are often large thus cluster thinning may be necessary. Berries are thick-skinned, clusters are looser than those of Chardonnay. While Grüner is less susceptible than Chardonnay to late season cluster rots, sorting may be necessary in wet years. Cold hardiness is reportedly a concern as wood matures slowly though this has not been noted in local plantings.



Itasca

Itasca

A cold hardy Minnesota hybrid planted in the LIHREC vineyard in 2018, Itasca has a complex lineage with hybrids Seyval and Frontenac Gris in its background. UMN states that it has good resistance to downy and powdery mildew as well as phylloxera. In 2019 in the LIHREC vineyard, fungicides were applied for black rot and phomopsis. A minimal program held the vines nicely throughout the rest of the season though it should be noted that the summer and early fall were sunny and dry. Fruit quality is purported to be good with high Brix/low acidity and pear, floral and mineral notes with a long finish.

Malvasia Bianca

One of many Malvasia grapes (see Robinson's book for a detailed list and description of the various types), this one produces a tangy wine that benefits from some residual sugar. It's found a home in Southeastern PA and in several plantings on Long Island. It offers fruit with grapefruit, peach and Asian pear flavors and floral aromas. This has been grown in the LIHREC vineyard for almost 20 years; fruit has been aromatic, flavorful and delicious even in cooler seasons. Clusters are large and cylindrical, berries are large and, in some years, are prone to splitting and uneven ripening. Yield can be variable year to year; cane pruning may be necessary to maintain productivity.

Melon

A Burgundian variety cultivated since the thirteenth century (Robinson, et.al., p.623-4). In years past, Melon vines were confused with Pinot Blanc. Like Pinot Blanc, Melon is a somewhat neutral, early maturing white wine that benefits from terroir and manipulation (surlie) in the cellar. It is best known for wines from the Muscadet region. It has good cold hardiness and is a consistent producer. Tight clusters can lead to bunch rot problems. In California it is reported that high tannins in the skins may render wines susceptible to browning unless handled properly (Christensen, et.al., p.85).

Moscato Giallo

One of many Moscato varieties (see Robinson's book for details). Highly aromatic, this variety can produce both table and dessert wines. Clusters are large and loose with large yellow berries. In the LIHREC vineyard and in a few industry plantings, the performance Moscato Giallo has been variable. Attentive vineyard management has been necessary to get vines to fill the trellis and produce economic yields, though yields remain variable from year to year. Development of periderm (bark) on canes is not optimal in some seasons. A challenge in the vineyard but capable of producing delicious fruit. Perhaps Robinson's statement that it is 'best suited to calcareous slopes' is part of the problem (Robinson, et.al, p.668).

Muscat Blanc

Robinson states that this is the oldest and most distinguished of the muscats but that it is difficult to grow (Robinson, et.al., p.684). Unfortunately, a small planting in the LIHREC vineyard did poorly. Vines frequently displayed sterile shoots (no clusters). This aggravated vine vigor, making management more problematic. A lack of crop has also been seen in Virginia (Wolf, 2007). Clusters are large, very tight and prone to bunch and sour rot. Experimentation on a small scale is recommended.

Muscat Ottonel

Low to moderate vigor vines, small clusters, large berries and early ripening with aromatic, simple flavors. Though often precocious in youth, yields moderate as vines age. This has been a very interesting variety in the LIHREC vineyard and as a result, there are now several small commercial plantings. In a trial maintained with >30 varieties, it is among the first vinifera to ripen. However, the early ripening and aromatic qualities attract birds, often making bird control a priority at or even just prior to veraison. Winegrowers are using Muscat Ottonel as blending tool.

NY81

An as yet unnamed (but available through nurseries) hybrid of Riesling x Cayuga White, this variety has done well in the LIHREC



NY81

vineyard. Vines are moderate in size and extremely fruitful, requiring annual cluster thinning. Clusters look like Cayuga White, long and cylindrical, but taste more like Riesling. It is not as susceptible as Riesling to *Botrytis* bunch rot. Wines have received favorable reviews from growers.

Petit Manseng

Native to SW France, work by Tony Wolf and Bruce Zoecklin (viticulturist and emeritus enologist, respectively) of Virginia Tech has led to successful plantings in that state. Very versatile variety that makes fine dry, semi- to unctuous sweet wines. Berries are very small, thick skinned and relatively rot resistant. It is very late ripening; by late October in the LIHREC vineyard, it is usually breaking down and giving way to bunch rot. Flavors are variously described from spicy to peaches to pineapple and mango with good acidity.

Pinot Blanc

A neutral white with no outstanding advantages or disadvantages. Vines are easy to grow and crop reliably. There has been some success in the east with both table and sparkling versions. Also a variety suited to blending.

Rkatsiteli

A cold hardy eastern European variety that is grown with some success in the Finger Lakes. Produces versatile wines with stone fruit, apple and quince flavors with good acidity (Robinson, et.al., p.897-8). Reportedly it must be harvested late in order to moderate acidity levels. Planted in 2019 in the LIHREC vineyard, the first planting on Long Island.

