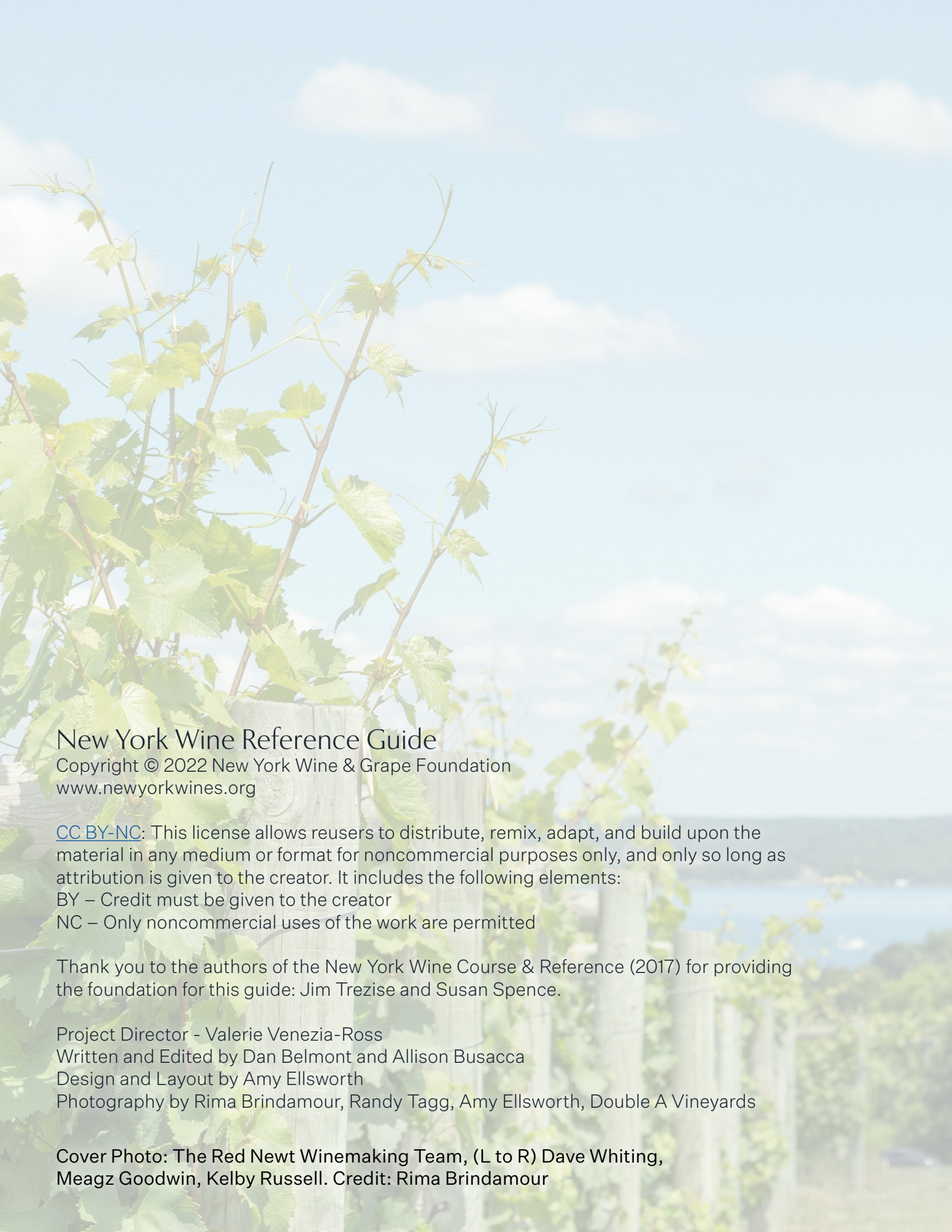
NEW YORK WINE

REFERENCE GUIDE

Boldly, NY.

www.newyorkwines.org



New York Wine Reference Guide

www.newyorkwines.org

Thank you to the authors of the New York Wine Course & Reference (2017) for providing the foundation for this guide: Jim Trezise and Susan Spence.

Project Director - Valerie Venezia-Ross
Written and Edited by Dan Belmont and Allison Busacca
Design and Layout by Amy Ellsworth
Photography by Rima Brindamour, Randy Tagg, Amy Ellsworth, Double A Vineyards

Cover Photo: The Red Newt Winemaking Team, (L to R) Dave Whiting, Meagz Goodwin, Kelby Russell. Credit: Rima Brindamour

TABLE OF CONTENTS

INTRODUCTION:
THE NEW YORK WINE INDUSTRY

Say the words New York, and people almost always think of New York City—a place of big dreams and bold attitudes. But surprisingly—in as little as an hour's drive—the five boroughs of concrete jungle give way to nearly seven million acres of rolling agricultural land and award-winning vineyards.

Here, in New York State's seven wine regions, the pace of life is decidedly slower (not if you ask a winemaker, of course!)—but the big New York dreams and bold New York attitude remain:

If you can make great wine here, you can make great wine anywhere.

With a unique cool climate—encompassing both maritime and continental regions that were carved over hundreds of thousands of years by glacial activity—making wine in New York State requires a tenacity not found in other US wine regions. But this challenging combination of terroir and climate is exactly what's drawn some of world's top talent and investment to the region over the last century. It's also what makes New York one of the premier wine growing regions in the world.

New York State produces wine with regional and varietal specificity, immense drinkability, and in many cases, suspenseful longevity. We produce over 60 varieties and export to over 30 countries, showcasing multiple styles to delight both local and international palates. And despite 200 years of rich history, we are not resting on our laurels. We are a young industry that is innovating every day.

Our current successes are just the beginning.

With such incredible diversity, it would be a fool's errand to pack New York State's wine industry into a tidy little box. So instead, we've created this reference guide, providing an essential compendium for the state's history, regions, viticulture, winemaking and more.

Use this guide to get to know many of the experimental outsiders and underdog disruptors that have banded together to call this region home. Dig into the historical, climatic and geologic circumstances that have given rise to some of the world's most interesting, dynamic and still evolving regions.

This guide provides a general resource for educators, trade, media and most importantly, the consumers who support the grape growers and winemakers of New York State.

We invite you to learn about our past, and be an active part of our future.

HISTORY: WHERE WE CAME FROM

Grape vines grow in many places along the eastern coast of North America. In fact, when the Vikings landed in now New Brunswick, Canada around the year 1000 BC, they named the area Vinland!

Much of these native grapes were muscadine (Vitis rotundifolia); and it was from the muscadine variety Scuppernong that North America's first wine was produced in 1562, by French Huguenots in Jacksonville, Florida (of all places).

Fast forward 267 years, to 1829, when the first grape vines were planted in New York's Finger Lakes region by Reverend William Warner Bostwick.

- At this point, Jamestown, Virgina had produced wine from wild, native grapes (1609)—but it was generally considered overly "grapey" and too acidic.
- Various attempts (1630-1683) to make wine from vines imported from Europe (Vitis vinifera), also failed. Vitis vinifera could not withstand the climatic rigors and disease pressure of the east, and was not resistant to the phylloxera root louse.
- By happenstance, the introduction of Vitis vinifera led to the creation of hybrid grapes (1786)—the accidental crossings of Vitis vinifera and native grapes.
- These hybrids combined disease and pest resistance from North American grapes with some of the better qualities of European grapes, and it's this combination of both native and hybrid varieties that allowed for the establishment of vineyards across the US.

Bostwick planted a few cuttings of Isabella (native) and Catawba (hybrid) vines from the Hudson River valley in his garden behind an Episcopal rectory. For the majority of the next 70 years, native and hybrid grapes took center stage, and produced largely sparkling, sweet and fortified wines.

- Brotherhood Winery, established in 1839 in the Hudson Valley, is the nation's oldest continuously operating winery.
- The Pleasant Valley Wine Company, popularly known as Great Western Winery (one of its leading brands) was founded in Hammondsport in 1860. It became US Bonded Winery No 1 and quickly established an international reputation for sparkling wines made in the Finger Lakes.
- Following the success of Great Western, several other wineries opened in the Finger Lakes such as Gold Seal Vineyards in 1865 and O-Neh-Da™ Vineyard in 1872. The Taylor Wine Company was established in 1880, and Widmer's Wine Cellars in 1888.

Brotherhood Winery

From 1873-1900, these wineries helped put New York on the world's winemaking map.

Their sparkling, dessert and table wines won major awards at several European competitions, fueling interest and growth. But the New York State wine story—and the American wine industry at-large—would be very different today if not for what happened next.

THE INDUSTRY (ALMOST) ENDED

Various social and political vectors (including the fight for women's rights and the purification of urban drinking water) culminated in the 18th Amendment—more commonly known as Prohibition—which banned the production, importation, transportation and sale of alcoholic beverages from 1920-1933. Propaganda for Prohibition called alcohol the "Fluid Extract of Hell—Guaranteed to Kill Boys". **...Yikes.**

Not surprisingly, these 13 years sent the American wine industry into obscurity for almost a half a century.

Of the nearly 2.5K wineries in the US prior to Prohibition, less than 100 remained.

While most wineries closed, a few adapted, taking advantage of loopholes in the law—including The Pleasant Valley, Taylor and Widmer companies.

- Under pressure, the US Federal Government passed changes, including the amusing notion that all sparkling wine could be sold for sacramental purposes (1927).
- Others sold blocks of dried grapes with explicit instructions: "Do not soak in water and store in a dark place for three weeks, or it may produce alcohol." Smart!

Some at-the-time-illegal operations still exist today as some of the world's biggest wine brands.

The illegal production, importation and sale of alcohol was rampant during that time, and many businesses were able to hit the ground running the very first day of repeal: December 5, 1933. Following prohibition, some key players began rebuilding the New York wine industry:

- In 1933, Charles Fournier left Veuve Clicquot Ponsardin in France's Champagne region to join Urbana Wine Company (Gold Seal) as winemaker. He was credited with introducing French-American hybrids to New York, and a supporter of vinifera experimentation in the Finger Lakes.
- In 1945, the Sands family purchased a winery in Canandaigua (Finger Lakes); Marvin Sands established Canandaigua Industries to run the winery and sold bulk wine to bottlers in the eastern United States. In his first year, with just eight employees, they sold approximately 200K gallons. Canandaigua Wine Company was purchased by E. & J. Gallo in 2021.

A NEW BREED OF WINEMAKING BEGAN

In the 1960s and early 1970s, several flagship wineries took root, such as Benmarl Wine Company and Cascade Mountain Vineyard in the Hudson Valley, and Bully Hill Vineyards and Dr. Konstantin Frank Vinifera Wine Cellars in the Finger Lakes.

Frank, a Ukrainian emigrant, arrived in the Finger Lakes in the early 1950s and began vinifera experiments, first with the New York State Agricultural Experiment Station, then with Fournier at Gold Seal Vineyards. He released the first vintage from his eponymous brand in 1962.

Dr. Konstantin Frank is widely credited with igniting the "vinifera revolution".

German emigrant Hermann J. Wiemer purchased land in 1973 that was previously planted with soybeans (not exactly a vinifera bellwether) and experimented with plantings of Vitis vinifera—particularly Riesling—with much success. Their first vintage was in 1981, and the winery and vine nursery are still in operation today.

That same year, on the North Fork of Long Island, grape growers Alex and Louisa Thomas Hargrave planted their first Vitis vinifera vines in Cutchogue, hoping that the local climate would support growing Cabernet Sauvignon and Pinot Noir. The Hargrave Vineyard became Long Island's first successful commercial vineyard and winery.

CONSUMER INTERESTS CHANGED

Historically, the business model of New York grape growers depended on a few large wineries purchasing their grapes annually. It was also a widespread practice of the larger wineries to purchase and blend California bulk wines to their mostly hybrid, New York-produced wines to achieve additional volume and flavor.

But by the time the 1970s came around, competition from California wineries was increasing from big producers such as E. J. Gallo, Italian Swiss Colony and Paul Masson.

Consumers were looking for drier, Vitis vinifera wines.

Because of this, former New York State powerhouses began suffering from reduced sales of their primarily hybrid, sweet wines. In turn, many New York State growers were notified that only a small portion of their 1975 crop would be purchased.

New York's wine industry needed a new business model, and a new product, to suit.

SMALLER WINERIES GOT A CHANCE

In 1976, the New York Farm Winery Act ushered in a new generation of wineries by significantly lowering the license fee for producing less than 50,000 gallons per year (the limit has since been increased to 150,000). This act allowed for an influx of growers to sell wine from their own grapes directly to consumers.

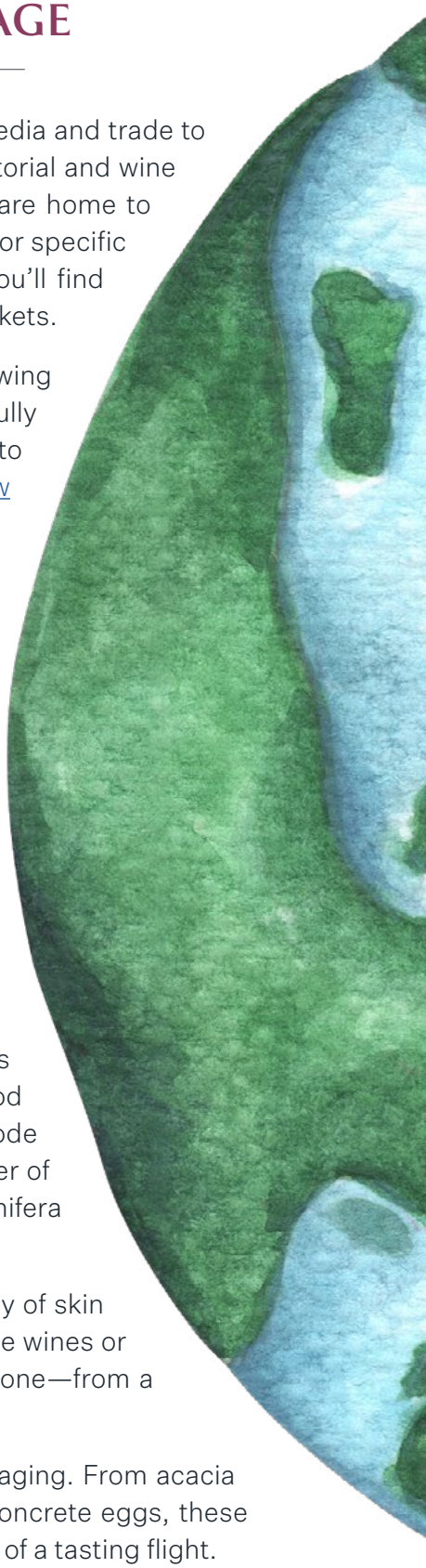
At the time, there were only 14 wineries in New York. Today there are over 440!

Benmarl Wine Company becomes the state's first farm winery, followed shortly by Glenora, Wagner and Hazlitt 1852 in the Finger Lakes; and Merritt Estate in Lake Erie.

Like these, most of the new wineries are small, family-operated businesses, which concentrate on limited production of premium varietal table wines. Typically, the owners of farm wineries oversee the entire process from planting to marketing. And most offer tours and tastings, which helps explain why over three million tourists visit New York wineries each year.

Benmarl Winery, Marlboro, NY
Inset: Victor, Jr. (L) & Matthew (R) Spaccarelli
Credit: Rima Brindamour

TODAY: OUR PLACE ON THE GLOBAL STAGE



Several of New York's grape and winegrowing regions are regarded by media and trade to be of national and international interest, and are followed annually by editorial and wine review staff. Some regions, such as the Finger Lakes and Long Island, are home to producers that have achieved a high degree of notoriety and recognition for specific varieties, including Riesling, Chardonnay, Cabernet Franc and Merlot. You'll find examples appearing in top restaurants and retail stores in most major markets.

"The story of each area is quickly becoming much more diverse, as a growing ensemble of other white, red, rosé and sparkling wines with real élan beautifully showcase their regions' and sites' strengths, characteristics and capacity to grow great vinifera," wrote Willliam McIlhenny in a 2021 review of 250 New York State wines for JamesSuckling.com.

"Most important, they highlight the bold open-mindedness of winemakers who are unafraid to move beyond the status quo..."

"...those that are planting new grapes, grafting old techniques to new technologies and applying new understanding of their terroirs. The results are delicious."

In a February 2022 article for JancisRobinson.com, Elaine Chukan Brown suggests that sparkling wine could be the key to shifting New York's perception of being "value-focused" to a region producing "prestige wines". The article further highlights many New York producer's dedication to sustainability, noting the use of solar power and lighter glass bottles—both pursuits significantly reducing carbon footprint.

Sparkling wine production is deep rooted in New York State. Thus, it makes sense that we look to historical methods beyond the traditional method bubbles. "There is so much experimentation in applying the méthode ancestrale to an enormous range of varieties that the flavors and character of pet-nat wines vary widely." Brown remarked. Examples from hybrid and vinifera varieties alike were very well received!

New York's vintners are also experimenting with the old-but-new category of skin contact wines. Some producers have been working with skin contact white wines or "orange" wines for over a decade. It is quite common to discover a new one—from a multitude of different grapes—in most tasting rooms.

Other producers are working with different vessels for fermentation and aging. From acacia barrels and large format puncheons and foudres, to clay amphora and concrete eggs, these alternatives yield small batch experimental wines that can be the highlight of a tasting flight.

The number of different varietals grown and vinified in New York State is unlike that of any other region in the world. With the increased interest in indigenous and heirloom varietals (see: Italy), pressure from climate change, and a drive towards quality and sustainability, grape growers and winemakers continue to push boundaries with new (or old) grapes across all species—native, hybrid and vinifera.

The resulting styles showcase New York State's diverse grape bounty: wines with personality, specificity and a palpable sense of place.

One such producer would be Fred Merwarth, owner/winemaker at Hermann J Wiemer Vineyards, who recently (and deservedly) was recognized as *Wine Enthusiast*'s Wine Star Awards 2021 International Winemaker of the Year. Fred is one of many producers who have continued to push in the direction of quality vinifera production, producing cool-climate, moderate-alcohol wines with freshness and energy that delight with most foods.

We believe in a future full of wine, made for today's wine lovers.

The regions are prime, the key players are brimming with talent and New York wines will continue to increase in global relevance. As the state motto says: "Excelsior!"; "Ever upward!" Stay tuned—it's going to be a wild ride.

Macari Vineyards, Mattituck, NY
Credit: Rima Brindamour

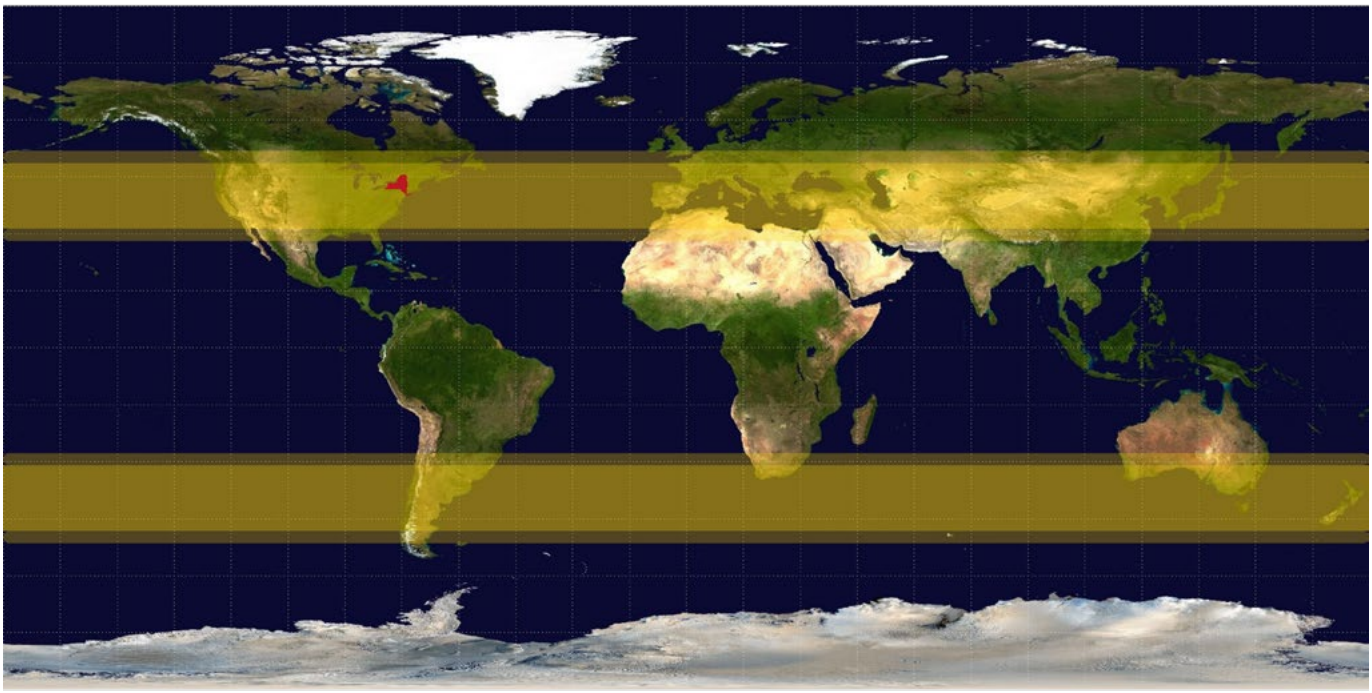
STATEWIDE FACTS AND FIGURES

LOCATION, GEOLOGY AND CLIMATE

New York State is found between 40°-45° north and 72°-80° west.

It spans 330 miles north to south, and 283 miles east to west, occupying 54,475 square miles. New York lies well within the world's "wine belt" between 28° to 50° north latitude.

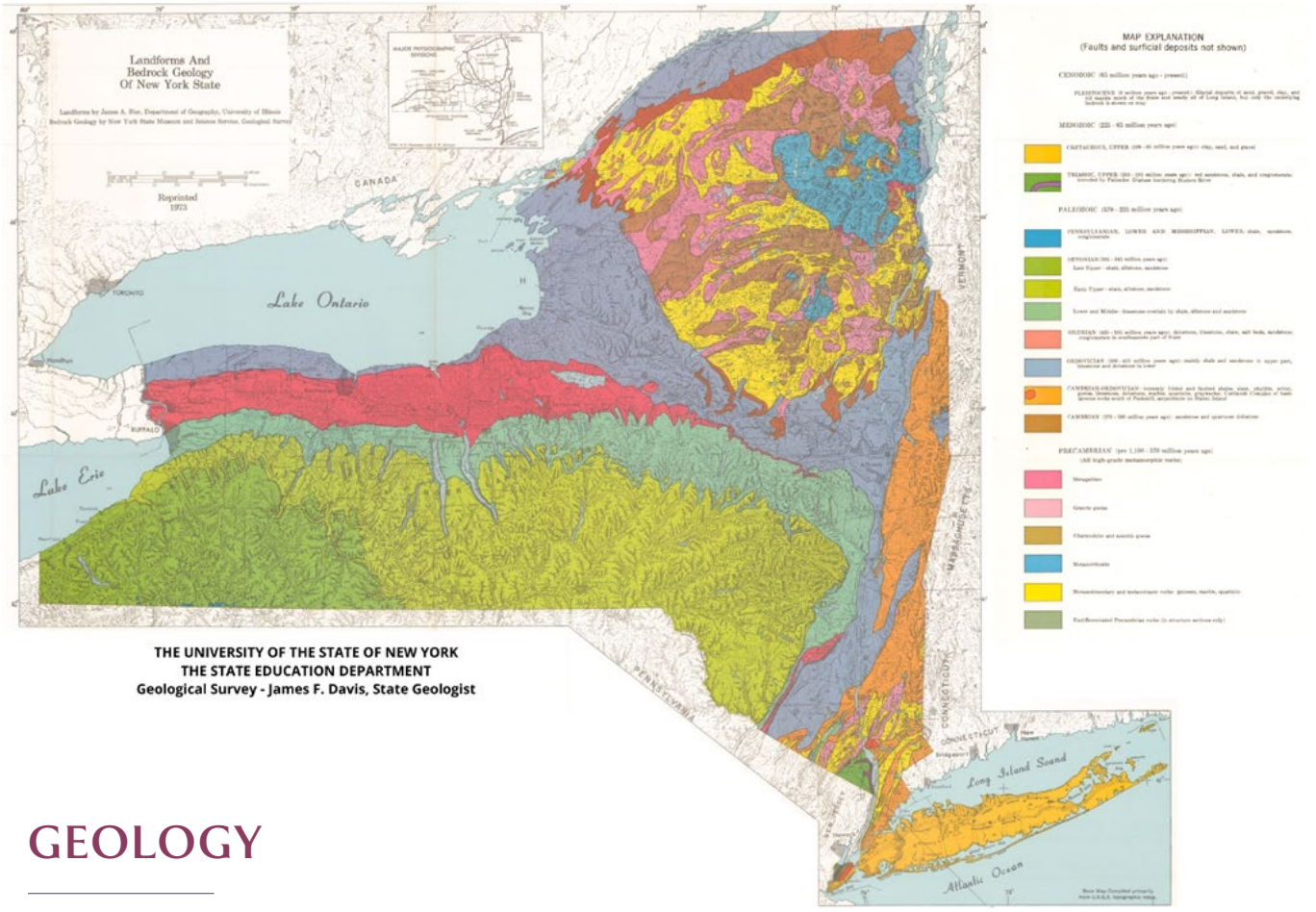
It's here that the unique combination of terroir and climate makes New York one of the premier wine growing regions in the eastern United States.



World Wine Belt

LATITUDES OF AMERICAN AND EUROPEAN WINE REGIONS:

AMERICAN	EUROPEAN
Finger Lakes (New York): 43°	Mosel (Germany): 49°
Hudson Valley (New York): 42°	Burgenland (Austria): 47°
Long Island (New York): 41°	Provence (France): 44°
Columbia Valley (Washington): 45°	Bordeaux (France): 44°
Willamette (Oregon): 43°	Penedès (Spain): 41°
Napa Valley (California): 38°	Douro Valley (Portugal): 41°



GEOLOGY

Roughly 1.6 million years ago, the Ice Age covered New York in glaciers over a mile thick. When they retreated about 10,000 years ago, the resulting glacial scouring, melt-water pressure and glacial deposition gave rise to many of the landscapes that make New York State so ideal for grape growing today, including:

- The two terminal moraines that form Long Island and their well-drained material
- The diverse mesoclimates of the Hudson River Valley
- The shaping of the Niagara Escarpment, the Finger Lakes and the Great Lakes Erie and Ontario

The shale and limestone soil that covers central and western New York comes from the ocean floor. This foundation came to the surface following a period of erosion and sea retreat over 220 million years ago, when the supercontinent Pangea broke apart, creating Africa, the Pacific and Atlantic oceans, and pro-North America.

New York can be divided into 13 distinct physiographic provinces—areas having similar parent material and geologic structure. Each of New York's grape growing regions is encompassed in one of these provinces except for the Hudson River Region, which crosses five of these provinces.

It's plain to see from the rainbow of colors above that the state boasts a complex tapestry of soil types, particularly in the Champlain Valley, Finger Lakes and Hudson Valley.

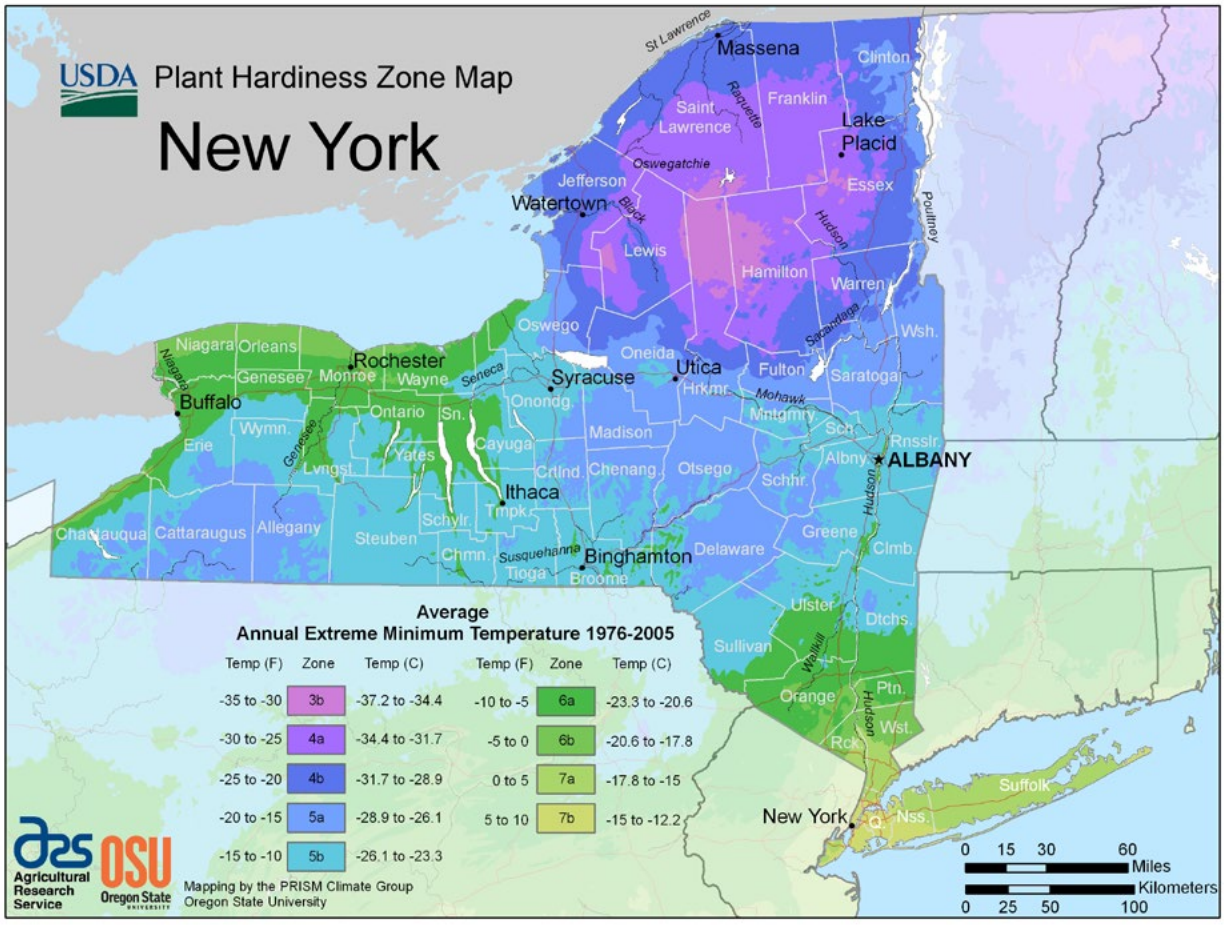
CLIMATE

The weather also plays a big part in why New York State is so good at growing grapes. In fact:

Nearly all storm and frontal systems moving east across the US pass through or near New York State, creating a diversity of temperatures not usually found within an area of comparable size.

Cold temperatures prevail over New York whenever Arctic dry air masses, under high barometric pressure, flow southward from central Canada or the Hudson Bay. High-pressure systems often move just off the Atlantic coast, become stagnant for several days, and then persistent south and southwesterly winds transport warm, humid air conditioned by the Gulf of Mexico. A less prevalent, but strategically important third great air mass flows inland from the North Atlantic Ocean and produces cool, cloudy and damp weather conditions.

This circulation drives warm, often humid summers and milder temperatures in fall, winter and spring.

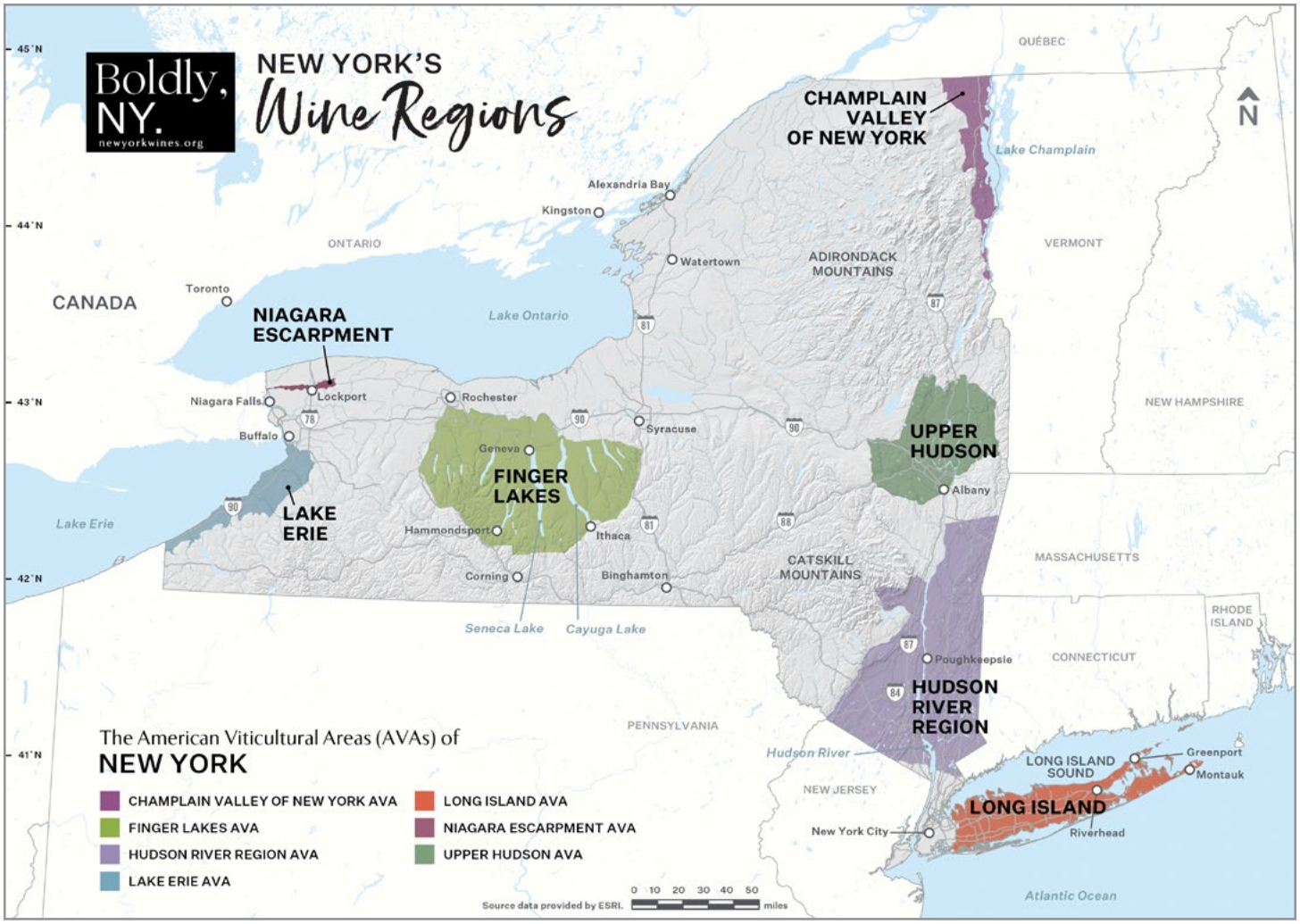


NEW YORK'S 11 AMERICAN VITITCULTURAL AREAS

New York has seven American Viticultural Areas (AVAs), and four sub-AVAs.

Each region has distinct wine grape growing circumstances that include combinations of soil, topography and climate, which contribute to a distinct regional wine character.

The only AVA that is not contained entirely within New York State is Lake Erie, which spans New York, Pennsylvania and Ohio.



WHAT'S AN AVA?

According to the Alcohol and Tobacco Tax and Trade Bureau (TTB), "an AVA is a delimited grape-growing region with specific geographic or climatic features that distinguish it from the surrounding regions and affect how grapes are grown. Using an AVA designation on a wine label allows vintners to describe more accurately the origin of their wines and helps consumers identify wines they may purchase."

AVAs are defined in different ways, which can make things tricky.

Some AVAs are defined simply by county lines. Some are so large that they're really just a catch-all for producers working with areas outside more specific AVAs. Some refer to exposure, elevation, and even soil types. To best learn what makes an AVA unique, look it up on the AVA Map Explorer—there's a lot to discover!

The first AVA in the United States was awarded to Augusta, Missouri on June 20, 1980. At the same time, seven districts in California and one in Oregon filed applications with the Bureau of Alcohol, Tobacco and Firearms (The TTB wasn't created until 2003). However, the honor went to the 15 square mile area surrounding Augusta! Napa Valley followed in 1981, as California's first. Currently, there are 260 AVAs in the United States, spanning 25 states.

NYS AVAS AND SUB-AVAS	ESTABLISHED
Hudson River Region	June 4, 1982
Finger Lakes • Cayuga Lake • Seneca Lake	September 1, 1982 • March 25, 1988 • July 2, 2003
Lake Erie	October 21, 1983
Long Island • Hamptons, Long Island • North Fork of Long Island	May 15, 2001 • May 16, 1985 • October 10, 1986
Niagara Escarpment	October 11, 2005
Champlain Valley of New York	August 22, 2016
Upper Hudson	December 6, 2018

A note on the term vineyard vs winery. Vineyards are farms, where grapes are grown. Wineries make (and often serve) wine. Some wineries have vineyards; some vineyards have wineries. Some don't! If you want to taste wine, make sure you're stopping by a winery with an open tasting room.

NEW YORK WINE BY THE NUMBERS

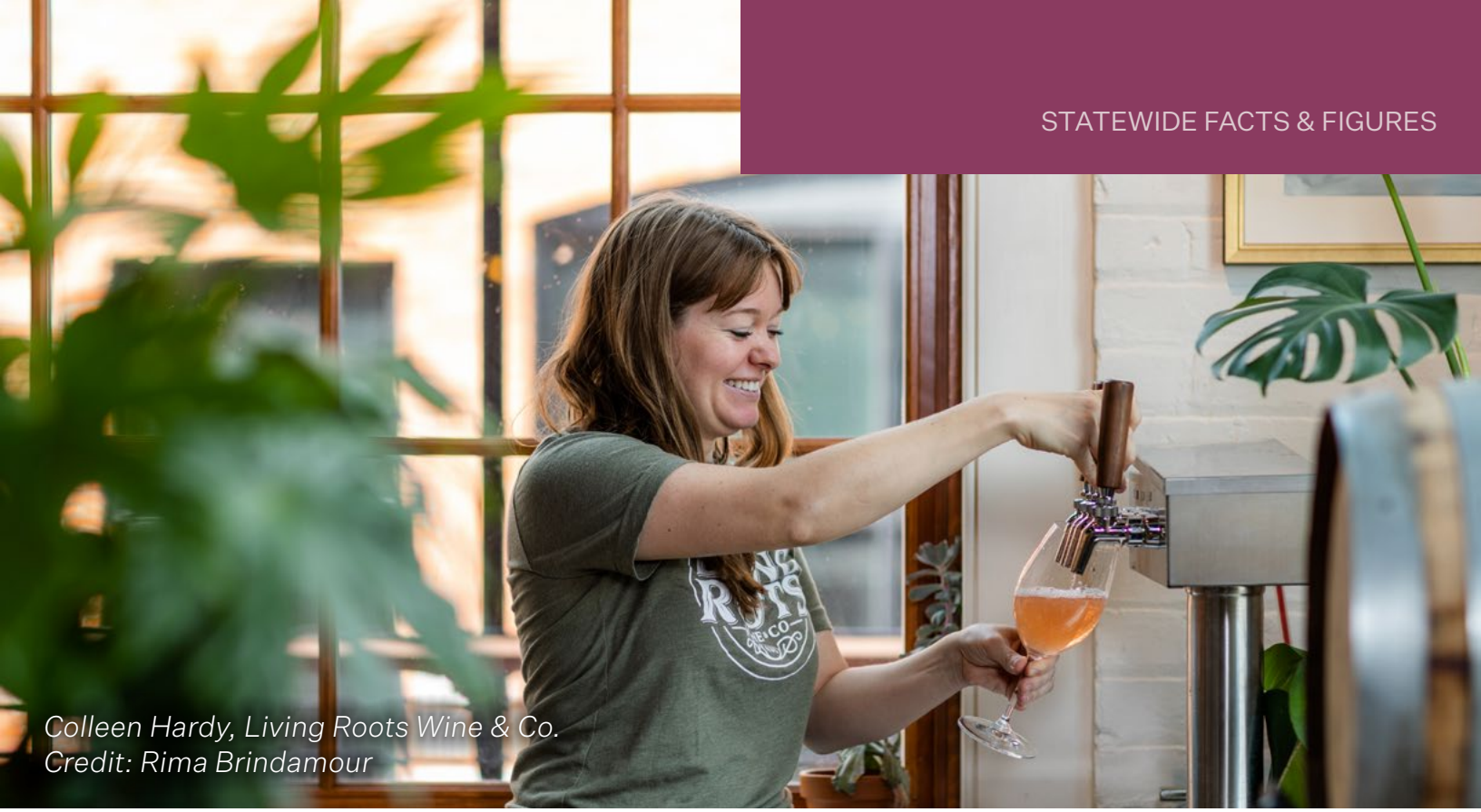
The New York wine industry is a major engine of economic development, generating well over $6.65 billion in economic benefits to New York State annually. Wineries—which mean new investment, new jobs, new tourism, and new taxes—have spread from the traditional regions to places never envisioned as wine regions. While some statistics, like vineyard acreage, grow slowly, the number of wineries changes nearly every week.

Even though most of the state's wineries are small, New York is a leading producer of American wine. According to data from Wines Vines Analytics, New York is the 3rd largest wine producing state in the U.S., with 12 million cases prodcued in 2021. This is equivalent to over 3.5% of the nation's production.

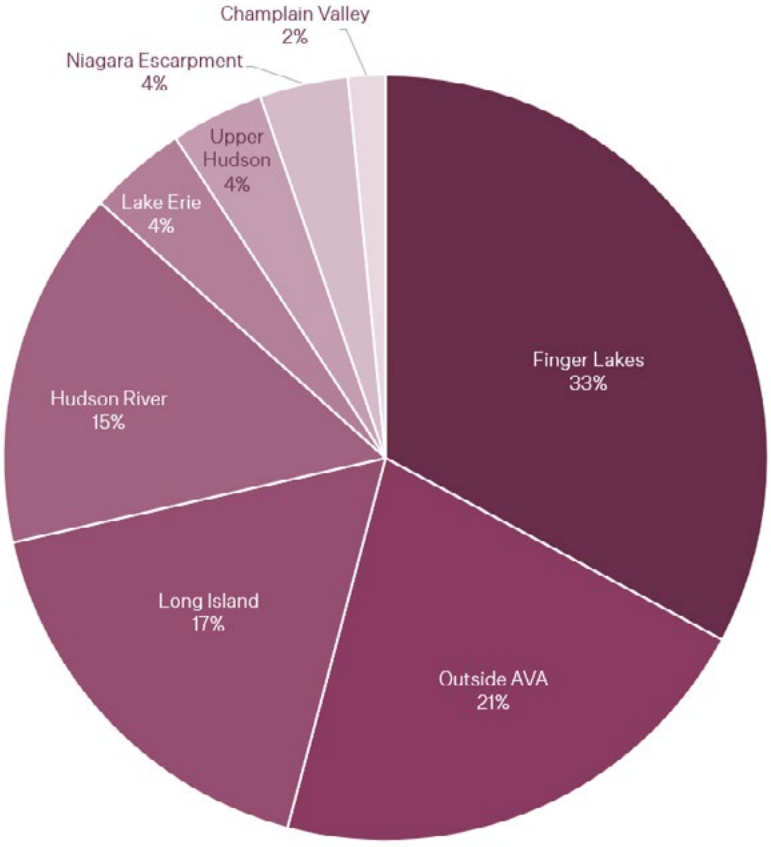
Source: John Dunham & Associates, 2019

We're moving too fast to keep up with...

The USDA's National Agricultural Statistics Service completed its last comprehensive New York State vineyard survey in 2011. The New York wine industry has doubled in size since 2011, and two new AVAs were established—the Champlain Valley and the Upper Hudson Valley. The five-year Census of Agriculture, last compiled in 2017, is the only remaining statistical summary of farms and acreage by county in New York. The data includes only acreage by county, but no breakdowns by variety or region are included—and no estimates whatsoever of production. Recognizing the seriousness of this issue, on May 3, 2021, US Senate Majority Leader Charles Schumer called on USDA to first, re-include New York in USDA's annual grape production statistics report, and second, resume the five-year comprehensive Vineyard and Orchard Acreage Survey.



Colleen Hardy, Living Roots Wine & Co.
Credit: Rima Brindamour

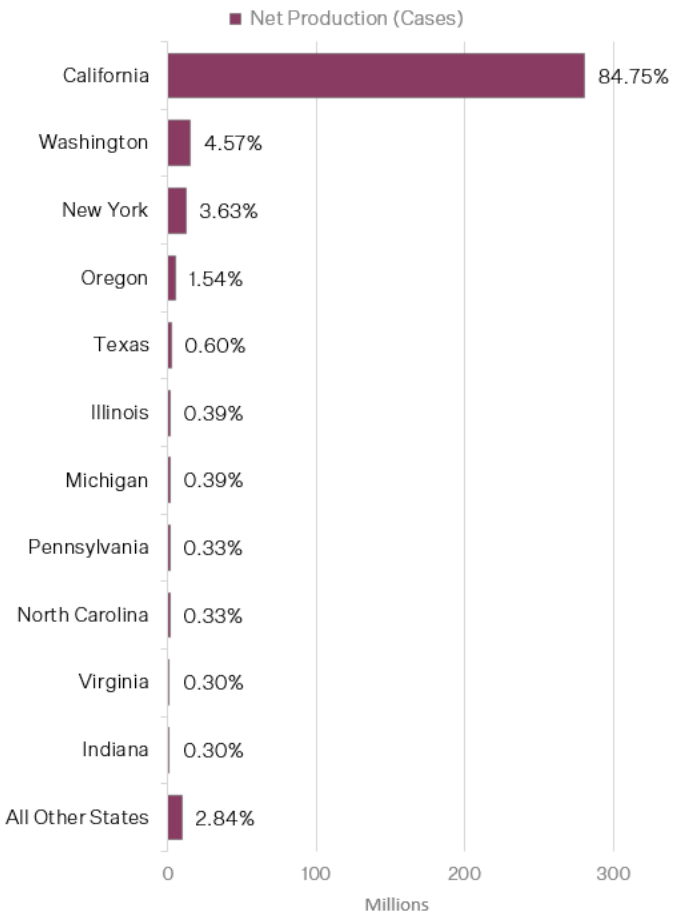


TOTAL WINERIES IN NEW YORK STATE: 444

Source: Wines Vines Analytics/data.ny.gov

2021 ANNUAL CASE PRODUCTION BY STATE

Source: Wines Vines Analytics



Understanding the New York wine label

What's required on a New York Wine Label?