Semillon

A variety grown primarily as a blender for Sauvignon Blanc. Grown by a few local wineries, Semillon is known in France to make wines that range from ordinary to extraordinary, dry to sweet. Typically low in aroma and low in acid in warm years. Flavors tend toward nutty and earthy rather than citrus. In the LIHREC vineyard, Semillon vines don't seem to thrive as Chardonnay or Merlot do. Leaves display leaf roll-like symptoms (repeated tests have been negative) and fruit sometimes seems to dehydrate before becoming fully ripe. Growers have mixed opinions about Semillon. There is reportedly a lot of variation in clones, perhaps this is a clonal issue.

Tocai Friulano

The Friuli region's most widely planted white, ampelographers claim it is the same as Sauvignon Vert (Robinson, et.al., p.958-9). In the LIHREC vineyard, there are annual problems with sterile shoots, meaning that yields are perennially low (1-2 tons/a). Cane pruning alleviates this somewhat. Vines appear to have a narrow range of sufficiency when it comes to soil water availability – too much and vines become too vigorous; too little and drought stress is evident. There are slight muscat flavors but this variety is known on Long Island for having pear, red grapefruit and almond characteristics. Fruit is moderately susceptible to late season cluster rot. Newly released disease tolerant TF hybrids are available commercially. Hopefully, these selections will minimize some of the challenges.

Traminette

A Cornell hybrid with Gewürztraminer as a parent (Reisch, et.al.). More cold hardy and productive than its parent, Traminettes reportedly avoids some of the phenolic bitterness of ripe Gewürztraminers. Grown in mid-Atlantic and upstate NY regions.

Trebbiano Toscano

Also known as Ugni Blanc and St. Emilion, this variety produces vast quantities of wine worldwide (Robinson, et.al., p.1079). Grown in the LIHREC vineyard in the 1990's, cuttings from the original planting survive to this day in several local vineyards. Shoots are long and leggy, clusters are long, cylindrical and late ripening. This variety can carry a reasonably heavy crop, 5 t/a plus, and still provide decent fruit quality. Flavors are described as peach, green apple and lemon.

Verdejo

Grown in the Rueda region of northwest Spain and in Portugal, regions that are cool and damp. Typically low alcohol wines with peach, mineral, citrus, nutty flavors (Robinson, et.al., p.1117). Planted in the LIHREC vineyard in 2011, flavors are often described as lemon/lime, grass and slightly herbal. Productivity has been consistent though fruit is susceptible to cluster rot.



Vermentino

Vermentino

This variety is planted in several eastern U.S. regions including Virginia. In the LIHREC vineyard, cluster size ranges from small to gigantic with large, juicy berries. Wines are rich and full-bodied, with citrus flavors complimented by almond and lemon zest notes in the finish. In a 2019 vineyard tour where berries were tasted on 20 varieties, Vermentino was a favorite among industry members who remarked on its good fruit – acidity balance and attractive minerality.

Vidal Blanc

Often unappreciated by vinifera snobs, the hybrid Vidal is versatile, making terrific dry, semi-dry and sweet wines, even ice wine. It's a great seafood wine. It ripens quite late, well after Chardonnay, but its large, loose clusters are fairly rot resistant. Vidal is capable of consistent production of moderate to high yields of good quality fruit. Prices have been good for a hybrid

white variety. It is susceptible to Tomato Ringspot Virus and thus vines should be grafted. Growers observe winter hardiness to be better than Chardonnay but not as hardy as Cayuga White. Vine vigor can be an issue if grown on heavy soils.

Viognier

Notoriously temperamental, Viognier on Long Island has been prone to alternate bearing. A late ripener, growers agree that ripening to high Brix helps to bring out the exotic, tropical flavors. Good canopy management is necessary to facilitate the long hang time. In the LIHREC vineyard, vines have displayed more vigor than Chardonnay but less than Sauvignon Blanc.

References

Christensen, L.Peter et.al. 2003. Wine Grape Varieties in California. University of California Agriculture and Natural Resources Publication 3419. Oakland, CA.

Itasca press release, April 11, 2016: The University of Minnesota is releasing its fifth cold-hardy wine grape and it's named 'Itasca'. <https://mnhardy.umn.edu/itasca-grape>

Reisch, B., Pool, R., et.al. Chardonnay fact sheet from Cornell University. Adapted from: Reisch, B.I., R.M. Pool, W.B. Robinson, T. Henick-Kling, J.P. Watson, K.H. Kimball, M.H. Martens, G.S. Howell, D.P. Miller, C.E. Edson and J.R. Morris. 1990. 'Chardonnay' grape. N.Y. Food and Life Sci. Bul. 132. <http://www.hort.cornell.edu/reisch/grapegenetics/bulletin/chardonnay.html>

Reisch, B., Pool, R. et.al. Adapted from: Reisch, B.I., R.M. Pool, W.B. Robinson, T. Henick-Kling, B.K. Gavitt, J.P. Watson, M.H. Martens, R.S. Luce and H.C. Barrett. 1996. 'Traminette' grape. N.Y. Food and Life Sci. Bul. 149. <http://www.hort.cornell.edu/reisch/grapegenetics/bulletin/traminette.html>

Robinson, J. Harding, J. and Vouillamoz, J., 2012. Wine Grape Varieties. Wine Grapes - A complete guide

Wolf, Tony. Viticulture Notes newsletter, Virginia Cooperative Extension, Vol. 19, No.6 Nov-Dec 2004 and Vol. 22, No. 6, Nov-Dec 2007.

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