Brand Name

Source: Dr Konstantin Frank Vinifera Wine Cellars

Place of Origin—To use an AVA name on a label, 85% of grapes must come from said AVA. An Estate Bottled AVA wine means 100% comes from grapes grown on land owned or controlled by the winery, and both the winery and the vineyard must be located within the boundaries of the labeled viticultural area.

Contains Sulfites—This statement is required when sulfur dioxide or a sulfiting agent is detected at 10 or more parts per million, measured as total sulfur dioxide. This is a nearly impossible level, even with the most raw of natural wines!

Made from Organically Grown Grapes—The winemaker only uses grapes from organic certified vineyards. Organic Wine can be used when the wine's been produced without added sulfites.

Health Warning
Alcohol %
Net Contents

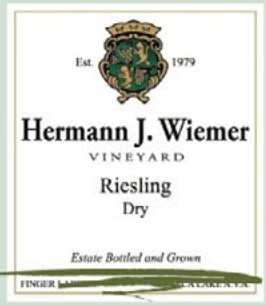
Producer Name & Address

What else can you learn from a label?

Source: Red Newt Cellars

Vineyard—To include the name of a specific vineyard, 95% of the grapes used must be from said vineyard.

"Estate Bottled"—Wines must come from vineyards leased or owned by the producer within a single AVA; and crushed, fermented, processed & bottled by the producer.



Source: Hermann J Wiemer Vineyards

Source: Hound's Tree Wines

"Reserve"—This is not a regulated term. It could mean something different for every producer, or it could mean nothing at all!

Grape Varieties—Each grape must note its percentage in the blend.

Source: Ravines Wine Cellars

Vintage (ie 2020)—85% of the grapes must be from that year's harvest.

If a label includes a vintage and the place of origin is an AVA*—95% of those grapes must be from that harvest.

Source: Paumanok Vineyards

Single Grape (ie Chenin Blanc)—at least 75% of the grapes used to make that wine must be from that grape

Single Grape, Native (ie Catawba)—only 51% of the grapes used to make the wine must be Catawba.

Note: Unlike many European nations, the US government has no rules when it comes to which grapes you can plant where, how you plant them, or the bottle shape used.

Understanding the New York Wine Label.
Credit: Dan Belmont

INTERNATIONAL RIESLING FOUNDATION (IRF)

Keuka Lake Vineyards is a small winery in the Finger Lakes specializing in fine artisanal wines. This **Riesling** is produced from grapes planted at the turn of the century on a rolling hillside adjacent to an **evergreen** forest - a sprawling vineyard with slopes in many directions, lake and forest views, and pockets of diverse glacial soil deposits. The only thing missing is the fruit from the three rows nearest the woods; the deer and turkeys supervise the clearing of grapes from these vines.

THIS RIESLING IS:

PRODUCED AND BOTTLED BY:
KEUKA LAKE VINEYARDS LTD
8882 County Route 76 Hammondsport NY 14840
(607) 868-4100
www.klvineyards.com

GOVERNMENT WARNING: (1) ACCORDING TO THE SURGEON GENERAL, WOMEN SHOULD NOT DRINK ALCOHOLIC BEVERAGES DURING PREGNANCY BECAUSE OF THE RISK OF BIRTH DEFECTS. (2) CONSUMPTION OF ALCOHOLIC BEVERAGES IMPAIRS YOUR ABILITY TO DRIVE A CAR OR OPERATE MACHINERY, AND MAY CAUSE HEALTH PROBLEMS.

CONTAINS SULFITES • 750 ml

Source: Keuka Lake Vineyards

IRF RIESLING TASTE PROFILE, TECHNICAL GUIDELINES SUMMARY

	SUGAR TO ACID RATIO	pH		pH	SHIFT DUE TO pH
DRY	< 1.0	3.1 to 3.2	If	= or > 3.3	Med Dry
				3.5 or >	Med Sweet
MEDIUM DRY	1.0 to 2.0			= or > 3.3	Medium Sweet
				< or = 2.9	Dry
MEDIUM SWEET	2.1 to 4.0			= or > 3.3	Sweet
				< or = 2.9	Medium Dry
				< or = 2.8	Dry
SWEET	or > 4.1			< or = 2.9	Medium Sweet
				< or = 2.8	Medium Dry

Source: International Riesling Foundation

Source: International Riesling Foundation

Many New York State Rieslings use the International Riesling Foundation's Riesling Taste Profile to distinguish across many styles of New York Riesling, from bone dry and laser-acidic to sweet, opulent dessert wines.

Based on IRF guidelines for the interplay of sugar, acid and pH, winemakers calculate where to place the arrow on the profile, to help consumers choose a Riesling that best matches their taste.

Of course, not all producers use the scale, and you'll find a variety of indicators on various labels to help navigate the wide world of Riesling.

NEW YORK STATE MERITAGE BLENDS (MERITAGE ALLIANCE)

New York Meritage Blends. Credit: Dan Belmont

In 1988, a group of American vintners formed The Meritage Association (now The Meritage Alliance) to identify and promote handcrafted wines blended from two or more of the red "noble" Bordeaux varieties—Cabernet Sauvignon, Cabernet Franc, Malbec, Merlot, Petit Verdot and the rarer St Macaire, Gros Verdot and Carménère. New York State vineyards are home to all the primary red grapes of Bordeaux.

Meritage, pronounced like "heritage", was selected from over 6K entries in an international contest to name the new wine category. Meritage is an invented word that combines "merit" and "heritage"—reflecting the quality of the grapes and the ancient art of blending wine.

To qualify as a Meritage, no single grape variety can make up over 90% of the blend, and only "noble" Bordeaux varieties can be used. As Meritage is not recognized by the TTB to be a class or type, Meritage is considered a "proprietary or fantasy name". Alliance membership is required to license the Meritage name, so some wineries producing high-quality Bordeaux blends use proprietary names instead of Meritage.

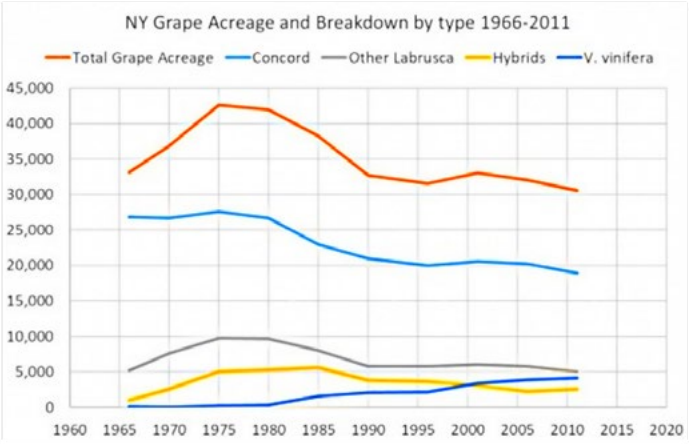
THE MANY GRAPES OF NEW YORK

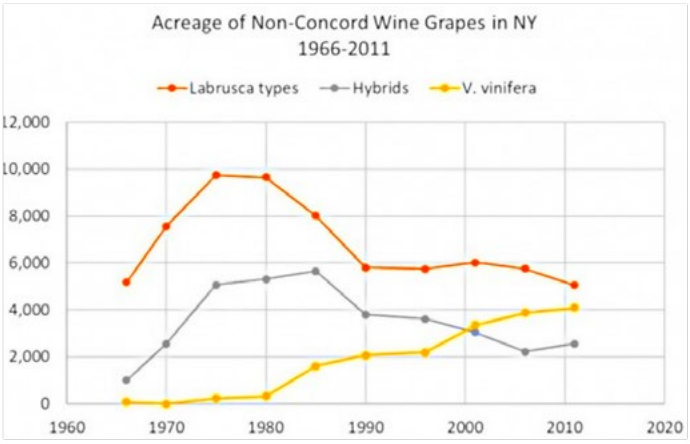
New York's unique role as one of America's oldest wine regions has left a diverse legacy in its vineyards.

Today, New York makes quality wines from more grape varieties than almost any wine region in the world.

And while there are grapes across each category—Vitis vinifera, native and hybrid—that have shown much success and garnered international renown, winemakers are constantly experimenting with unproven varieties across all of the state's regions.

The following charts show the changes in acres planted to each of the grape categories that we'll explore. The second chart removes Concord—of which 90% is used for juice and table grapes—as it tends to skew the overall picture of the state. Note the increase in vinifera essentially trading places with hybrids.





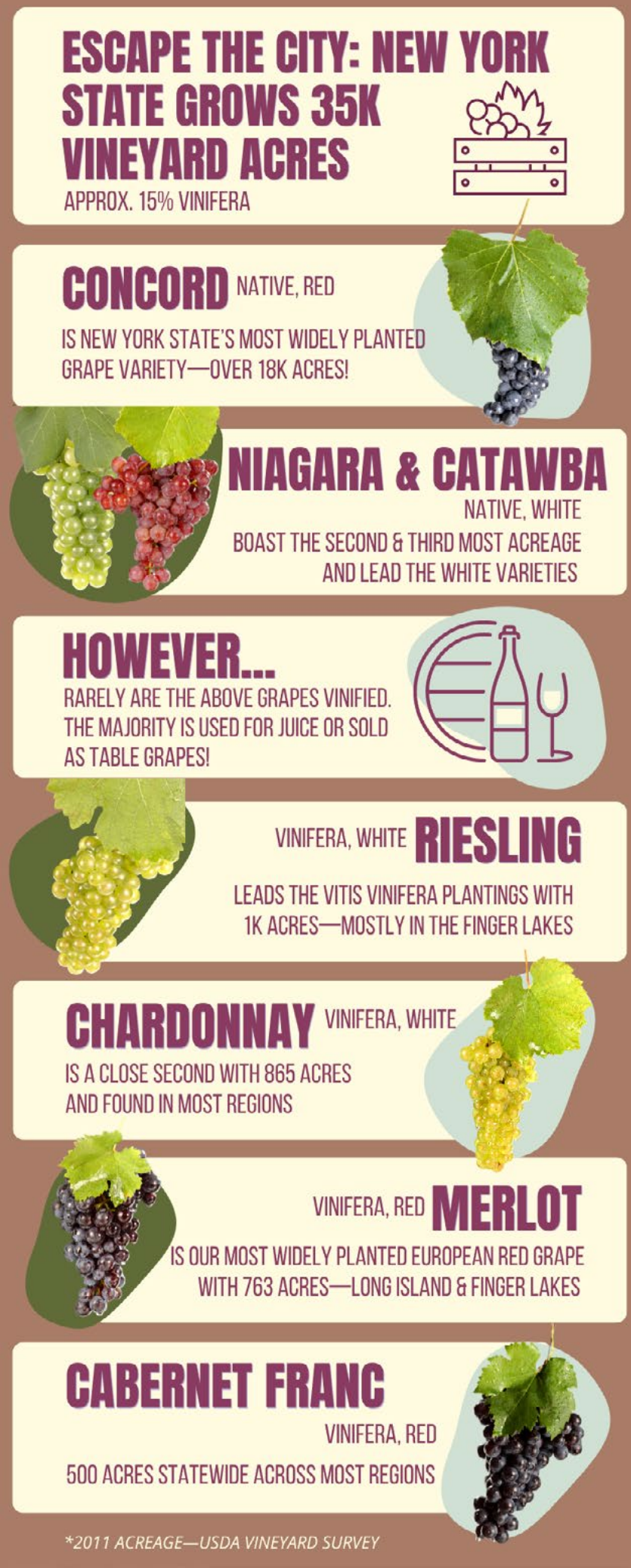
Since the USDA plotted the data a decade ago, we've seen big changes to New York's vineyard landscape:

- Vinifera plantings like Riesling have increased due to the state's excellent reputation
- Some wineries are producing new wines from native varieties with stunning results
- Hybrids continue to gain back popularity; and considering the potential effects of climate change, this sustainable grape could see more of a renaissance in the future

VITIS VINIFERA

Vitis vinifera is a species of grapes thought to be native to the area near the Caspian Sea in southwestern Asia. The Phoenicians carried wine cultivars to Greece, Rome and southern France, and the Romans spread the grape throughout Europe.

Despite their origin, they're commonly referred to as European varieties due to their historic success across the continent. Although hundreds of vinifera wine grape varieties are planted throughout the world, accounting for over 99% of all wine produced, only the finest and most adaptable of these have been transported from Europe and planted worldwide. But it's tricky business!



Early attempts to establish vinifera vineyards failed in the eastern part of the US—phylloxera, cold winters, humid summers and disease pressure, confounded viticulturalists for decades.

The first successful commercial plantings of vinifera grapes were made by Dr. Konstantin Frank at Gold Seal Vineyards in the 1950s, although UP Hedrick had success with certain vinifera varieties at the New York Agricultural Experiment Station in the 1930s and 1940s.

Identifying cold hardy varieties like Riesling, and choosing the right vineyard site—such as New York's gentle sloping lakesides or sandy island shores—was paramount.

Riesling currently dominates, but is joined by the likes of Cabernet Franc, Chardonnay, Merlot, Pinot Noir, Cabernet Sauvignon, and Sauvignon Blanc—all of which are among the most widely accepted varieties in the world and produce quality grapes and premium wines in New York State.

These varieties have contributed to more new acreage of vineyards in the past decade than native and hybrid varieties combined. Forget what you think you know—we're producing an array of wines as diverse as Queens!

▶ Click here for an introduction to New York Cabernet Franc with winemakers from across the state.

Escape the City Inforgraphic
Credit: Dan Belmont

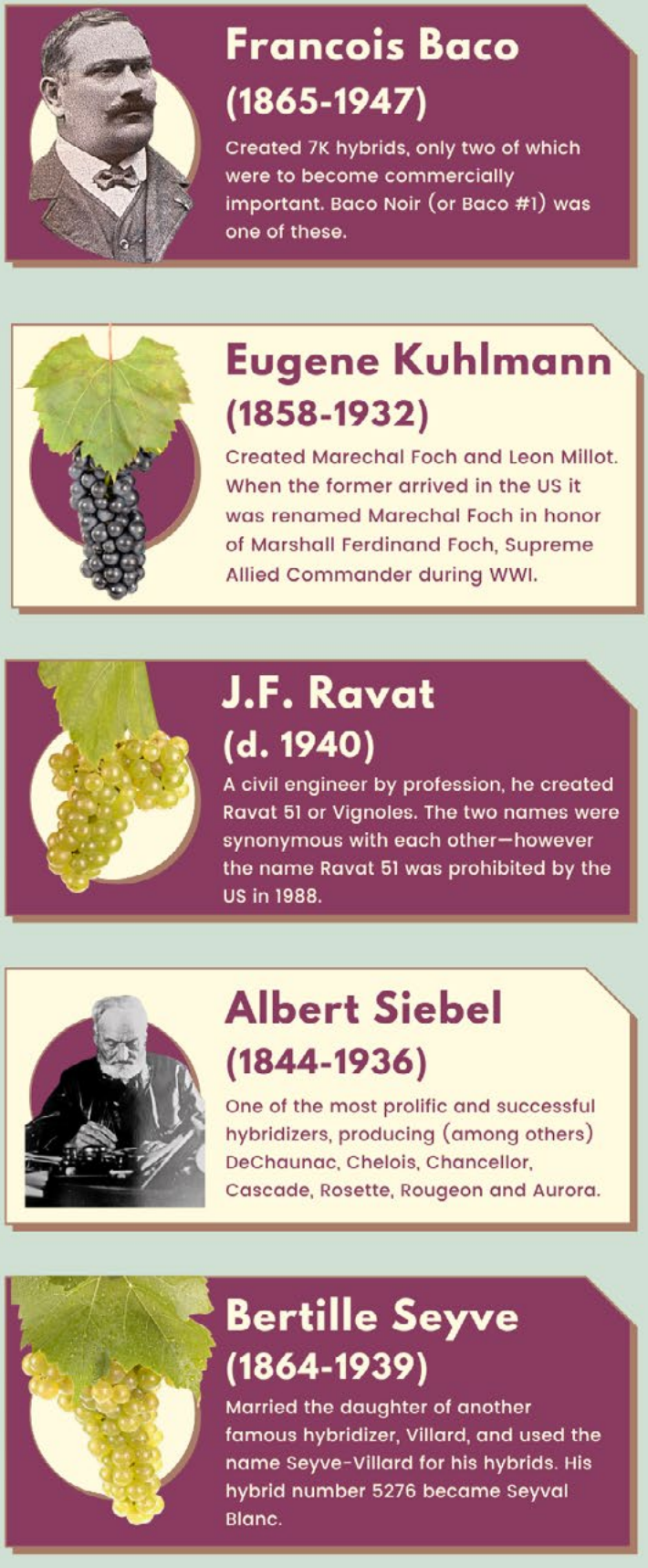
HYBRID VARIETIES

The term hybrid refers to a crossing (accidental or deliberate) between two species of grape, most often these are North American or Asian crossed with Vitis vinifera from Europe.

Most of the hybrids used in New York today were developed by French hybridizers who did the bulk of their work from 1880 to 1950. For this reason, the category is often referred to as French-American hybrids, however, many of the popular varieties grown today are not French-American but rather the result of North American breeding programs from University of Minnesota and Cornell (ie: Frontenac, La Crescent, Marquette, Cayuga White, Traminette, etc). With that in mind, some producers refer to the original French-American hybrids as heritage or heirloom varieties.

The French hybridizers' efforts were an attempt to develop new grape varieties—crossing vinifera varieties with the hardier, disease-and pest-resistant American species. These horticulturists made thousands of crosses and created hundreds of hybrids, of which a handful eventually became viable commercial producers.

While hybrid varieties were important to the United States in the first half of the 20th Century, improved rootstocks, insecticides and fungicides permitted the return of vinifera varieties to most vineyards. Simultaneously, a drive to improve the overall quality of American-grown European varieties promoted the elimination of vines considered to be marginal quality, hybrid and vinifera alike.



Meet the Hybridizers.
Credit: Dan Belmont

However, American Viticulture would not be where it is today without hybrid grapes bridging our past to our present... and they may be the future!

"The vinifera varieties we all know and love aren't very sustainable," wrote Dr. Jamie Goode in a 2020 *Vinepair* article. "To keep disease at bay, vineyards need to be sprayed [with copper, sulfur or modern fungicides] and this is leading winegrowers to explore the potential for working with hybrids that carry natural resistance to these fungi."

"The problem? The wine world still has a horrible bias against hybrids, which are regarded as a low-quality option compared with vinifera." He's right, it'll be an uphill battle marketing a new (or old) grape variety—but we think they should be treated with excitement.

And we're not alone! According to a May 2022 article by Elaine Chukan Brown for JancisRobinson.com, titled "Hybrids Gain Traction": "Some of the skepticism that the fine-wine community has towards hybrids comes from early attempts by producers to work with these cultivars in the vineyard and cellar in ways not conducive to maximizing their quality. For attentive winemakers able to adjust their approach to the characteristics of these hybrids, and the curious wine drinker interested in new taste experiences, hybrids can offer pleasurable wines, often at relatively affordable prices." Brown goes on to review dozens of hybrid wines from all across America. The stage may be set for a comeback of hybrid varieties!

NATIVE VARIETIES

The Natives—wild grapes—were here first. Forming the backbone of the early New York wine industry, native varieties came into use when it became apparent that European vines lacked the disease resistance and winter hardiness to survive. . The majority of these grapes are Vitis labrusca, but as we learn more about them, we're discovering more complex genealogy, including vinifera ancestors. For example, the Catawba grape is now believed to be a likely cross of the native American Vitis labrusca and the Vitis vinifera cultivar Semillon. However, since it was growing wild in North America long before we cultivated it, and even longer before we made these connections, it's considered a Native grape.

"[Native grapes] have a distinctive flavor, and this is described as foxy, but the term was originally used to describe the fondness foxes have for grapes from Vitis labrusca, an American species, rather than any resemblance between the wines and the smell of foxes," wrote Dr. Goode.

"Incidentally, researchers have found that the compound in labrusca that generates the foxy note develops later in ripening and so can be avoided through farming and picking decisions." wrote Brown.

The overwhelming majority of New York native plantings are used for the production of grape juice and jam. When made into wine, their flavor mimics the experience of these everyday products. It's truly local flavor!

▶ Click here for an introduction to New York Hybrid & Native grapes with winemakers from across the state.

VITICULTURE IN NEW YORK STATE

Grape production is different than viticulture. And New York State's agricultural history was largely built on the former. Over the last 50 years, we've been actively in transition to the latter, with regions and producers leading the vanguard.

Willliam McIlhenny made the following observation: "We think the biggest issue for some [Finger Lakes] producers may be the need for more careful and proactive vineyard management, which is critical for world-class quality. It is not by coincidence that the best New York wineries seem especially focused on this."

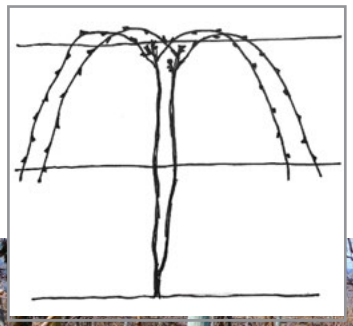
The upside is that this quality-focused group grows larger every day. New York state winemakers have a reputation for collegiality and sharing hard won knowledge with peers; continual curiosity and exposure to wines from other regions has also made an impact.

From an agri-business point of view, the modest upward trend in the prices of New York wines has enabled business owners to reinvest in equipment, plant additional vineyards, and conduct additional operations that are necessary to retain quality and character across the vintage years.

This collaboration, and the innovation that goes hand-in-hand with it, has long been in our DNA as we endeavor to grow better fruit in our unique climatic conditions—particularly, cold winters and humid summers.

To name a pair of early instances:

- William Kniffin's vine training experiments in the Hudson Valley from the mid-1800s yielded successful trellis methods that are still in use today. (inset)



- Dr. Konstantin Frank developed a special plow to earth over the vines for the winter. "Hilling up" is a common post-harvest practice for the colder regions, but not by all winegrowers, or achieved in the same manner. In the event of imminent extreme cold, fires, firepots, and wind machines are used to combat the extremely cold winter temperatures. Today, hilling up is often a requirement to qualify for crop insurance!

Winter Vines 'Hilled Up' on Seneca Lake. Note the additional 'replacement' growth.

- In the early 1960s, Professors Stanley Shepardson and Nelson Shaulis and their teams at Cornell University developed the Cornell Grape Harvester, which passed over the top of a row of grapes, straddling it while shaking the clusters off the vine. At about the same time, Lake Erie grape growers Max and Roy Orton developed a horizontal-action machine, which beat the trellis rather than shook the vines.

Contrary to most world wine regions, who will prune shortly after harvest, many New York vintners put off completion of pruning until the spring.

The primary strategy for growing cold tender grape cultivars in New York is the use of spare parts so that cold damage can be tolerated. Because both trunks and buds can be winter-injured, the attempt is to provide an excess of both, and adjust the final crop only after spring growth signals winter survival. With that in mind, one or more canes with additional buds will be left so that the final pruning can be adjusted if a frost episode has reduced the number of viable buds and a full crop may be achieved.

Open trellis systems and repeated vineyard maintenance help with air circulation to manage mildew and disease. Dense canopies restrict air flow, increase drying time and interfere with spray penetration. For varieties that are sensitive to bunch rot, such conditions can spell disaster.

Thus, the majority of cold tender grapes are produced on a low head, cane pruned system, such as flat cane VSP (ie, guyot) or Pendlebogen system. Here, minimal vine structure makes for easier replacement after winter injury and use of canes results in more fruitful nodes than spur pruning. These systems require intense management; the umbrella kniffin system is often a more suitable alternative for lower value fruit.

Additionally, New York's vineyards are not without their everyday pests, including insects, deer, birds and wild boar. These are often deterred by noise cannons, laser systems, netting, above and below ground fencing, pheromones (sexual confusion), or simply planting lesser fruit as a barrier to protect higher quality fruit! Conventional pesticides are also used by some producers as necessary.

Leading producers take a more holistic and hands-on approach to vineyard management, reducing reliance on pesticides and herbicides, and focusing on the importance of soil health using non-chemical methods.

Several employ organic and biodynamic practices, although very few are currently certified. This often coincides with a more hands-off winemaking approach.

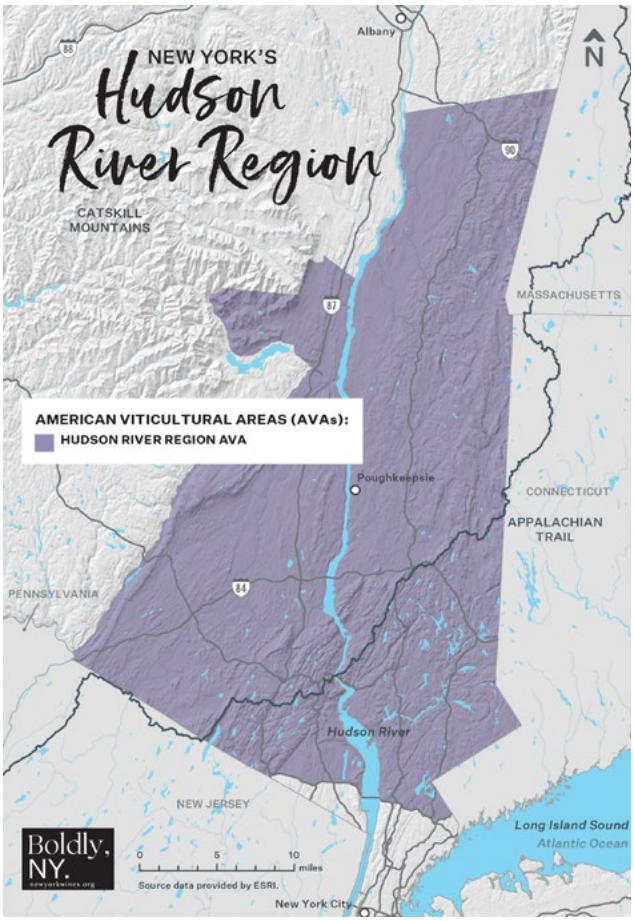
We'd also be remiss not to acknowledge the immense contributions of the Cornell University Cooperative Extension Regional Grape Programs, whose viticulture experimentation and research has been key in keeping our food systems secure and economically sustainable. New York was a pioneer in extending this research information to its citizens, starting in 1894, and today the program continues to benefit grape growers and wineries across the state, helping them adapt to conservation efforts and climate change.

THE HUDSON VALLEY

OVERVIEW

The Hudson Valley includes the Hudson River Region AVA (south of the New York State capital Albany) and the Upper Hudson AVA (north and west of Albany). The valley is characterized by long-standing agricultural and viticultural history; the diverse alluvial soils and microclimates found throughout the corridor of plains and hills; and the resulting 315 mile long Hudson River.

One of the oldest and most historically important wine areas in the US, the Hudson River Valley can be credited for pioneering many of the innovations that helped the NY wine industry grow.



Established: June 4, 1982

Grapes: Hybrids and Vitis vinifera

Size: 79 farms, with 446 acres under vine

Average growing season: ~190 days

Established: December 6, 2018

Grapes: Hybrids

Size: 43 farms, with 117 acres under vine

Average growing season: ~155 days

HISTORY

Wine has been produced in the Hudson Valley for at least three centuries.

- In the late 1600s, Huguenot French settlers at New Paltz attempted to grow Vitis vinifera vines but failed, likely due to phylloxera and fungal disease. Native grapes (labrusca, riparia) remained the mainstay, until varieties such as Isabella were available in the early 19th Century.
- The first large, commercial vineyard—Croton Point Winery—was established by 1827, growing Isabella and Catawba grapes. Croton Point eventually grew to 75 acres, supplying New York City with grapes, and produced some of the first wines in the 1860s.
- Brotherhood Winery was founded in 1839 (then known as Blooming Grove Winery) and is the oldest, continuously operating winery in the US.

In the 50 years prior to the 1890s, Hudson Valley horticulturists and grape breeders played a significant role in the development of new grape varieties.

Crossing Vitis vinifera with native varieties, their experiments produced grapes that in turn, eventually led to such notable varieties as Diamond and Cayuga White. Pruning systems that are in use today, such as Two and Four-Arm Kniffin, were developed to respond to the vigor of the new varieties while providing canopy structures that would ripen the fruit.

By 1890, there were approximately 13,000 acres of grapes in the Hudson Valley. By the turn of the century, with low economic value, over half had been removed. Growers were transitioning to other fruit crops—such as apples, peaches, cherries and small fruits—as competition from California and the Finger Lakes grew. As of 2008, about 22% of New York's fruit production acreage lies within the Hudson Valley. And according to the Hudson Valley Research Lab, over 500 fruit and vegetable farms occupy over 18K acres.

At the passage of the Farm Winery Act in 1976, Hudson Valley was home to four large bonded wineries that each produced about 250,000 gallons (105,000 cases) of wine annually: Brotherhood in Washingtonville; the Royal Wine Corporation in Milton; Marlboro Industries Winery in Marlboro; and Hudson Valley Winery in Hudson.

Following the passage of the act, Benmarl Winery, in Marlboro became the first newly licensed New York Farm Winery. They operate one of the oldest continuously farmed vineyards in America—a vineyard site that had been used by noted viticulturalist AJ Caywood, who developed the Dutchess grape (among others) in the 1700s.

Benmarl marks the revival of the region following Prohibition, and the focus has since shifted to premium table wines from smaller producers. There are now over 59 wineries in the Hudson River Valley and 20 in the Upper Hudson. In addition, in 2016, the Hudson Valley Cabernet Franc Coalition was formed to showcase Hudson Valley Region AVA Cabernet Franc; there are currently eight legacy members.

The Hudson Valley has established itself as a stronghold of the farm-to-table movement, with over 60 million mouths to feed in close proximity, and the majority of farms are small to midsized. Over the last decade, the Hudson Valley has seen a tourism boom; and since the pandemic, is seeing an increase in residents, many emigrating from New York City. We believe these factors will continue to drive growth of both viticulture and winemaking.

From quality output, to talent and technology—this is a region to watch.

GEOLOGY

The Hudson is contained by the Taconic and Berkshire Mountains to the east of the river; the Catskill Mountains and the Palisades cliffs to the west; and the Adirondack Mountains to the north. The Hudson Highlands span both sides of the river.

The river is tidal, changing directions twice daily, with influence as far north as the Federal Dam in Troy, NY (just north of Albany). Heading south from there, the river maintains a depth of at least 30', dredged as a shipping route. Some areas however are much deeper – with the deepest part of the Hudson reaching 202', called "Worlds End" near the US Military Academy.

The Hudson River is sometimes referred to, in geological terms, as a "drowned river". The rising sea levels after the retreat of the most recent ice age drowned the coastal plain and brought salt water well above the mouth of the river. The former riverbed is clearly delineated beneath the waters of the Atlantic Ocean, extending to the edge of the continental shelf.

Along the river, the Palisades are of metamorphic basalt, the Highlands are primarily granite and gneiss, and from Beacon to Albany, shales and limestones. Ultimately, glaciation has made for very diverse alluvial soils.

CLIMATE

The climate of New York's Hudson Valley is generally representative of humid climates in the northeastern United States, but the topography outlined above plays a large role, leading to a wide range of microclimates. Summers are pleasant, and the diurnal range helps cool the mid-day heat. Winters are cold and sometimes severe. Precipitation is relatively well-distributed throughout the year, with most falling during warmer months via thunderstorms. Snowfall is highly variable based on elevation. The Hudson Valley area enjoys abundant sunshine compared to the rest of New York State. Despite lying between areas of higher elevation to the west and east, the area seldom experiences long periods of cloud cover or accumulated smog.

The Hudson River
Credit: Randy Tagg

While humidity and precipitation may be somewhat higher than surrounding areas, it's a worthy trade-off for warmer nights and a less extreme annual temperature range.

"The Hudson Valley's climate changes rapidly as one goes north up the Hudson Valley and away from the river's shores," wrote J Stephen Casscles in the book, *Grapes of the Hudson Valley And Other Cool Climate Regions of the United States and Canada*. "This variation in temperature is partly due to the diversity in physical features that separate the land from the river and the proximity of the Catskill and Berkshire mountains.[...] Overall, the influence of the river, which is really a broad tidal estuary or fjord, is most favorable to growing fruit crops."

"The lowlands of the Hudson Valley receive somewhat less rainfall when compared to the rest of New York because when moisture is carried inland from the Atlantic Ocean, it falls as rain over the Hudson Highlands and the mountains and highlands of New England. Another desirable characteristic of the Hudson Valley's rainfall patterns is that, on average, July rains are more plentiful than in the rest of the state, but reduced in September and October during the critical harvest season. This relatively light rainfall in the fruit's maturing months is more marked in the Hudson Valley than in other New York grape-growing regions."

In an interview for ValleyTable, Hudson Valley AgriBusiness Development Corporation founder and executive director Todd Erling noted: "It's a mixed blessing because some of our humidity and some of our water issues are challenges for pest control and production practices. But at the same time, we're not going on our fifth year of drought."

In the fruit-producing areas of the Hudson Valley, summer temperatures are high, with an average of approximately 74° (Beacon, NY) thanks to warm southerly winds. In winter, the average low temperature is approximately 21°, with northerly winds out of Canada constraining the region's primary grapes to cold-hardy varieties.

DRINK THIS

The Hudson Valley has been a crucible for the development of French-American hybrids—including Seyval Blanc, Cayuga White, Baco Noir, Mareschal Foch and Traminette in the Hudson River Region and Marquette, Frontenac, La Crescent and La Crosse in the Upper Hudson.

However, it's vinifera that we're seeing increased plantings of. Varieties include Cabernet Franc, Pinot Noir, Chardonnay, Riesling, Albariño, and Gamay.

Serious viticultural winegrowing is also being undertaken on heirloom varieties that were developed between 1840-1890. This nod to our history aligns with regional culinary trends that emphasize locally grown food and wine, and link the Hudson Valley region with the key market of New York City.

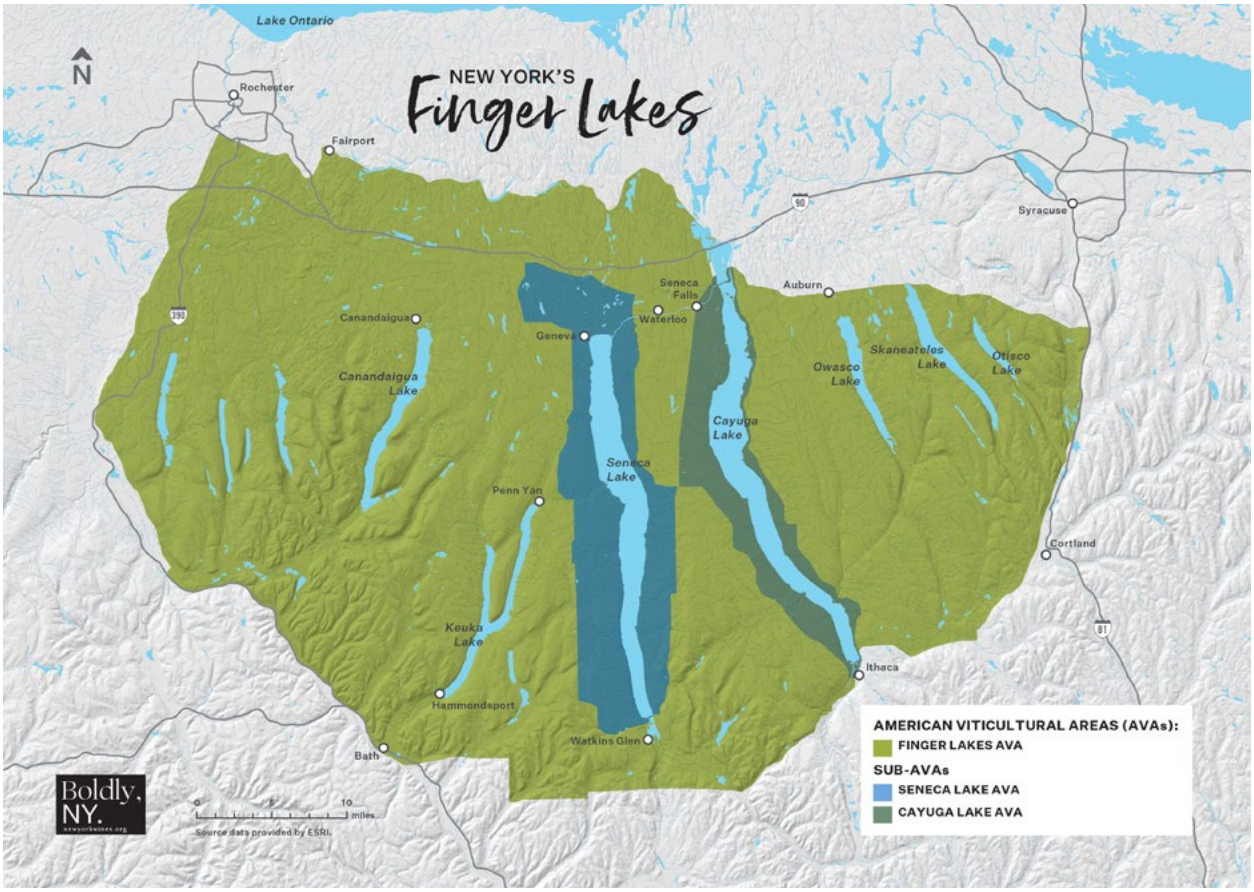
Baco Noir

FINGER LAKES

OVERVIEW

The Finger Lakes region of northwest New York is known for its picturesque grouping of narrow glacial lakes—some of the deepest freshwater lakes in the United States.

Over the past two decades, the Finger Lakes have become known as one of the finest cool-climate winegrowing regions—especially for Riesling—in North America.



Established: September 1, 1982
(Cayuga Lake AVA Est: March 25, 1988, Seneca Lake AVA Est: July 3, 2003)

Grapes: Native, hybrids, Vitis vinifera

Size: 423 farms, with 10,709 acres under vine

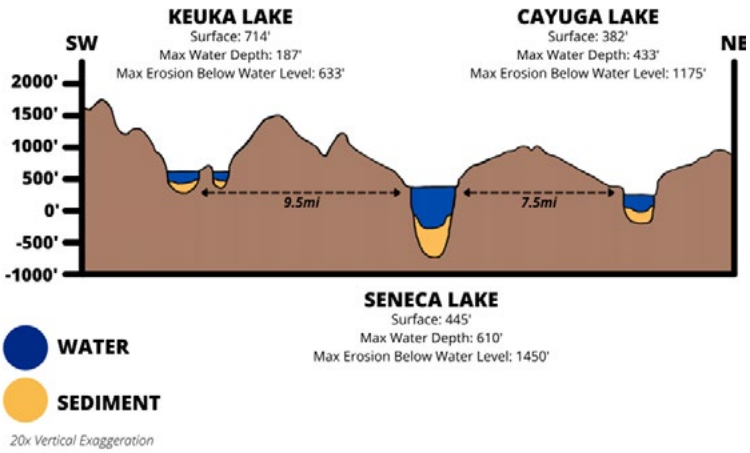
Average growing season: ~195 days

Of the 11 lakes, Canandaigua, Keuka, Seneca and Cayuga are central to the cool—climate winegrowing region. Their names are Native American, meaning: Canandaigua ("The Chosen Spot" or "The Chosen Place"), Keuka ("Canoe Landing" or "Crooked Lake"), Seneca ("Place of the Stone") and Cayuga ("Boat Landing"), with the latter two recognized as separate AVAs due to their unique conditions.

Seneca Lake is characterized by the large area it covers. It's really big. You could take the 10,000 acres of grapes from across the region, multiply it by 4x, and still have room for more on the 43,000-acre lake surface!

It's also really deep—600' in places—and this volume stores heat energy leading to the region's delayed spring warming and delayed autumn cooling.

The underlying bedrock of glacial till soils are primarily shale, plus sandstone in the south and limestone in the north.



Cayuga Lake is characterized by lime-influenced glaciated soils, low elevation (382' above sea level), moderating lake micro-climate and uniform air drainage.

Some of the newest growth in this region, however, is coming around the smaller western lakes, Conesus ("Always Beautiful") and Hemlock (the only lake named for European settlers). The smaller eastern lakes, Owasco ("Floating Bridge" or "Crossing Place"), Cazenovia ("Lake of the yellow perch ") and Skaneateles ("Long Lake") are also seeing wineries open in their vicinity.

HISTORY

In 1779, the American Revolutionary War brought the Continental Army to the Finger Lakes in pursuit of the Iroquois, a people whose Finger Lakes homeland included hundreds of acres of fruit trees. Following the war, their lands were parceled out to veterans who planted subsistence farms and gardens.

By 1860—about 30 years after the region's first planting of Catawba and Isabella vines by Reverend William Bostwick—about 3,000 acres of grapes were being grown along the shorelines of Keuka, Canandaigua and Seneca Lakes. This expansion of vineyards was fueled by the 1825 completion of the Erie Canal, which established a trade route, linking the Finger Lakes to Albany and New York City via the Hudson River.

Barges could haul up to 65 tons of grapes, turning the lakes into thoroughfares of trade.

The pioneering wineries hired French winemakers from Champagne, and in 1863, the Pleasant Valley Wine Company—the region's first—won a gold medal at the Vienna Exposition for a sparkling Catawba, inspiring growth in wine cellars throughout the late 1880s. By 1865 the Pleasant Valley Wine Company was producing about 20,000 bottles of sparkling wine "Champagne".

Industry expansion continued, reaching up to 50 wineries across 20,000 acres of vineyards by the early 1900s. But Prohibition had the same effect on the region as elsewhere. When it ended in 1933, most of the small, family wineries were gone, and vineyard acreage had declined by over half.

During the late 1930s and 1940s French-American hybrids were introduced to the Finger Lakes, primarily through the leadership of Philip Wagner, a nursery man and vineyardist who also wrote two seminal books: *American Wines and How to Make Them* (1933) and *A Wine-Growers Guide* (1945). The vines were largely imported through Ontario after the USDA imposed quarantine regulations in 1948, preventing direct importation of European vines.

By the end of the 1960s, Wagner stated that hybrids accounted for about 9% of the NY State crush of 20,000 tons. Finger Lakes producers were also bringing in around 11,000 tons from outside the state, plus about 1.25 million gallons of California wine to blend with their own.

As Finger Lakes wineries moved away from the traditional use of American varieties, two personalities emerged with opposing views of the future for viticulture.

Stephen, Lillian, and Greg Taylor (L to R), Bully Hill Winery. Credit: Rima Brindamour

Walter S Taylor, grandson of the founder of Taylor Wine Company (now Bully Hill), promoted hybrids. Dr. Konstantin Frank, a Russian emigrant with a PhD in Agricultural Science who taught viticulture and enology in the Ukraine, championed vinifera.

The Taylor Wine Company had been founded in 1880 on Bully Hill, Keuka Lake, and survived Prohibition by producing sacramental wines. The number of growers supplying Taylor grew from a couple of dozen in the 1950s to over 350 by the early '70s. Most of the new acreage was French-American hybrids.

Dr. Frank was an expert in cold-climate vinifera viticulture and had successfully developed innovations to enable the vines to survive and be commercially viable. In 1951, at age 52, he came to the US, and two years later was hired by Charles Fournier, president of Urbana (Gold Seal) as a viticultural consultant. Over the next seven years Dr. Frank and Fournier toured the northeast and gathered wood to experiment with scion-rootstock combinations. In 1960, the first commercial vinifera wines in New York were produced, including Pinot Noir, Chardonnay and Riesling. Dr. Frank purchased a 118-acre farm on Keuka Lake in 1957, founded Dr. Frank Vinifera Wine Cellars in 1959 and the first vintage was released in 1962.

Meaghan and Fred Frank, Dr. Konstantin Frank Winery. Credit: Rima Brindamour

Dr. Frank started the American Wine Society, a group dedicated to the evolution of American Wine, in 1967. As of 2022, there are over 7,000 members, with chapters in 36 states and overseas.

In the June 1980 petition for the establishment of the Finger Lakes AVA, the Finger Lakes Wine Growers Association made three principle arguments:

1. That the geographic boundaries of the proposed AVA were readily defined
2. That the name Finger Lakes is a well-known definition of the area and can be supported historically
3. That the "viticultural features of the area clearly differentiate it from surrounding areas".

In 1988, Cayuga Lake was approved for its own AVA, claiming it's basin differed from the surrounding Finger Lakes region in topography and soil type. In 2003, the petition for the Seneca Lake AVA was approved, after showing that the lake's physical properties (size, extent, depth, etc.) created a latent heat, which provided superior climate moderation to any of the other lakes. Both Seneca and Cayuga Lake AVAs lay entirely within the Finger Lakes AVA.

Twenty years ago, almost all the region's Riesling was sold directly to winery visitors. Today, many Finger Lakes wineries distribute throughout the United States and internationally.

Lucas Vineyards, established in 1974, became the first winery on Cayuga Lake. The Cayuga Lake Wine Trail was then founded in 1983 by five wineries (Lucas, Hosmer, Plane's, Americana and Frontenac Point), becoming the first wine trail in the United States.

In 1977, Glenora Wine Cellars became the first winery on Seneca Lake. In 1986, 11 wineries established the Seneca Lake Wine Trail. Today, there are over 50 wineries on Seneca Lake.

Vineyard overlooking Seneca Lake. Credit: Randy Tagg

That same year, eight wineries formed the Keuka Lake Wine Trail. Today, there are over 20 wineries on the lake.

The contribution of independent, family-owned wine growing operations to the region cannot be understated. Without the Wagners, Petersons, Lucases, Stamps and many other growers, there would not be a working foundation for the more recently established operations to build on.

The past decade has been marked by growing domestic and international interest in the region.

Talent and investment continues to pour in, and headlines highlight high achievements and notable partnerships.

The Tierce 2010 Dry Riesling, a collaborative effort of three Seneca Lake wineries, was served at President Barack Obama's Inaugural Luncheon in 2013. That same year, Christopher Bates becomes the world's 199th Master Sommelier. In 2016, Nathan Kendall Wines partnered with Pascaline Lepeltier (MS, Best French Sommelier 2018) for their inaugural vintage of Chëpìka—a range of wines using native grapes pro petillant natural sparkling wine.

In 2020, Finger Lakes was named the top wine region in *USA Today*'s 10 Best Reader's Choice awards. 2021 saw the release of Global Vintner Paul Hobbs' inaugural vintage of Finger Lakes based winery Hillick and Hobbs. Additionally, Hermann J. Wiemer winemaker Fred T Merwarth was just named International Winemaker of the Year by *Wine Enthusiast*. The future is bright!

FINGER LAKES REGION - VINEYARD ACREAGE BY LAKE

	CANANDAIGUA	KEUKA	SENECA	CAYUGA
ACRES	520	4100	3900	550

GEOLOGY

The underlying bedrocks of the Finger Lakes date from the Devonian period over 360 million years ago. They're composed of primarily grey shales and silty limestone, or a mix of shale, siltstone, sandstone and limestone.

The present-day landscapes of the Finger Lakes were produced during the most recent North American glaciation, 22,000-13,000 years ago.

As the ice retreated, the action of glacial scouring and high pressure sub-glacial melt waters formed a series of gorges, waterfalls and proglacial lakes.

These formed hanging deltas and shoreline terraces that can be observed at various vineyards including Fox Run and Sheldrake Point.

The Finger Lakes has several soil series, with differences such as soil pH (possibly requiring amendments to reach neutral pH), grain size and soil texture (effecting drainage), and the presence of clay and/or limestone in the subsurface (effecting nutrient content and availability). Depending on vineyard location, soils can

Montour Falls, Credit: Randy Tagg

be well—to moderately well-drained, and vigorous to moderately vigorous. Trellis systems and row orientation have been implemented in response to slope, aspect and soil vigor. Underlying shale beds may provide pathways for vine roots and may also enable water from springs to travel along the ledges.

Vineyard location circumstances can dictate otherwise, but in general, for Finger Lakes latitude, north-south row orientation is considered optimal for the region. A north-south orientation provides morning sun exposure on the east side of the trellis and afternoon sun on the west.

Given the site-specific nature of the regions vineyards, "many top producers now are also focused on the potential of single vineyards and micro sites, and many have intricate arrangements to secure production from very carefully delineated top 'lieu dits' in the region," wrote McIlhenny. "They produce over a dozen bone-dry, single-vineyard Rieslings that reflect the extraordinary variation of soil types within an eight-mile stretch of territory on the southeast part of Seneca Lake."

THE FINGER LAKES BY THE NUMBERS

	CANANDAIGUA	KEUKA	SENECA	CAYUGA
ELEVATION	688' (210m)	715' (218m)	445' (136m)	381' (116m)
AREA	10,558 ac (4,273 ha)	11,584 ac (4,688 ha)	43,343 ac (17,540 ha)	42,956 ac (17,384 ha)
LENGTH	15.5mi (24.9km)	19.6mi (31.5km)	38mi (61km)	38mi (61km)
MAX WIDTH	1.5mi (2.4km)	1.9mi (3.1km)	3mi (4.8km)	3.5mi (5.6km)
MAX DEPTH	276' (84m)	183' (56m)	618' (188m)	435' (133m)

CLIMATE

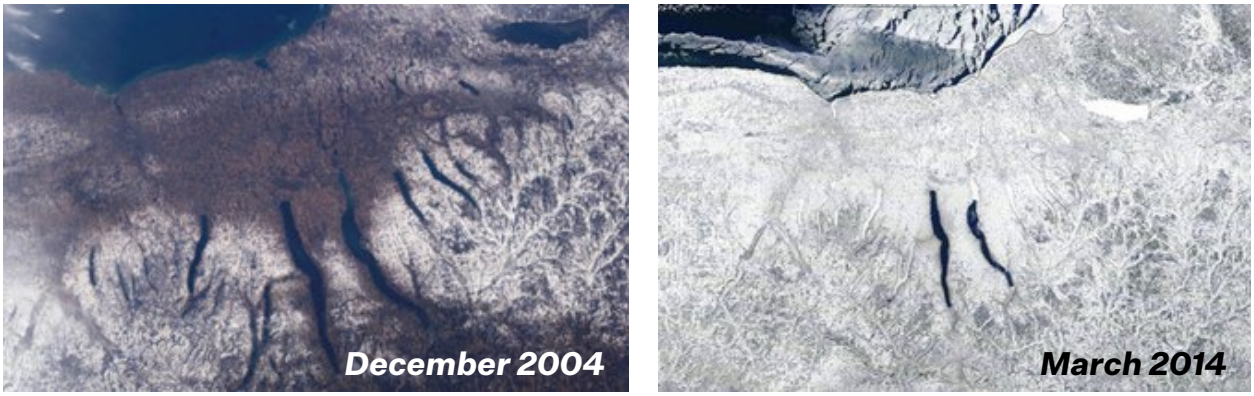
Winegrowing circumstances of Finger Lakes vineyards are very complex and not at all uniform throughout the region. With each vineyard location comes distance from a Great Lake, distance from a Finger Lake and elevation above the lake, as well as varying soil structures, water availability and retention, nutrients, slopes and aspect (direction). Rainfall also occurs throughout the year and varies considerably from one location to another.

The Finger Lakes is a cool-climate region with otherwise continental temperatures being moderated by Lake Ontario to the north, and Lake Erie to the west. Extreme winter air from Artic high-pressure systems is warmed while passing over the warmer waters of these two Great

Lakes, providing a degree of warming. During summer, a degree of cooling is provided. Both of these elements increase the viability of Vitis vinifera grapes winter survival and bud viability.

Vineyard elevation also has an impact on the "lake effect". The lakes accumulate heat from March to August and lose heat for the remainder of the year. Since the land surrounding a lake warms up in the spring faster than the water, vineyards close to a lake will experience cooler temperatures that delay bud break and protect from spring frost. In the fall, the land cools faster, so proximity to the lake provides the vineyards some additional heat.

But the predictability and consistency of the lake effect may be lessening as climate change brings dramatic and increasingly less predictable temperature swings and rainfalls to the region.



An extreme winter freezes over all but two lakes.
Credit: The International Space Station

Understandably, the varying locations of vineyards give rise to considerable seasonable variation within the general characteristics of a vintage. Additionally, the ripening period from August through October is central to the characteristics of a vintage. For example, Riesling wines vary in character from bold, full and a touch textural in warmer years to sleek, fresh and vibrant in cooler years.

Growing Degree Days (GDD) provides an index for estimating the heat accumulation during the growing season; it totals the number of degrees the daily average temperature rises above 50° (the minimum threshold for grapevine development) from April 1-October 31.

The seasonal 10-year rolling average GDD has risen over 12% over the last 40 years, from 2,400 in 1982 to 2,700 in 2020.

Master Sommelier, winemaker and Finger Lakes native Christopher Bates notes that it's a "short, but very efficient growing season"— in general the region accumulates heat units later and faster than more traditional old world regions. It's a compact season, but a warm and dry September and October can be especially beneficial and extend hang time into November. A cool climate, yes, but defined by the cold winters, and not necessarily the growing season itself.

FINGER LAKES VINTAGE REVIEW

Vintage variation is a characteristic of the cool-climate growing circumstances of the Finger Lakes. Vineyard managers and winemakers boast the talent and resources to recognize and deal with challenges, which enables Finger Lakes wineries to produce noteworthy wines even in challenging vintages. In speaking with many of them, it's that "every vintage is unique" that gets them out of bed in the morning.

2011

A mild winter followed by a cool, moist spring established conditions for above average yields. July and August were generally hot and dry, providing advantage to vineyards with access to natural moisture or irrigation. September and October were average other than consistent cloud cover and rain episodes that kept potential alcohol (sugar accumulation) to modest levels. Producers that practiced sound crop management and delayed harvesting varieties such as Riesling and Cabernet Franc to the end of October were well rewarded by a much drier and warmer period with superior results.

2012

An exceptional growing season. With good fruit set, warm weather and just sufficient rain, a solid crop achieved full ripening. Growing degree days (GDD) were near to the warmest that the region has had in many decades. By Aug. 30, the region had accumulated as many GDD as it normally does by the end of Oct.. Rainfall was below average, particularly in May, June and Aug., keeping disease pressure low. Bloom, veraison and harvest were ahead of schedule. Most varieties were picked 2-3 weeks earlier than normal. As can be anticipated in a warm year, brix development was higher than normal in a number of varieties.

2013

Winter was average kicking off 2013 – overall bud damage was very limited (10% or less). Bud break occurred at the end of April into May. No spring frosts. The growing season was wetter than normal (+15%). These circumstances encouraged shoot growth and increased disease pressure (downy mildew, botrytis). Entering harvest, the season pivoted and was much drier than normal through early October – ensuring a sound vintage. With good vineyard practices, and some sorting in the field and crush pad, 2013 has produced expressive wines that are medium bodied, balanced with moderate alcohol and good Finger Lakes typicity.

2014

Low temps in Jan. damaged vinifera buds, and growers modified pruning to leave additional buds and canes. Volumes were down although it varied by variety and vineyard. A late spring was followed by an indifferent summer. Overall GDD finished close to the long-term average. Rainfall defined the vintage. Disease pressure required much attention in the vineyard. By the end of Aug. rainfall was ~26% above the long term average. Veraison and ripening was delayed. A dry and sunny Sept. & Oct. saved the vintage. Riesling has great freshness and focus. 2014 is a good, solid vintage with fresh and expressive reds and whites.

2015

Winter 2014/2015 was even colder than the previous year. Back-to-back cold winters increased the vine's hardiness. Some vineyards sustained repeated injury, but many had near normal crops. Spring averages were warmer and drier. Summer slightly cooler. A drier July and a much drier Aug. signaled a strong harvest that came about a week earlier than usual due to a very warm Aug.–Sept.–Oct.. This yielded a healthy, ripe crop with typical freshness. 2015 displayed the flexibility and adaptability practiced in response to vintage variation. Building on the strong 2014, the 2015 wines have more definition, freshness and weight.

2016

An otherwise warm winter was interrupted when temps dropped on Feb 14th, causing varied bud damage. Those still pruning were able to adjust. Spring was cool (no frost). The summer was the driest and warmest in 50 years – causing drought conditions in many vineyards. Berry size and weight were down. However brix ended up close to average. Volumes range from normal to 20% down, but low disease pressure made for high quality fruit. Harvest was mostly completed by mid-Oct., and the rest of the month was very wet. White wines are balanced, with typical balance and pure fruit flavors. Red wines are bold and ripe.

(Continued on next page.)

FINGER LAKES VINTAGE REVIEW

2017

2017 presented average heat accumulation but was ~40% wetter than average. Warm and wet May & June established growing conditions for a large crop. The summer was just a touch cooler than average but very wet (up +49% over average). This promoted vine vigor, canopy growth, and increased disease pressure. Controlling crop load was paramount. A warm and dry fall ensured the quality of the vintage and produced a very large crop. Extended hang-time into late Oct may be responsible for flavor development. White wines boast more freshness than 2016. Reds are well structured and expressive with a lot of energy.

2018

2018 was 16% warmer (2882 GDD) than the long-term average. Rainfall was up 5%. However, it was the ripening period from Aug. – Oct. that defined the vintage. Warm and wet months giving rise to disease pressure and limited ripening at the end of the vintage. Maintaining vineyard hygiene, and rapid response within a relatively narrow harvest window was required. For the vigilant, this challenging vintage yielded solid wines with typical characteristics. Timing was earlier and shorter and volumes much lower than '17. The resulting wines are restrained and show finesse and elegance rather than power.

2019

2018/2019 winter was moderate with little bud damage. May was cold and wet, delaying bud break and bloom. Summer was close to normal for heat accumulation with July being especially dry & sunny. Fall was cooler than average, but a dry and sunny September brought ripening forward. Growers left grapes to 'hang' and ripening markers improved. 2019's crop size was a return to normal. Whites boast the freshness of a cool year. They have good weight and should cellar well. Red wines are higher in tannin as compared to previous years. September gave us wines that are ripe, yet restrained, with fruit and structure for cellaring.

2020

The 2019/2020 winter was quite mild. April was cooler and delayed bud break. Early-mid may saw frost events that caused bud damage and potential reduced crops. We headed into a dry/warm June, so by the end of that month the GDD was close to average. July rainfall was high, but Aug., Sept. and Oct. were very dry. Total rainfall for the growing season was 14.9in whereas the long term average was 90.6in. Disease pressure was virtually absent. Ripeness as measured by brix was excellent. Exceptional diurnal variation (warm days, cool nights) has favored the retention of acidity. A strong and complete vintage for both red and white wines.

2021

The 2020/2021 winter did not cause any significant damage to buds, so conditions were set for a potentially large crop. Overall spring weather encouraged early bud break and bloom. But July was wet, August wet and warm. Heavy rains at the end of August led to high humidity and some berry splitting. Into Sept. many producers acted to reduce the crop. September was dry though, veraison delayed by ~10 days. October was very warm, wet and humid. Disease pressure was high. On average, the nights were warmer than usual. This has reduced acidity in some varieties. Despite it all, noteworthy wines were produced across all styles.

2022

2022 is about quality over quantity. A cold Jan. brought bud damage and the crop reduced from the outset. Summer brought drought, smaller berries and less vigorous vine growth. Rains in late Sept. marred an otherwise great vintage. Winemakers responded with intense vineyard oversight. Thankfully, early picks had already achieved ripeness. Oct. was dry and sunny, and the grapes that survived Sept. came in clean and fully ripe. Outstanding reds. Concentration across the board. Acidity is lower this year, but pH's are too, so the wines are bright and vibrant. One of the most well-rounded vintages of the last decade.

SOURCE: Finger Lakes Wine Alliance w/ contributions from its members and Cornell's Finger Lakes Grape Program.

Click here for an introduction to Finger Lakes Riesling from NYC Sommelier, Thomas Pastuszak.

DRINK THIS

Vitis vinifera is the foundation for the economic viability of the Finger Lakes wine industry.

- **White:** While the majority of Finger Lakes Riesling are fermented with commercial yeast strains with fruit and freshness in mind, there are a number of winery programs that include ambient (uninoculated) fermentations, cold-soaking, lees aging and the use of large and older wood formats.

William McIlhenny, right, with winemaker Oskar Bynke, left. (Photo by William McIlhenny)

"A decade ago there was a reliable sameness to many Finger Lakes Rieslings. But today the picture is infinitely more interesting. The use of cold soaking, which was controversial until a few years ago, and more skin and lees contact—plus more judicious use of wood—are changing the profile of many wines, particularly their mid-palate weight and texture."

- Willliam McIlhenny, Director and Contributing Writer
jamessuckling.com, 2021

The Finger Lakes have long produced unique unoaked, stainless steel fermented Chardonnays, expressing the purity and freshness of cool-climate fruit. There is a growing trend to block malolactic fermentation, especially for wines that have been tank fermented and aged on lees. Textural Pinot Gris and perfumed Gewürztraminer are also gaining in popularity.

A February 2023 VinePair article, highlights outstanding non-Riesling white wines from the region including Gewurztraminer, Pinot Gris, Pinot Blanc, Rkatsiteli, and Sauvignon Blanc.

- **Dry Rosé**, predominantly from Cabernet Franc, has developed an enthusiastic following. Other popular varietals include Pinot Noir, Blaufränkisch, Saperavi and more!
- **Red:** While barrel-aged Cabernet Franc remains the most common, fresh and snappy unoaked Cabernet Franc wines—a relatively recent development—are very well regarded. Pinot Noir also remains a contender and is passionately supported by a few dedicated producers.

Sparkling wines have been part of the Finger Lakes wine industry since the early days.

- Methods vary—from forced carbonation and Charmat (tank) method using native and hybrid grapes, to traditional (Champagne) method using Chardonnay, Pinot Noir.
- Sparkling Riesling (emulating Sekt from Germany) is also growing quickly in production volume, popularity and renown.

The evolution of vineyard and cellar techniques is prompting a "back-to-the-future" like movement for quality hybrids such as Vignoles, Seyval, Marchal Foch, Baco Noir, and natives such as Catawba as well. Across the board, wines of quality and interest are—and will be—produced!

LAKE ERIE

OVERVIEW

The Lake Erie AVA occupies a narrow strip of well-drained, warm soil running 14 miles along the southern shore of Lake Erie. In its entirety, the 53 mile grape belt spans the states of Ohio, Pennsylvania and New York. The lake itself moderates the climate, and the Lake Erie Escarpment (part of the Allegheny Plateau) provides protection. The effects of the lake and landscape extend the growing season with warmer autumn temperatures that prolong ripening, and cooler spring temperatures that prevent early bud break and subsequent frost damage.

Established: October 21, 1983

Grapes: Concord, with small amounts of labrusca, hybrid and Vitis vinifera

Size: 338 farms with 17,977 acres under vine

Average growing season: ~200 days

This sprawling grape belt includes 338 vineyards and accounts for 54% of the total vineyard acreage in the state.

Lake Erie Wine Country is a regional wine trail association of 23 wineries that lie from Silver Creek, NY to Harborcreek, PA. There are 11 wineries in the New York State portion of the Lake Erie wine trail.

HISTORY

In 1818, Baptist Deacon Elijah Fay planted the first vineyard with wild vines in what is now known as the Chautauqua Grape Belt. These vines were replaced with Isabella and Catawba in 1824, and Fay's son, Joseph, built the first "wine house" in 1859 near Brocton.

Plantings of Isabella, Catawba and Delaware grew and during the 1870s, wineries prospered. However, at the same time, the temperance movement was gaining a strong following within Chautauqua County.

British-American physician and dentist Thomas Bramwell Welch was a keen supporter of the dry movement. He was the producer of "Dr Welch's Unfermented Wine," which became Welch's Grape Juice in the 1890s.

As the temperance movement grew, so did the popularity of grape juice.

In 1913, Secretary of State William Jennings Bryan served grape juice instead of wine during a full-dress diplomatic function, and in 1914, the Secretary of the Navy forbade any alcoholic drinks on board naval ships, actively replacing them with grape juice. During World War I, the company supplied "grapelade"—a type of grape jam—to the military.

Vineyard, Lake Erie Region
Credit: Randy Tagg

During Prohibition, wineries closed and grape growers thrived. Consequently, the Chautauqua-Erie Grape Belt became a major source for table grapes. But the region's wine growing history wasn't over yet.

- In 1944 Dr. Nelson Shaulis was appointed viticulturalist at the Geneva Experiment Station and is credited with developing the mechanical grape harvester and the Geneva Double Curtain vine training system, which reduced internal canopy shading.
- In 1960, Fred Johnson brought the wine growing era back, planting French hybrids and opening Johnson Vineyards Winery in 1961.
- The first vinifera wine, Chardonnay, was produced by Woodbury Fruit Farm in 1972.

New York's land grant universities have long been centers of excellence for agriculture, science and engineering. In 2009, as part of the Cornell Cooperative Extension program, the Lake Erie Research and Extension Laboratory opened, with the goal of maintaining a strong grape industry across the three western counties.

Cornell Lake Erie Research and Extension Laboratory
Portland, NY

GEOLOGY

The Lake Erie AVA lies within the Lake Erie Lacustrine Plain that borders Lakes Erie and extends from Buffalo, NY to Cleveland, OH. It is composed of sediment from a series of proglacial lakes from the last Ice Age. Bedrock consists of upper Devonian shales and sandstones.

Lake Erie is comprised of three basins. The AVA lies in the eastern basin that extends from Buffalo to Erie, PA. Lake Erie is the shallowest of the Great Lakes; this deepest basin has an average depth of 80ft.

The Chautauqua Grape Belt is actually a series of two to three belts, created by glacial lake beaches and lake bottom sediments. Heavier, fine clay soils can be found near the lake shore, and the most favorable gravelly loam soils lie 500'-800' in elevation, and extend up to 10' deep. They are well drained over the permanent water zone below.

CLIMATE

The region lies on the Ontario-Erie plain, with the shoreline of Lake Erie to the north and the bounding, protective crest of the Allegheny Plateau to the south.

The growing area is protected from start of season frosts from the proximity of the cooler lake, and the growing season is extended by the warmer lake as you enter into fall.

The region is sheltered to the northwest by the effect of the Great Lakes Superior and Huron, and by reach of Lake Erie. Data from the Lake Erie Regional Grape Program shows that the annual GDD averages ~3,000.

The temperature effects of regional physiography diminish as you increase distance from the lakes and climb higher on the slopes of the plateau. In extremely cold winters, 80% of the lake can freeze over, leaving vineyards exposed to winter damage.

DRINK THIS

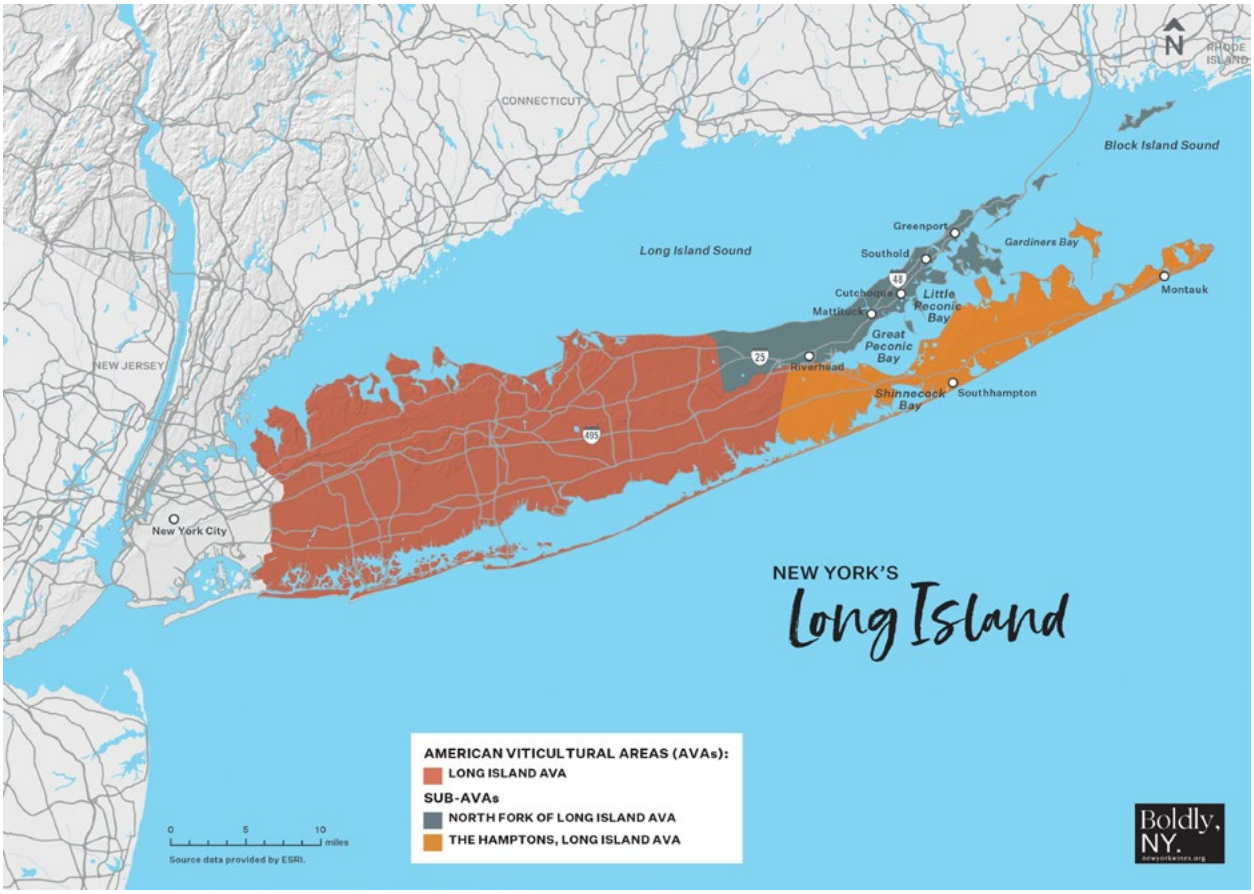
Concord accounts for 86.5% of the total vineyard acres planted along Lake Erie. Small amounts of labrusca, hybrid and vinifera varieties are planted there as well.

In New York's northernmost regions, an exciting trade off of cold winters and short growing seasons is the natural ability to produce ice wines. This rarity is enjoyed by vintners in the Niagara Escarpment, Lake Erie and in certain years, even the Finger Lakes. In the right conditions, healthy grapes are left to hang on the vine through to the first frost—sometimes as early as October, sometimes as late as early December! They're rare, and special, a must-try experience for any wine lover.

LONG ISLAND

OVERVIEW

Long Island, the southeastern tip of New York State, is the largest island in the contiguous United States, stretching from the East River into the Atlantic Ocean and shouldered by the Long Island Sound. The Long Island AVA is the entirety of the two counties on the eastern part of the island—Nassau and Suffolk—with the majority of the 90 wineries located in eastern Suffolk county.



Established: May 15, 2001
The Hamptons AVA: May 16, 1985 | The North Fork AVA: October 10, 1986

Grapes: Vitis vinifera

Size: 53 farms, with 1815 acres under vine

Average growing season: ~225 days

The forks each have their own AVAs. The North Fork of Long Island AVA is protected from the Atlantic by the South Fork and Peconic Bay. It's here where the first vineyards were planted in 1973. The Hamptons Long Island AVA lies on the South Fork, which has less protection and therefore fewer vineyards (but more celebrities!)

The climate of eastern Long Island is considered "mid-latitude maritime" and the grape growing conditions are strongly influenced by proximity to the ocean. Long Island winters are significantly milder than most of New York State, making the region desirable for growing the more cold-sensitive grapes varieties, such as Chardonnay, and Merlot, along with Bordeaux varieties and sparkling wines.

A bastion of experimentation, the sheer number of varieties planted and vinified with success in such close proximity is wild.

Coastline along the North Fork of Long Island
Credit: Rima Brindamour

HISTORY

Early wine growing attempts on Long Island follow a well-known mantra: If at first you don't succeed, try again!

- In the 1820s, Alphonse Loubat of France, established a 40-acre vineyard at New Utrecht (now Brooklyn). His vineyard efforts succumbed to disease pressure.
- Alden Spooner also attempted vinifera in Brooklyn in 1827, but decided that native were the only options and planted Isabella.
- The Prince family operated a nursery and botanical gardens in Flushing (now Queens) with some success. Their 1830 catalogue lists native and vinifera grapes.
- Moses Fournier, a French immigrant, introduced wine grapes to eastern Long Island in the 18th Century, and by the 20th Century, small backyard vineyards flourished, providing wine for private consumption. But commercial grape growing didn't really take off until the mid 1900s.

In 1963, a man named John Wickham planted a selection of table grapes obtained from Cornell University. Nine years later, in 1972, he's credited with introducing Louisa and Alex Hargrave to the North Fork's superior growing circumstances—and this provided the foundation needed for the industry to succeed.

The Hargraves had just finished travelling to research winegrowing regions in the United States. Convinced of the strength and potential of Long Island's soils and climate, they purchased a potato farm of 66 acres near Cutchogue on the North Fork, and planted 17 acres of Cabernet Sauvignon, Pinot Noir and Sauvignon Blanc. (They were so confident, they decided against any plantings of hybrids or native grapes!) Hargrave Vineyard opened for wines sales in 1976, and had expanded to 55 acres by 1981.

On the South Fork, the first vinifera vineyards were planted in 1979. Bridgehampton Winery released their first wine in 1983.

Today, Long Island continues to show it's confidence in innovative winemaking methods.

Cornell's Long Island Horticultural Research and Extension Center in Riverhead was established in 1993. The research program has evaluated some 49 wine grape varieties with an emphasis on clones of the commercially significant varieties of Chardonnay, Merlot and Cabernet Sauvignon.

Long Island Sustainable Winegrowing (LISW)—the first third-party certification for sustainable winegrowing in the eastern United States—is a not-for-profit that provides education and certification for Long Island vineyards using international standards of sustainable practices refined for the northeast. There are currently 23 vineyards and over 1K acres certified by LISW, representing over half of the Long Island AVA.

Channing Daughters Winery, Bridgehampton, NY
Credit: Rima Brindamour

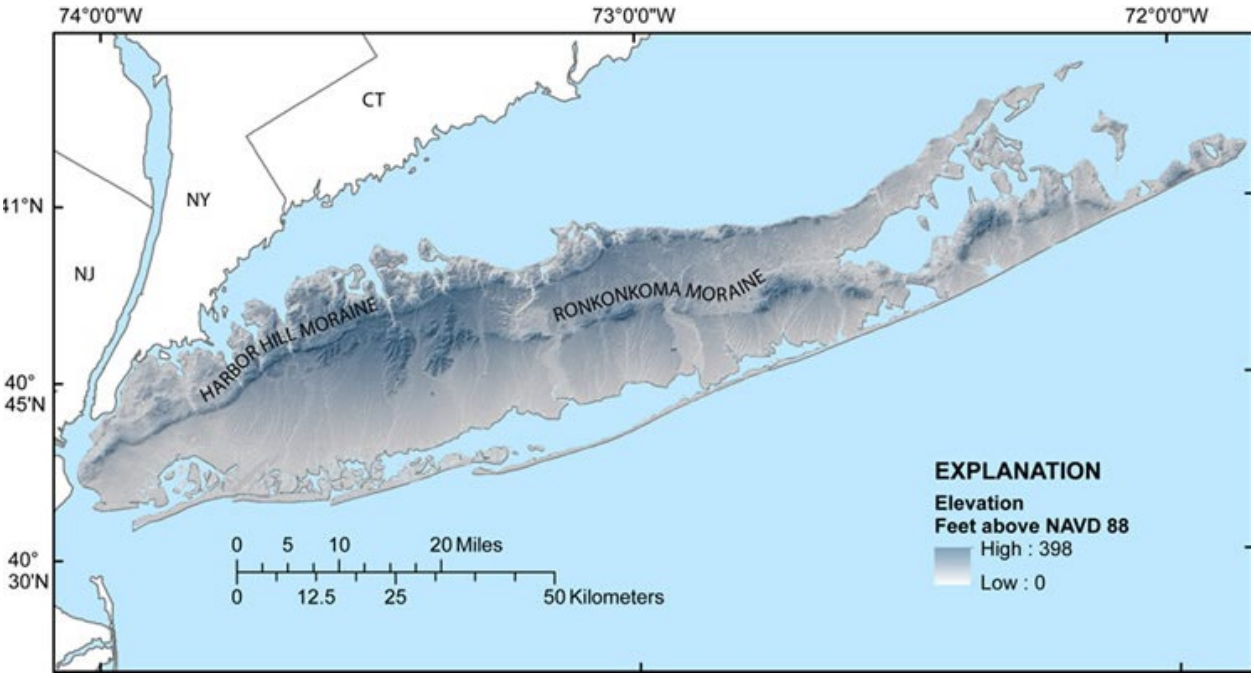
To mitigate the rising costs of both winery equipment and eastern Long Island real estate, winemaker Russell Hearn and the Lieb Family partnered in 2000 to create the Premium Wine Group, the region's first custom-crush facility. The business has had a major impact on the reach and awareness of Long Island's wines and now supports 16 brands, creating over 100 cuvees each year. Despite managing the orchestration of this state-of-the-art facility, Hearn believes that wines are made in the vineyard, and applauds the new vineyard practices that have yielded better fruit, including vertical shoot positioning, irrigation, leaf removal, new plantings at a closer density and varietal clones and rootstock more suited to the region.

In the summer of 2010, Cynthia and Tom Rosicki completed Sparkling Pointe's state-of-the-art méthode champenoise winemaking facility in Southold on the North Fork. Their dedication, commitment and investment to the craft and region has garnered much deserved attention, and helped put Long Island on the map for quality sparkling wine.

French-born Sparking Pointe winemaker Gilles Martin is also yet another excellent example of New York cool climate terroir attracting international talent. With over three decades of experience spanning France, Germany and California among others, Martin chose to put down roots (pun intended) in New York State and has launched winemaking programs at many of Long Islands now long-established wineries.

GEOLOGY

The landforms and soils of Long Island were formed by the advances and retreats of glaciers during the Ice Age, 21,000 years ago. Two great spines of glacial moraines, consisting of gravel and loose rock with outwash plains to the south, shape the key geomorphological features most relevant to vineyard growing circumstances.



A map showing Long Island's topography and the generalized locations of the glacial moraines. Source: United States Geological Survey (USGS)

The northern moraine, which directly abuts the North Shore at points, is known as the Harbor Hill moraine. Here the soil is deep, well-drained and ranges from nearly level to gently sloping, medium to moderately textured.

The more southerly moraine, known as the Ronkonkoma moraine, forms the backbone of Long Island; it runs primarily through the very center, roughly coinciding with the length of the Long Island Expressway. Here, the soil is rolling, excessively drained and course textured.

The land south of this moraine is the outwash plain of the last glacier. The glaciers melted and receded to the north, resulting in the difference between the rocky North Shore and the sandy South Shore.

CLIMATE

The climate of Long Island features long hot summers with occasional thunderstorms, mild spring and fall seasons, and cool-to-cold winters with a mix of snow and rain.

Long Island winter temperatures are significantly milder than most of New York State.

The coldest month is January, when average temperatures range from 30°-35°, and the warmest month is July, when average temperatures range from 70°-80°. Daytime high temperatures on the eastern part of Long Island are cooler than the west on most occasions, due to the moderating effect of the Atlantic Ocean and Long Island Sound. In general, the North Fork has more sunshine than the South Fork and warmer temperatures earlier in the spring (due again to the effect of the Atlantic Ocean). Overall, the South Fork has cooler ripening weather, yielding wines that frequently may have lower pH and slightly higher acidity.

Precipitation is distributed fairly uniformly throughout the year, with approximately 3”-4" on average during each month. Average yearly snowfall totals range from approximately 20"-35", with the North Shore and western parts averaging more than the South Shore and the East End. Fog occurs on the South Fork, when moist, warm Atlantic air rising up the moraine encounters cooler air and a lower dew point.

Long Island is somewhat vulnerable to tropical cyclones. While it lies north of where most tropical cyclones turn eastward and out to sea (most landfalls occur from North Carolina southward), several tropical cyclones have struck Long Island.

The Cornell Cooperative Extension program for Suffolk County considers Long Island’s east end to have a maritime climate. It sees an extended period of frost-free days, a reduced range of diurnal and annual temperatures, a moderately sunny climate, averaging 2,400-2,800 hours of sunshine annually, and heavier precipitation in winter than summer. GDD averages 3,300 annually.

▶ Click here for an introduction to pétillant naturel with Long Island winemaker, Christopher Tracy, of Channing Daughters Winery in Bridgehampton, NY.

Aerial view of Montauk Point State Park, located on the eastern tip of the South Shore of Long Island. Credit: Randy Tagg

DRINK THIS

In contrast to the grape growing industries of the Finger Lakes and the Hudson Valley, Long Island began on a foundation of vinifera vines.

- **Red:** Merlot forms the base for Long Island's many awarding winning red "Bordeaux style" blends. In fact, Long Island has proven to be a hospitable home to an ever-expanding number of varieties.

  As such, a Long Island Merlot, from Bedell Cellars took center stage at the 2013 Inaugural Luncheon of President Barack Obama's second term.

  Bordeaux style wines with "sessionable" alcohol levels are on the rise, a welcomed counterpoint to the always-inching-higher levels in today's Bordeaux.

  Equally as popular is Cabernet Franc, which is made into dry single varietal red and rosé wines.

- **Rosé:** The rosé styles of Long Island are wildly popular with the locals, as well as visitors to the world-renowned beaches of the South Fork.

- In a June 2022 New York Times profile of Wölffer Estate's rosés, "...the company now has eight varieties — [that] have become a fixture at backyard parties and beach picnics, a symbol of languid days on Long Island's South Fork. For the young summer-share crowd, rosé has become a stylish alternative to beer or hard seltzer. From the beginning, Christian Wölffer and [winemaker] Mr. Roth were committed to making rosé, believing that the East End terroir was perfect to produce an 'elegant, fun and versatile rosé that would be perfect for cocktail parties out East,' Mr. Roth said."

- **White:** Chardonnay remains a flagship variety for New York. Long Island wineries have been eschewing over-oaked styles of yesteryear and embracing lighter styles, much to the delight of today's imbibers. You can also expect to see racy, textured Sauvignon Blanc in most winery tasting rooms.

- **Sparkling:** The region sees wines made by the traditional method, produced with classic sparkling wine varieties including Chardonnay and Pinot Noir; and Petillant Natural (ancestral method), made with just about anything.

There are several other smaller plantings showing great promise as well. To name a few: Auxerrois, Melon de Bourgogne, Chenin Blanc, Albariño, as well as northern Italian whites. Excellent examples have also been made from Malbec, Blaufränkisch and Teroldego.

Hannah Staab for SommTV writes, "These unique grape varieties from regions worldwide can all be found in one unexpected place – Long Island, New York. Even though the Long Island AVA is small, with only 3,000 acres of grapevines, it's a leading region in experimentation. Some wineries are searching for grapes that will thrive in the area long term. However, others believe the flexibility to experiment is enough to define a region."

For all intents and purposes, there are very few if any wines produced from native grapes. Hybrids tend to be vinifera crosses. However, with climate change and sustainability top of mind, native and hybrids will continue to work their way into the conversation.

NIAGARA

OVERVIEW

The Niagara region includes the Niagara Escarpment AVA and the “Lake Plain” area north of the escarpment. The AVA derives its name from the Niagara Escarpment, a limestone ridge that runs for over 650 miles through the Great Lakes Region and the proximity of this ridge to the lake results in a moderate climate.

Established: October 11, 2005

Grapes: Native, hybrid & Vitis vinifera

Size: 58 farms, with 1067 acres under vine

Average growing season: ~205 days

The Niagara Escarpment is important to winegrowing in both western New York and in the Niagara region of Ontario Canada. The AVA is essentially a continuation of Ontario's Niagara Escarpment region on the western side of the Niagara River. The New York portion of the Niagara Escarpment has a continental climate that is heavily influenced by both Lake Erie and Lake Ontario. Winters are cold, preventing the overwintering of some insect species harmful

to grapes. The moderating effects of the lakes extend the growing season, and its northern latitude makes for very long sunny days in the summer months.

The AVA has soils of clay over a limestone base with streaks of glacial till. Slopes range from 3%-6%, providing air drainage and frost protection in combination with the warming effect of Lake Ontario. The influence that Lake Ontario imparts on a tiny 18 mile section of the Niagara Escarpment creates a unique microclimate in the elevations between 400'-600'. In combination with the fertile soils, this provides for ideal growing conditions for many varieties, including Pinot Noir, Chardonnay, Cabernet Franc, Riesling and Cabernet Sauvignon.

The Niagara Lake Plain is situated between the Niagara Escarpment AVA and Lake Ontario. Both regions share the benefits of the Niagara Escarpment and Lake Ontario's climatic effects. The gentle warming effects of the warm breezes off the Lake during springtime are captured by the escarpment and give both regions their character. The Niagara Lake Plain has slightly more maritime effects with bud break being held back a week or two after the escarpment region. This helps in controlling late season frost effects.

Soils on the Lake Plain are alluvial, lake laid sands, silts and gravels. With proper outlets, they can be well drained, to very well drained. These soils often have surface gravel to surface rock content and can absorb considerable solar energy, heating up during the day and releasing that heat to the vineyard at night. Varietals grown include Chardonnay, Gewurztraminer, Riesling, Cabernet Franc, Pinot Noir and Saperavi.

HISTORY

Winegrowing in the region began before the Civil War. It is believed that a winery operated at Lockport, NY during the 1860s. It's here that the Niagara grape (Concord x Cassidy crossing) was developed.

Niagara

As was the case in the Lake Erie grape belt, the Niagara regions experienced a grape production boom until the 1890s, when the market collapsed from over production. The Niagara Grape Company operated from 1879 to 1915 then ceased operations. The Niagara University Winery was in production from 1931 to 1944.

New planting flourished in the 1960s. Chateau Gay, a Canadian producer, opened a Lewiston facility making sparkling wines from 1933 until 1970. It was purchased in 1971 and Niagara Wine Cellars opened, only to close in 1973.

It wasn't until the early 2000s that Niagara's commercial winery businesses really resurged. In 2002, the Niagara Wine Trail route was established with two wineries. Today, the route includes six wineries in the Niagara Escarpment AVA and 13 in the surrounding region.

GEOLOGY

The Niagara Escarpment is a massive topographic feature, about 650 mile long, that formed from sediments deposited in a shallow warm sea between 445-420 million years ago. Over millennia, the coral reefs transformed to a hard dolomite (dolostone of limestone).

The formation can be traced in a giant horseshoe from near Rochester, through the Niagara Peninsula south of Lake Ontario to Hamilton, and north to Tobermory on the Bruce Peninsula. It then disappears beneath the water of Lake Huron to reappear on Manitoulin Island, across northern Michigan and down the west side of Lake Michigan to the state of Wisconsin. The final shape of the escarpment, the Niagara River and Great Lakes were formed 12,000 years ago on the retreat of the Ice Age glaciers. The Niagara Escarpment slopes to the north dropping 200' towards Lake Ontario. The AVA's vineyards are planted between 200-400' of elevation on these soils that were once lake shore and lake bed.

Niagara Escarpment (in red), License: CC BY-SA 3.0

The deep gravelly limestone- and clay loam-based soils in the Niagara Escarpment AVA have proven ideal for viticulture. The limestone content puts the soil in the correct range for optimal nutrient uptake and the clay soil components hold moisture for the long summers.

With the right vineyard care, this leads to an intensity of flavor and color in the finished wines, which are fast gaining a reputation for their high quality.

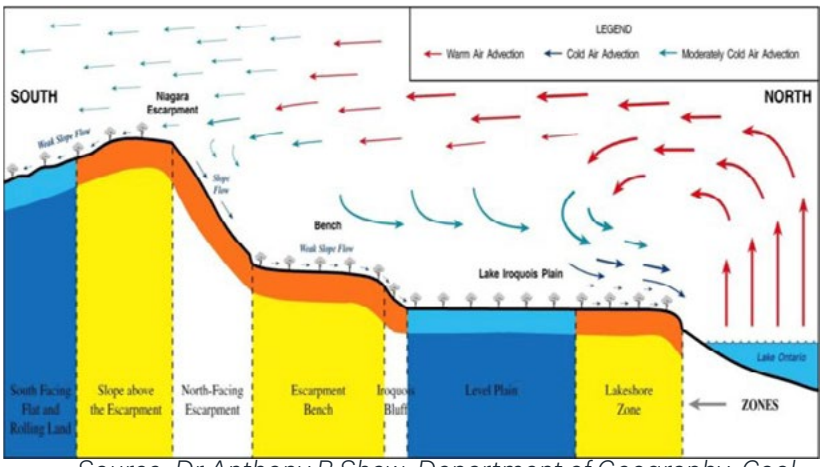
Arrowhead Spring Vineyards, Lockport, NY. Credit: Duncan Ross

CLIMATE

The lakes are the region's largest temperature moderator and extend the growing season in conjunction with the escarpment by keeping air moving during times that are risky for frost. This has made the escarpment a prime fruit growing region for hundreds of years. The proximity of the escarpment to the lakes also results in decreased cloud cover, especially in the summers, which enjoy more sunshine than most of the northeastern regions.

Western New York is known for its lake effect snows, which can result in highly localized, sometimes intense and even historic snow events. However, snow accumulation actually protects vines from deep freeze temperatures.

Lake effect storms across the region are usually most active between November and February, and are a result of cold air picking up water vapor as it blows over warm lake waters. Generally, the heaviest amount of snow in Western New York falls near the southern end of Erie County, and lake effect snows typically diminish when Lake Erie freezes over.



Source: Dr Anthony B Shaw, Department of Geography, Cool Climate Oenology and Viticulture Institute

In the winter season, warm air rises also off of Lake Ontario and is met with cooler air blowing from the southwest over the top of the Niagara Escarpment. This causes constant air movement as the warm air is forced back down the slopes towards the lake. Ontario has the smallest surface area of the Great Lakes, yet one of the deepest with max depth of 802', which prevents it from freezing over. The overall result is over 205 frost free days of growing season on average. Less than 5% of winters reach temperatures below -10°. Winter vine kill and bud damage from early frosts are largely avoided. In the spring, the effect of the escarpment is reversed; the sun warms the land and the air rises to then settle over the lake.

Click here for an introduction to the Niagara region in New York State with some of the areas leading winemakers.

DRINK THIS

While the region has a history that includes native grapes and hybrids, a warming climate and improved growing techniques are yielding superb results with vinifera. Most of the new plantings have been vinifera and the region is particularly well suited to the production of elegant, age-worthy wines made from Pinot Noir, Cabernet Franc, Chardonnay and Riesling.

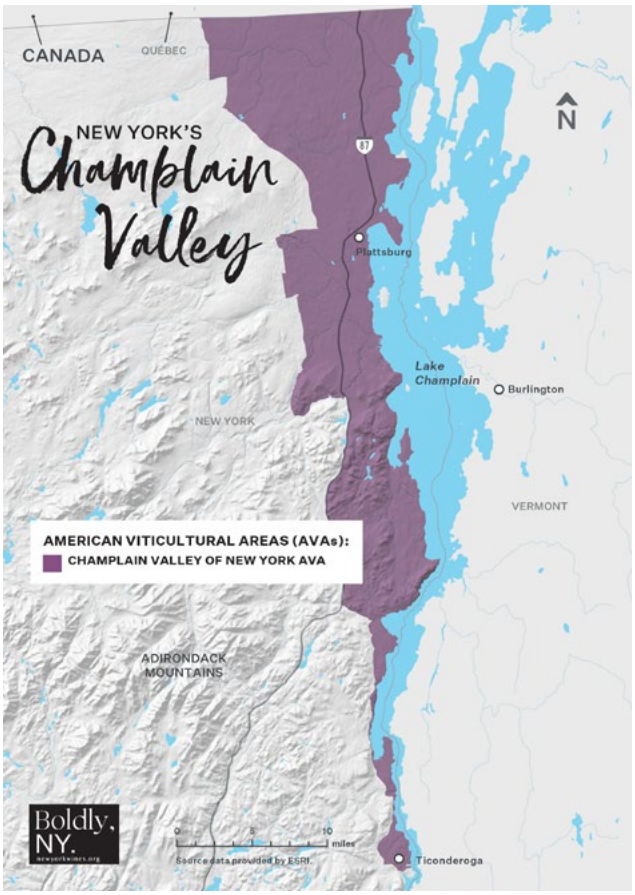
In addition to the AVA's dry white and red wines, this is one of the few regions in the world where true ice wine can be made – they're known the world over! Get out there and explore!

CHAMPLAIN VALLEY OF NEW YORK

OVERVIEW

The Champlain Valley in northeastern New York is bordered by the Adirondack Mountains to the west, the Green Mountains of Vermont to the east, the Taconic Mountains to the south, and Canada to the north. While the Hudson River drains south to New York City and the Atlantic Ocean, Lake Champlain flows north to the St Lawrence River. Lake Champlain has a surface area of 435 square miles, but spans 12 miles at its widest, with a maximum depth of 400'. The Champlain Valley of New York AVA recognizes the cool-climate and short growing season, owing to the physiography of the relatively flat valley and surrounding mountains.

The physiographic region of the Champlain Basin starts about 30mi south of Montreal, Quebec, stretching approximately 140 miles south and encompassing 8,234 square miles. The Champlain Basin is 37% within New York State, 56% Vermont and 7% Quebec, Canada. The Champlain Lowlands or "Champlain Valley" is contained within the basin. The AVA lies entirely within the Champlain Lowlands.



Established: August 22, 2016

Grapes: Hybrids, native and small plantings of vinifera

Size: 21 farms, 122 acres under vine

Average growing season: ~160 days

HISTORY

The native species of grapes that thrives in New York, Québec and Vermont—Vitis riparia—are wild grapes that were first documented on the St Lawrence River by French Explorer Jacques Cartier in 1535. Almost a century later, Samuel de Champlain tried to transplant French vinifera vines for wine making, but the cold climate kept the plants from producing. While some wine was made from native grapes, the early French settlers in the Champlain Valley imported most of their wine from France.

The treaty ending the Seven Years War in 1763 (known as the French and Indian War in the United States) ceded French control over Québec to the British. Trade then shifted to Great Britain, which produced spirits such as whiskey, rum and gin, with very little wine allowed in from France. It wasn't until the 1970s that farmers in the region began to experiment with grape growing in earnest. By the 1990s, breakthroughs in viticulture developed high-quality, disease resistant grapes that could thrive in this climate.

Today, more and more of the landscape in the Champlain Valley is being dedicated to vineyards and cideries.

Tied in with the strong local food movement, the award-winning wines made here attract wine lovers to visit the region and sample the flavors of the landscape.

There are several wineries that welcome guests, give educational tours, and allow a tasting of their wines.

The Champlain Valley National Heritage Partnership founded the first US International Wine Trail in the fall of 2012, as part of the area's commitment to connect communities and conservation. The trail promotes sustainable economic development by showcasing the working landscape on all sides of Lake Champlain. The trail encompasses nearly 40 vineyards and cideries in Vermont, New York and Quebec.

DRINK THIS

Given the relatively short growing season, and cold climatic circumstances, grape varieties grown are primarily cold-hardy Minnesota French-American varieties such as Marquette, Frontenac and LaCrescent.

Some producers work with small amounts of the most cold-hardy vinifera, or import the grapes from other New York State regions. Cider and fruit wines are also popular. These wines are rare outside of the local market—time to book a trip!

Marquette

GEOLOGY

During the last Ice Age, the region was covered by ice over a mile thick. As the Laurentide Ice Sheet retreated about 13,500 years ago, the land slowly rebounded. An ice dam formed at the northern boundary, creating the glacial Lake Vermont from the waters that flowed north. About 12,000 years ago the ice dam broke, thereby draining the lake by some 300' of depth to 200' in a short period.

Source: USGS/NASA Landsat

This dramatic event enabled sea water from what is now the St Lawrence River to enter and form the brackish Champlain Sea; in effect, a temporary inlet of the Atlantic Ocean.

As the land rose the northern inlet was cut off, and gradually the salty, brackish water became fresh from the waters draining from the surrounding lands and forming the present day Lake Champlain.

The region lies within a relatively flat valley between the Adirondack Mountains to the west and Lake Champlain and Green Mountains to the east. The underlying bedrock and soils based on glacial silt and sediments and erosion from the Adirondacks are relatively homogeneous.

The soils are mostly a combination of sand and clay with little organic matter. They are rich in minerals and tend to be well drained.

CLIMATE

The region lies within the wind and rain shadow of the Adirondack Mountains. Because of this, the prevailing westerly winds that sweep across Lake Champlain warm the lands to the west—not the AVA. The distinguishing features of the Champlain Valley of New York AVA is its short growing season and cold climate.

A SUSTAINABLE FUTURE

We're thrilled with our progress over the last half century, but we're not settling down. There's always work to be done.

With that in mind, the NYWGF has launched the New York Sustainable Winegrowing Program, with a mission to advance the environmental, social and economic sustainability of New York's wine and grape industry through regionally defined sustainability standards, third-party certification, grower education and stakeholder engagement. The vision of the program is to elevate New York State as a world class wine and grape region that protects the environment, conserves natural resources and improves the lives of our stakeholders.

It matters to us, and it matters to wine drinkers. According to a survey of wine consumers funded by Wine Intelligence and Full Glass Research, about 90% of millennials are willing to pay more for wine that is sustainably produced, 70% of consumers now expect brands to address social issues and 46% consider a brand's social mission before making a purchase.

Silver Thread Vineyard, Lodi, NY
Credit: Rima Brindamour

A 2021 Wine Enthusiast article goes further, suggesting that the future of wine and its long-term success lies with social sustainability and inclusivity: "a genuine commitment to social sustainability resonates with younger wine consumers, who have decades of future wine-buying potential."

Certification under New York Sustainable Winegrowing is based on achieving a minimum score of 75% in VineBalance and meeting sustainability minimums set out by the program. Vineyards who wish to be certified are audited by third party inspectors periodically to ensure they are meeting requirements.

The VineBalance workbook, originally launched by Cornell and NYWGF in 2007, is the core of the New York Sustainable Winegrowing Program's certification process. Reviewed and revised by a group of technical experts and guided by comparisons to leading sustainability certifications from around the country (LIVE, Lodi Rules and SIP) the VineBalance workbook has been updated to better reflects modern sustainable Viticulture. In addition, the workbook is annually reviewed and updated by a technical committee to ensure it represents best practices of New York sustainable viticulture into the future.

The rigorous updates and reviews of VineBalance by the scientific community and consistent third-party audits of certified Vineyards are essential to the legitimacy of the New York Sustainable Winegrowing program. Through these measures greenwashing is avoided and certified vineyards are guaranteed to truly be sustainable.

The resulting objectives are as follows:

1. To promote the use of practices that reduce reliance on off-farm inputs.
2. To build, regenerate, and conserve healthy soils for future generations.
3. To improve energy efficiency and reduce greenhouse gas emissions.
4. To encourage healthy ecosystems, biodiversity and wildlife habitat.
5. To protect surrounding reservoirs and waterways from pollutants.
6. To conserve natural resources, reduce waste streams and recycle.
7. To increase climate resiliency and promote climate-smart farming.
8. To provide education and pathways for continuous improvement.
9. To foster a socially equitable and economically viable industry.

The objectives were designed to ensure that vineyards operate under best management practices to conserve natural resources, protect the environment and maintain a successful and socially equitable business. Good for the planet, good for people and good for business!

Sustainability can be challenging to explain as its tenets are so wide-ranging. However, when speaking to our growers, it is often simple for them – it's about family. The next generation. They're stewards of the land, which they want their grandchildren and their grandchildren's

children to enjoy safely. As the overwhelming majority of New York State's producers are small family-owned and operated businesses, we can execute these best practices more effectively than mass-market producers.

Here are some practical, everyday examples of sustainable practices championed by vintners across New York State:

- Hermann J Wiemer Vineyards eliminated the use of herbicides in 2003. Instead, they use under trellis cultivation for weed management – a mechanical, non-chemical method.

In an October 2022 Decanter Article, Wiemer winemaker Fred Merwarth "...acknowledges, from his own experience implementing organic and biodynamic practices at H.J. Wiemer, that it's not an easy path – but there's always a starting point. 'Even small changes, like changing [phytopharmaceutical] products to more bio-driven alternatives, are positive and drive change. Many small growers are seeing that there's a way towards sustainability and away from conventional practices.'"

Cowpea cover crop at Hermann J. Wiemer Vineyards

- Hunt Country Vineyards installed a 348-panel solar system that provides most of their electricity. They have an award-winning borehole (closed loop) geothermal heating/cooling system that has eliminated their need for oil and propane to heat their buildings.

Hunt Country Vineyards, Branchport, NY

- Macari Vineyards has their own herd of cows, and the manure produced is used to make their own compost.
- At Channing Daughters, over 90% of each acre of grapevines is under permanent mixed cover crops, protecting the soil from erosion and contributing to the bio-diversity of their farm.
- Stoutridge Vineyard & Distillery built their winery into a hillside with their cellars underground, which allows them to take advantage of passive geothermal energy, and use gravity for the processing of their wines as opposed to pumps, which require external energy consumption.

Up close and personal at Macari Vineyards.

- Benmarl kegs wine for restaurants to help reduce the amount of energy that goes into producing and transporting bottled wine.
- Boundary Breaks, along with a small group of Finger Lakes vineyards established a non-profit to annually secure visas, provide transport, housing and ultimately gainful employment for a “guest” vineyard crew. The workers then rotate between the various vineyard sites. They make a good wage, and since their living expenses are quite small, they are able to send a substantial amount of money back to their families. Typically, about 90 percent of each year's workers return from the previous years, so they are well-trained and familiar with the operations.

These are just a few of the ways that New York State wineries approach sustainability. The updated VineBalance 2023 workbook has over 140 action items!

Advancing the environmental, social and economic sustainability of New York’s wine and grape industry will define and preserve our future and solidify our place in the wide world of wine. Applications for the 2023 New York Sustainable Vineyard Certification are now open.

The first wines labeled with the New York Sustainable Winegrowing Vineyard Certification will be released in 2023!

EVER UPWARD

Like we said, it's not easy to put New York State wines into a tidy box!

- We are undoubtedly cool-climate, but we've proven we know how to ripen our fruit
- We are young, but we're armed with a rich history
- We are an intrepid band of talented outsiders, but we've come together over a shared vision for excellence.

Together we embrace our diversity as a community of locals and expats alike—and we've set our sights on the world stage.

The mission of the New York Wine & Grape Foundation (NYWGF) is to promote the world-class image of New York grapes and wines from our diverse regions; to responsibly benefit farmers, producers and consumers through innovative marketing, research, communication and advocacy.

In this pursuit, we are redefining quality, tastes and experiences. We sit at the vanguard of old and new, producing wine for local and international palates.

We're still learning, growing and adapting—that's the world of wine! As our producers are overwhelmingly family owned and operated, we can be scrappy, and make moves with big impact. Compared to some major world regions, our output may seem low. But then it's all the more impressive that you can find our wines in over 30 countries worldwide.

We're so excited to have you—the wine lovers—along for the ride.

ACKNOWLEDGEMENTS

The New York Wine & Grape Foundation would like to thank Dan Belmont, wine educator and author, for working tirelessly with our team and with the community of dedicated winery and grower contributors to bring the updated New York Wine Reference Guide and Curriculum to life.

A huge thanks to editor extraordinaire, Allison Busacca, for making sure all the facts, ideas, and inspirational stories were woven together in an energetic but easy to digest narrative.

And thanks to the many, many contributors throughout New York's premium cool-climate wine growing regions who dedicate themselves to the odyssey that is New York State wine. This includes, but is not limited to:

Bob Madill, whose extensive research was paramount to our success.

And our in-region experts & on-camera contributors:

- Jim Baker, Chateau Niagara Winery
- Christopher Bates, Element Winery
- Terry Bates, Lake Erie Regional Grape Program
- Peter Bell & Ashley McCaffrey, Fox Run Vineyards
- Paul Brock, Silver Thread Vineyard
- Oskar Bynke & Fred Merwarth, Hermann J. Wiemer Vineyard
- Steve Casscles, Author, Grapes of the Hudson Valley
- Mike & Brooke Colizzi, Kashong Glen Vineyards
- Double A Vineyards
- Meaghan Frank, Dr. Konstantin Frank Winery
- Shane Gustafson, A Gust of Sun Winery & Vineyard
- Jason Hazlitt, Hector Wine Company
- Suzanne & Art Hunt, Hunt Country Vineyards
- Jim Meyers, Cornell Cooperative Extension, Eastern New York Commercial Horticultural Program
- Juan Micieli-Martinez, Premium Wine Group, Montauk Daisy
- Eric Miller, Winemaker
- Bruce Murray, Boundary Breaks
- Richard Olsen-Harbich, Bedell Cellars
- Lindsey Pashow, Northern NY Regional Agricultural Program
- Thomas Pastuzak, NoMad Hotels & Restaurants
- Duncan Ross, Arrowhead Vineyards
- Kelby James Russell, Red Newt Cellars
- Jennifer Ruso, Cornell Lake Erie Research and Extension Laboratory, Regional Grape Program
- Matthew Spaccarelli, Casey Erdmann, Laura Cypress, Fjord Vineyards
- Stephen Taylor, Bully Hill Vineyards
- Lenn Thompson, New York Cork Report
- Christopher Tracy, Channing Daughters
- Hans Walter-Peterson, Cornell Cooperative Extension, Finger Lakes Grape Program
- Peter Weis, Weis Vineyards
- Josh Wig, Lamoreaux Landing Wine Cellars
- Wendy Wilson & Jonathan Oakes, Leonard Oakes Estate Winery
- Alice Wise, Cornell Cooperative Extension of Suffolk County

The story of New Yorks wines is still being written. We welcome any feedback and/or updates regarding information contained in this reference guide. If you have something to add, click here to provide feedback.

APPENDIX

Montezuma Winery, Seneca Falls, NY
Credit: Rima Brindamour

BLAUFRÄNKISCH (AUSTRIAN) / LEMBERGER (GERMAN)

Red, Vitis vinifera

Origin:	*Principal AVAs:*
Styria, Slovenia	*Finger Lakes, Long Island*

VITICULTURE:

- Early budding and late ripening, ideal for warmer vineyard sites
- High yielding vine produces large leaves, large clusters
- Blackish blue, thick-skinned berries

VINIFICATION:

- Produces deep red wines
- Typically aged in oak
- Occasionally aged in stainless steel

TASTING NOTES:

- Produces deeply colored, tannic, medium to full bodied red wines, with lively acidity
- Aroma includes red and black fruit notes of red currant, cherry and blackberry, cardamom and black pepper

2011 ACREAGE:

Total NY: <10 acres

This grape has shown much success with top producers across the state in recent years and is proven viable in multiple regions across the state.

Cabernet Franc grapes shown during veraison (ripening)

CABERNET FRANC
Red, Vitis vinifera

Origin:
Bordeaux, France

Principal AVAs:
Finger Lakes, Long Island, Hudson Valley

VITICULTURE:

- Moderately vigorous, with small to medium clusters
- Thinner-skinned, earlier ripening and lower in acid than Cabernet Sauvignon.
- Late and uneven color development are common, leading to red wines that are lighter in color and tannin

VINIFICATION:

- Used in both blending and single varietal red wines and rosé.
- Produces light to medium-bodied wine
- Neutral oak barrels are commonly used for aging
- Fresher styles use stainless steel, concrete or amphora

TASTING NOTES:

- Light in color and tannin
- Often described as savory, however NY examples do not exhibit the degree of vegetal character that is associated with “old world” styles
- Bright red fruit aromas such as strawberry, raspberry and bramble
- Vegetal aromas include bell pepper or jalapeño
- Light tannins, with graphite-like minerality

2011 ACREAGE:

Finger Lakes: 236 acres
Long Island: 215 acres
Lake Erie: <10 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Niagara Escarpment: <10 acres
Champlain Valley: <10 acres
Other areas of the state: 20 acres

Total NY: 495 acres

Click here for infographic!

PRINCIPAL VITIS VINIFERA

CABERNET SAUVIGNON
Red, Vitis vinifera

Origin:
Southwest France

Principal AVAs:
Finger Lakes, Long Island

VITICULTURE:

- Vigorous and low yielding
- Does well in well-drained soils of low fertility
- Variety is late budding and late ripening, requiring a long growing season
- Clusters are small, thick-skinned and loose, making Cabernet Sauvignon very disease resistant
- Berries are tiny, dark and seedy, contributing to characteristically high tannins

VINIFICATION:

- Produces robust, well-aged wines
- Can be made into standout single varietal wines or blended into Bordeaux-style blends
- Typically aged in oak for months or years to soften tannins before release

TASTING NOTES:

- Has a complex aroma of black currant, bell pepper, eucalyptus, mint, black pepper, green olives and tar
- Oak aging can contribute toast, wood or vanilla flavors
- Small grape size and high skin-to-pulp ratio leads to highly tannic, full-bodied red wines

2011 ACREAGE:

Finger Lakes: 104 acres
Long Island: 143 acres
Lake Erie: <10 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Niagara Escarpment: <10 acres
Other areas of the state: <10 acres

Total NY: 268 acres

CHARDONNAY
White, Vitis vinifera

Origin:
Burgundy, France

Principal AVAs:
Finger Lakes, Long Island

VITICULTURE:

- Highly vigorous and cold-tolerant
- Early flowering may increase the risk for springtime frost damage; vines are pruned just prior to flowering to delay onset
- Clusters are small with petit, thin-skinned, amber colored berries
- Highly adaptable; can be grown in many climates and vineyard soils

VINIFICATION:

- Made in a variety of styles using different winemaking techniques to boost complexity
- Includes fermentation in stainless steel tanks and new or neutral oak barrels, sur lee aging, malolactic fermentation and months-long aging in oak, concrete, or amphora vessels

TASTING NOTES:

- Produces light to medium-bodied wines with balancing acidity
- The rich bouquet and flavor includes aromas of apple, melon, peach, pear, pineapple, lemon and citrus
- Oak aged Chardonnays that complete malolactic fermentation may show layers of butterscotch, butter, hazelnut and toast

2011 ACREAGE:

Finger Lakes: 351 acres
Long Island: 440 acres
Lake Erie: <10 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Niagara Escarpment: <10 acres
Champlain Valley: <10 acres
Other areas of the state: 29 acres

Total NY: 865 acres

Click here for infographic!

GEWÜRZTRAMINER
White, Vitis vinifera

Origin:
Tyrol, Italy

Principal AVAs:
Finger Lakes, Long Island

VITICULTURE:

- One of the least cold-hardy Vitis vinifera varieties, although quality is highest when grown in cooler regions
- Vine has moderate vigor, low-to-moderate yield and compact clusters
- Berries are petite with a white pulp and thick pink skins that can attain high sugar levels during ripening

VINIFICATION:

- Cold soaking on skins to extract aromatics
- Cool to cold fermentation in stainless steel tanks helps to preserve the delicate, aromatic flavors
- Made in a variety of styles from dry, to sweet to sparkling Occasionally blended, but not in significant proportion, as its distinctive aroma will overpower others

TASTING NOTES:

- Produces some of the most full-bodied wines of any white grape variety
- Has a pronounced spicy and tropical fruit aroma, often described as smelling like lychee fruit or highly aromatic pink and white flowers
- High sugars can lead to high alcohol levels in drier versions

2011 ACREAGE:

Finger Lakes: 108 acres
Long Island: 41 acres
Lake Erie: <10 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Niagara Escarpment: <10 acres
Champlain Valley: <10 acres
Other areas of the state: <10 acres

Total NY: 155 acres

Click here for infographic!

MERLOT
Red, Vitis vinifera

Origin:
Bordeaux, France

Principal AVAs:
Finger Lakes, Long Island, Hudson Valley

VITICULTURE:

- Vines have moderate vigor with moderate to high yields.
- Early budding increases the potential for spring frost damage; early ripening avoids losses due to inclement autumn rains
- Loose clusters of large red berries, with thinner skins, higher sugars, lower tannins and softer acids than other red varieties

VINIFICATION:

- Used to make standout single varietal wines, red blends and rosé.
- When blended, can improve the color, flavor, texture and depth of more astringent red varieties
- Most commonly aged in oak
- Produces round wines with soft-tannins that often lend themselves to an earlier release than other oak aged reds

TASTING NOTES:

- Has a complex aroma of black fruit, earth and floral character
- May show layers of cassis, black cherry, blackberry, blueberry and plum
- Earthier notes include black and green olive, fennel, hummus, rhubarb and tobacco
- Floral and herbal notes include eucalyptus, laurel, mint, sage and thyme

2011 ACREAGE:

Finger Lakes: 87 acres
Long Island: 658 acres
Lake Erie: <10 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Champlain Valley: <10 acres
Other areas of the state: <10 acres

Total NY: 763 acres

Click here for infographic!

PRINCIPAL VITIS VINIFERA

PINOT NOIR
Red, Vitis vinifera

Origin:
Burgundy, France

Principal AVAs:
Finger Lakes, Long Island

VITICULTURE:

- Cold-hardy, moderately vigorous, low-yielding vine
- Delicate variety, susceptible to viruses, mildew and bunch rot due to thin skins and small, tightly packed clusters
- Has one of the earliest ripening and harvest dates, making it well suited to grow in cool climates
- Although it ripens early, it also ripens unevenly, making for a lighter style red

VINIFICATION:

- Has low pigmentation and tannin levels in the skin
- Long fermentation on the skins and stems is necessary to boost tannin levels
- The same qualities make Pinot Noir ideal for world class sparkling wines and rosé

TASTING NOTES:

- May have an intense aroma of black cherry and spice that suggests cinnamon, sassafras and mint
- Earthy and vegetal flavors such as ripe tomato and mushroom are also present

2011 ACREAGE:

Finger Lakes: 194 acres

Long Island: 87 acres

Lake Erie: <10 acres

Hudson Valley: <10 acres

Upper Hudson: <10 acres

Niagara Escarpment: <10 acres

Champlain Valley: <10 acres

Other areas of the state: <10 acres

Total NY: 316 acres

Click here for infographic!

RIESLING
White, Vitis vinifera

Origin:
Rhine River Valley, Germany

Principal AVAs:
Finger Lakes, Long Island, Lake Erie

VITICULTURE:

- One of the most cold-hardy vinifera varieties
- Clusters are compact with small berries and greenish-yellow skins
- This variety's ability to retain acidity through the late stages of ripening allows it to maintain a balance of flavor in concentrated, late harvest wines

VINIFICATION:

- Cool to cold fermentation in stainless steel tanks helps preserve the delicate, aromatic flavors
- Often aged in stainless steel, and occasionally aged in neutral oak, large puncheons are increasing in popularity
- Lees aging for texture is becoming more popular

TASTING NOTES:

- Produces fresh, aromatic, well-aged wines with light to medium-body and racy acidity
- Has distinctive apple, stone fruit, floral, honey and spice character
- Finished with a variable range of residual sugar
- Excellent dessert wines are made when the grape is affected by the "noble rot" (botrytis cinerea) or allowed to dehydrate on the vine during late harvest

2011 ACREAGE:

Finger Lakes: 849 acres

Long Island: 59 acres

Lake Erie: 42 acres

Hudson Valley: <10 acres

Upper Hudson: <10 acres

Niagara Escarpment: <10 acres

Champlain Valley: <10 acres

Other areas of the state: 63 acres

Total NY: 1,035 acres

Click here for infographic!

SAPERAVI
Red, Vitis vinifera

Origin:	*Principal AVA:*
Republic of Georgia	*Finger Lakes*

VITICULTURE:

- A moderately productive and cold-hardy vinifera
- Large leaves and large, dark-blue, thin-skinned berries
- It is a teinturier grape, meaning there is pigment in the juice and pulp of the grape, as well as the skins

VINIFICATION:

- Produces deep red wines that are highly suitable for aging
- Can be made into standout single varietal wines or blended with lighter red verities to add color and depth
- Makes both rosé and sparkling wines

TASTING NOTES:

- Has dark fruit flavors of cherry, plum, blackberry and blackcurrant
- Spicy and earthy notes include licorice, coffee, chocolate, leather and tobacco

2011 ACREAGE:

Total NY: <10 acres

**Western NY plantings (Finger Lakes, Niagara) are on the rise. There may not be a lot of it, but what's there has vine age and is producing exciting wines from top producers.*

SAUVIGNON BLANC
White, Vitis vinifera

Origin:
Bordeaux, France

Principal AVA:
Long Island

VITICULTURE:

- A vigorous variety that grows well in many soil types across warm and cool regions
- This green-skinned grape produces modest clusters with thin skins

VINIFICATION:

- Cool to cold fermentation preserves the delicate, aromatic flavors
- Typically finished in stainless steel; sometimes aged in neutral French oak
- Can be used to make standout single varietal wines or blended with less aromatic white varieties to boost aroma and complexity

TASTING NOTES:

- The aroma can range from grassy to fruity, depending on climate and ripening conditions
- Tropical fruit aromas include melon, papaya, and passionfruit

2011 ACREAGE:

Finger Lakes: 17 acres

Long Island: 82 acres

Lake Erie: <10 acres

Hudson Valley: <10 acres

Upper Hudson: <10 acres

Niagara Escarpment: <10 acres

Champlain Valley: <10 acres

Other areas of the state: <10 acres

Total NY: 106 acres

ADDITIONAL VITIS VINIFERA

Albariño	Spanish / Portuguese white variety, known for its success in other maritime climates. Loose clusters and thick skins made it an ideal match for the New York State climate. Limited plantings in Long Island and the Hudson Valley.
Auxerrois	French white variety. Important in Alsace, France and also grown in Germany and Luxembourg. It is a full sibling of Chardonnay that is often blended with the similar Pinot Blanc. Limited plantings on Long Island.
Barbera	Italian red variety. Most widely planted grape in Piemonte, Italy, but always second fiddle to Nebbiolo. It produces very drinkable wines with low tannin and tart dark fruit.
Dornfelder	Germany red variety. Has a depth of color, good acidity and the ability to benefit from barrique aging and the associated oak flavors. Often used for blending, there are New York State producers making varietally labeled Dornfelder.
Gamay	Gamay is an old vinifera cultivar and a red grape synonymous with Beaujolais. While little is planted, it's proving to be good in the Finger Lakes. Tart red fruit, often easy drinking styles.
Gruner Veltliner	The most important grape variety in Austria. It is a prolific variety and therefore requires yield regulation. The site and the yield are crucial to the quality. Spicy, peppery versions are preferred; so are versions showing stone fruit notes. Like it's Austrian red counterpart Blaufränkisch, Gruner is well suited to New York State.
Lagrein	Lagrein is a red wine grape variety hailing from cool Northern Italy. It produces wines with high acidity that are highly tannic. Successful production on Long Island and the Finger Lakes.
Malbec	Malbec hails from southwest France, but has seen most success in Argentina. Long Island is producing the top examples in the state. Deep color and high in tannins, it is one of the six grapes allowed in the blend of red Bordeaux wine.
Malvasia	Believed to be of Greek origin, Malvasia has a strong historical and viticultural association with islands and some of the most distinctive examples of the wine come from maritime environments. Watch Long Island and the Hudson Valley.
Melon de Bourgogne	A vinifera variety of white grape, grown primarily in the Loire Valley region of France. It is best known through its use in the white wine Muscadet. In the US, Federal law prevents "Muscadet" from being used for American-produced wine; only the full name of the grape, or the shortened "Melon" can be used. Recent examples from Long Island prove this grape has a bright future in New York State.
Muscat Ottonel	The vinifera variety, a young addition to the broader Muscat family, makes a range of wine styles, from light, dry table wines to richer styles with more residual sugar. It's more cold-hardy than its Mediterranean Muscat relatives. Relatively low in acidity, growers need to pick early to retain freshness, without sacrificing complexity.

ADDITIONAL VITIS VINIFERA

Petit Manseng	Petit Manseng is one of the key vinifera white grape varieties of southwest France. It has thick skins and loose bunches — positive characteristics for the New York landscape.
Petit Verdot	Petit Verdot is a red vinifera grape that was traditionally reserved as a minor grape in Bordeaux blends, but warmer new-world regions are showcasing the grapes qualities as a standalone variety. It produces intensely bold, fruity-yet-floral wines. The grape is showing success on Long Island, both as not-so-minor component of blends and as a single variety.
Pinot Blanc	Pinot Blanc (France) or Pinot Bianco (Italy). Jancis Robinson calls it "useful rather than exciting." It's main distinguishing characteristic is a roundness of flavor. In New York, It is utilized in sparkling wines, blends and also bottled as a single variety.
Pinot Grigio	Pinot Grigio (Italy) or Pinot Gris (France). With more fruit flavors and spiciness than Chardonnay but less intensity than Riesling, this relative of Pinot Noir makes wines that can offer a refreshing alternative to either. They tend to be leaner (more Grigio) on Long Island, and more aromatic and opulent (more Gris) in the Finger Lakes. With a touch of pigment in its skins, the grape is often favored for skin-contact orange wines.
Refosco	Refosco is an ancient group of red vinifera grapes, hailing from northern Italy's Friuli-Venezia Giulia, western Slovenia and the Istrian Peninsula of Croatia. Refosco wines have particularly high acidity and are mostly dark and densely colored with violet and grassy aromas, and dark peppery spices and plums on the palate. Refosco is a late ripener, and grown on Long Island.
Ribolla Gialla	Another white vinifera variety from northeast Italy; performs well on Long Island. It produces light-medium bodied, unoaked wines with floral aromatics and a stony, citrus palate.
Rkatsiteli	Rkatsiteli is an ancient pale-skinned grape variety from the Republic of Georgia, the world’s oldest wine-producing region. One of the original cold-hardy vinifera varieties brought to the Finger Lakes and championed by Dr Konstantin Frank. Producers lean into its origins, employing skin-contact and quevri aging.
Sangiovese	Sangiovese is Tuscany's flagship grape, used to make popular Chianti or Brunello. Wines can range from intensely fruity to rustic. It’s high in acid and tannin.
Semillon	Semillon's origins are in southwest France, and is used for the production of the famous sweet wine, Sauternes. It is often blended with Sauvignon Blanc, but there are stunning examples of single varietal bottles. It's not particularly difficult to grow and has excellent yields. A perfect fit for Long Island's sandy maritime terroir.
Sereksiya Charni	Sereksiya Charni is the Russian name for Băbească neagră, which originated in what is now Moldova and Romania. Imported for its cold-hardy qualities, it is only grown by one Finger Lakes producer, in a blend with Saperavi. The Black Russian Red has cult status among fans.

ADDITIONAL VITIS VINIFERA

Sylvaner	Sylvaner currently ranks fifth in German white wine production. The vigor of the Sylvaner vine and the grape's neutral flavor can lead to blandness unless yields are controlled.
Syrah	There's not much Syrah in New York, but it’s championed by several producers on Long Island and the Finger Lakes. While popular in warmer climates, it has loose bunches of big grapes, with minimal susceptibility to various mildew diseases. Varietal Syrah can be quite floral in its youth, developing white and black pepper aromas and herbaceous notes as it ages.
Teroldego	Teroldego is cultivated almost exclusively in Trentino in northeast Italy. But Long Island has some too! It is a relatively simple variety to cultivate and produces wine low in tannins but usually deep in color, with vivacious acidity and good levels of fruit concentration.
Tocai Friulano	Friulano, formerly known as Tocai Friulano, is a grape variety most famous for its role in the white wines of Friuli, northeastern Italy. These wines, usually varietal, are lively and fruity with notes of citrus, flowers, almonds and a touch of minerality. Find some on Long Island!
Verdejo	Verdejo is a light-bodied white wine that grows almost exclusively in Spain. The exception is of course, Long Island! And producers there are very excited for its potential in the sandy soils, similar to its Spanish home, Rueda. The best examples are age-worthy.
Zweigelt	A relative newcomer, Zweigelt was bred in Austria in 1922, and has risen to the country's leading red grape over the last 20 years. Add it to the list of successful Austrian varieties grown in New York! The variety brings slightly violet-reddish colored wines with soft tannins.

CAYUGA WHITE
White, Hybrid

Developed at Cornell University, New York / Introduced in 1972
Developed from crosses of the Vitis labrusca hybrids Schuyler and Seyval Blanc

Principal AVA:
Finger Lakes

VITICULTURE:

- Produces large, high yielding clusters
- This early-ripening variety is winter-hardy, disease resistant and one of the most productive hybrid varieties grown in the United States

VINIFICATION:

- Can be used to produce fresh, fruity wines with residual sugar, dry, oak-aged wines, or sparkling wines.
- Typically made into single varietal wines, although it can also be used for blending

TASTING NOTES:

- Produces white table wines with medium body and balancing acidity
- Green apple and cotton candy aromas appear when finished with residual sugar

2011 ACREAGE:

Finger Lakes: 338 acres
Long Island: <10 acres
Lake Erie: <10 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Niagara Escarpment: <10 acres
Champlain Valley: <10 acres
Other areas of the state: <10 acres

Total NY: 385 acres

FRONTENAC
Red, Hybrid

Developed at University of Minnesota / Introduced in 1996
Developed from crossing an interspecific hybrid, Landot 4511, with a cold hardy selection of Vitis riparia

Principal AVA:
Finger Lakes

VITICULTURE:

- A vigorous, cold-hardy, disease resistant, hybrid
- Produces loose clusters of small, dark, highly acidic berries that develop high sugar levels during ripening

VINIFICATION:

- Used in the production of dry red wines, rosé, and fortified wines

TASTING NOTES:

- Characterized by red fruit flavors of cherry and red currant

2011 ACREAGE:

Finger Lakes: 20 acres
Long Island: <10 acres
Lake Erie: <10 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Niagara Escarpment: <10 acres
Champlain Valley: <10 acres
Other areas of the state: <10 acres

Total NY: 40 acres

MARQUETTE
Red, Hybrid

Developed at the University of Minnesota / Introduced in 2006, Marquette is the cousin of Frontenac, a well-known French-American hybrid, and the grandson of Pinot Noir

Principal AVAs:
Finger Lakes , Hudson Valley

VITICULTURE:

- Vigorous, high yielding, disease resistant and extremely cold-hardy

VINIFICATION:

- Used to produce jammy red wines that are aged in oak as well as delicate rosé wines that are released soon after harvest

TASTING NOTES:

- Produces medium bodied wines that tend to be lighter in color
- Aromas of black fruit, such as cherries, blackcurrants, plums and blackberries
- Layers of earthy and spicy aromas such as tobacco, leather and black pepper
- Oak aged Marquette may present aromas of wood, toast and vanilla

2011 ACREAGE:

Finger Lakes: < 40 acres
Long Island: <10 acres
Lake Erie: <10 acres
Hudson Valley: 40 acres
Upper Hudson: <10 acres
Niagara Escarpment: <10 acres
Champlain Valley: 20 acres
Other areas of the state: <10 acres

Total NY: 100 acres

Click here for infographic!

TRAMINETTE
White, Hybrid

Developed at the University of Illinois (1965) and released in Geneva (Finger Lakes) in 1996. Is a cross of the French American hybrid Joannes Seyve 23.416 and the German Vitis vinifera Gewürztraminer

Principal AVA:
Finger Lakes

VITICULTURE:

- A late budding, late ripening variety that shares some of the same flavor characteristics as Gewürztraminer
- Vigorous but not overly fruitful
- Both cold-hardy and disease resistant

VINIFICATION:

- Can be made dry or sweet
- Is sometimes finished with residual sugar to balance its naturally high acidy

TASTING NOTES:

- Shares some of the distinct tropical fruit, floral and spice aromas of Gewürztraminer

2011 ACREAGE:

Finger Lakes: 31 acres
Long Island: <10 acres
Lake Erie: <10 acres
Hudson Valley: <10 acre
Upper Hudson: <10 acres
Niagara Escarpment: 61 acres
Champlain Valley: <10 acres
Other areas of the state: <10 acres

Total NY: 139 acres

ADDITIONAL HYBRID VARIETIES

Baco Noir	This French-American hybrid has its light to medium body, good acidity and preference for cooler climates. It does not express the distinctive foxy aromas and flavors of other Vitis riparia varieties, but instead shows rich fruit tones, typified by blueberry and plum. The grape has seen increased interest in the Finger Lakes in recent years.
Chambourcin	This is a French-American interspecific hybrid grape, whose parentage is uncertain. It has a good resistance to fungal disease, and is one of the parents of the new disease resistant variety, Regent, which is increasing in popularity among German grape growers. Chambourcin is considered a very productive grape that produces a deep-colored and aromatic wine. It can be made into a dry style or one with a moderate residual sugar level. Chambourcin is a teinturier, a grape whose juice is pink or red rather than clear like most red Vitis vinifera cultivars.
Chancellor	Chancellor is a hybrid red-wine variety originally developed in France, but now grown almost exclusively in the United States. It is considered to be one of the better hybrid varieties, making fruit-driven red wines that can be enhanced by barrel aging and blended with Vitis vinifera varieties like Merlot. It doesn't like humidity and is susceptible to disease; cool ventilated sites are preferred.
De Chaunac	Known to be early ripening, this French American hybrid red has a very vigorous growth habit and good resistance to powdery mildew and downy mildew.
Diamond	Cross of Concord & Iona (1855). A versatile white variety that is used to make both still and sparkling wines, in both sweet and dry styles. The finest examples come from the Finger Lakes.
Himrod	Himrod is a white table grape, released in 1952 by the New York Agricultural Experiment Station in Geneva, New York. It is seedless and known for ripening quickly and its sweet flavor. Himrod is considered very productive and reliable.
La Crescent	Complex hybrid from the University of Minnesota (2002). The high acidity makes it relatively versatile for various winemaking styles from dry to sweet or even fortified dessert wines, while the tropical fruit and floral aroma make it an easy sell to consumers. It is cold-hardy, but is susceptible to other vineyard issues.
Leon Millot	Léon Millot is a dark-skinned French-American hybrid grape that is widely grown in the United States and Canada. It was created in Alsace in 1911. It ripens very early in the vineyard, making it suitable for New York's marginal regions where the growing season is limited. It offers a high level of resistance to fungal diseases. As a wine, Léon Millot is light- to medium-bodied with very deep color, low tannins and a range of berry aromas and subtle notes of white pepper.

ADDITIONAL HYBRID VARIETIES

Marechal Foch	An Alsace, France-born hybrid. It ripens early, and it is cold-hardy and resistant to fungal diseases. The berry size is small, which makes it prone to bird injury. The quality of wine produced by Marechal Foch vines is highly dependent upon vine age. It can produce a spectrum of red wines from light-to-full-bodied. This grape has seen a resurgence of interest in areas like the Finger Lakes.
Noiret	Developed by Cornell, Noiret is well suited to New York State's grape growing conditions, resulting in a distinctive, medium-bodied red wine with aromas of pepper, blackberry and some mint.
Seyval Blanc	A hybrid grape, primarily grown in the Finger Lakes and Hudson Valley, Seyval Blanc typically has aromas of apples, citrus and melons, and often resembles Sancerre from France's Loire region. Some barrel fermented versions resemble Fumé Blanc.
Valvin Muscat	Developed by Cornell University and released as a variety in 2006, Valvin Muscat has a distinct flavor profile of apricot and peach.
Vidal Blanc	Vidal Blanc is a cross between Ugni blanc and Rayon d'Or. It is a hardy, thick-skinned grape that thrives in even the coldest wine-growing regions. Flavors of honeysuckle and pear complement candied fruit and citrus flavors in the wine, which can be made in a variety of styles, from dry, crisp wines to late-harvest and ice wines.
Vignoles	Vignoles is a light-skinned hybrid grape variety first bred in France, but now grown mainly in the Finger Lakes, as well as in Missouri and a handful of other midwestern US states. It is suited to cold continental climates, as late budding and early ripening helps it to avoid frost risk. It is moderately cold hardy, and the small, thick-skinned grapes are highly susceptible to botrytis. High acidity and sugar levels make Vignoles a good choice for vintners looking to make dessert wines, and if the region is cold enough, ice wine can be produced from frozen grapes.
Vincent	Vincent is a red French-American hybrid variety that was bred specifically to be winter-hardy. Developed in Ontario, Canada at the Vineland Research Station in 1967, these grapes are a late-season harvester and are moderately susceptible to black rot and powdery mildew and slightly susceptible to downy mildew and botrytis. Vincent vines are medium in vigor and very productive. With its abundance of pigment, its often used in red blends. Vincent grapes are also quite popular for use in ports and port-style wines.

CATAWBA
White, Native

Origin: Eastern North America
Believed to be a likely cross of the native American Vitis labrusca and the Vitis vinifera cultivar Semillon

Principal AVAs:
Finger Lakes, Lake Erie

VITICULTURE:

- Winter hardy and vigorous, producing moderate yields of large reddish-pink grapes with labrusca "slip-skins" that slip off, leaving the pulp of the berry intact
- Ripens late and requires a long growing season.

VINIFICATION:

- Often hot–pressed or given limited skin contact to yield pink juice
- Used in the 1970s to create "pop" wine
- Today it produces wine coolers, sparkling wines, white and pink dessert wines and grape juice

TASTING NOTES:

- Produces spicy white or pink wines, with crisp acidity and a typical labrusca "grapey" aroma, which can also be described as the aroma of grape jelly

2011 ACREAGE:

Finger Lakes: 864 acres
Long Island: <10 acres
Lake Erie: 322 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Niagara Escarpment: 22 acres
Champlain Valley: <10 acres
Other areas of the state: <10 acres

Total NY: 1,221 acres

Click here for infographic!

DELAWARE
White, Native

Origin: Eastern North America
Labrusca variety, its parentage is unknown. It's thought to have a significant Vitis vinifera component

Principal AVAs:
Finger Lakes, Lake Erie

VITICULTURE:

- Cold-hardy and vigorous, but susceptible to fungal diseases
- Produces moderate yields of red grapes in small, compact clusters that maintain high sugar and acidity at harvest

VINIFICATION:

- Used for producing dry, sweet and ice wines
- Prized for its use in sparkling wine

TASTING NOTES:

- Does not have a distinctive "grapey" or grape jelly flavor
- Wines are light pink to white in color with a fruity, spicy aromas

2011 ACREAGE:

Finger Lakes: 113 acres
Long Island: <10 acres
Lake Erie: 55 acres
Hudson Valley: <10 acres
Upper Hudson: <10 acres
Niagara Escarpment: <10 acres
Champlain Valley: <10 acres
Other areas of the state: <10 acres

Total NY: 168 acres

CONCORD
Red, Native

Origin: Eastern North America
Believed to be 100% Labrusca, it is primarily cultivated for production of juice and preserves

Principal AVAs:
Lake Erie, Finger Lakes

VITICULTURE:

- Cold-hardy, disease resistant, pest resistant, and productive
- Ripens in late mid-season, producing medium clusters of blue-black grapes

VINIFICATION:

- Typically hot-pressed to extract color for sweet, red wines or pressed without skin contact to produce juice for sparkling wines
- Always finished with more than 1% residual sugar, and as much as 10% for dessert wines

TASTING NOTES:

- Has a prominent "grapey" aroma, identical to the flavor of Concord grape jelly

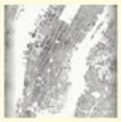
2011 ACREAGE:

Finger Lakes: 2,220 acres
Long Island: <10 acres
Lake Erie: 16,166 acres
Hudson Valley: 52 acres
Upper Hudson: <10 acres
Niagara Escarpment: 366 acres
Champlain Valley: <10 acres
Other areas of the state: 18 acres

Total NY: 18,883 acres

NEW YORK WINE INDUSTRY TIMELINE

1647 Dutch settlers plant grapes on the island of Manhattan (unsuccessful).



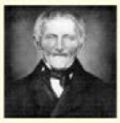
1667 French Huguenot settlers plant European varieties in Ulster County (Hudson Valley). European varieties fail, and they begin cultivation of wild grapes.

1737 Linnaean Gardens established in Flushing, Long Island (now the Queens Botanical Gardens).

1801 Catawba grape variety discovered in North Carolina near the Catawba River.

1816 Isabella grape variety discovered in South Carolina, introduced to New York by Linnaean Gardens.

1818 First vineyard planted in Lake Erie (Chautauqua County) by Elijah Fay.



1827 First commercial vineyard and winery planted in the Hudson Valley (Croton Point) by Richard Underhill.

1829 First vineyard planted in the Finger Lakes (Hammondsport) by Reverend William Bostwick.

1839 John Jaques releases his first commercial vintage in 1839, under the label Blooming Grove (now Brotherhood) Winery.

1848 First vineyard planted in the Niagara Escarpment.

1849 Concord grape variety introduced by Ephraim Bull of Concord, New Hampshire.

1850 First vineyard planted on Canandaigua Lake (Finger Lakes) by Edward McKay.

1851 First commercial vineyard planted in Lake Erie (Chautauqua County) by Joseph Fay, son of Elijah. Lincoln Fay, a nephew, is responsible for introducing the Concord grape to the region.

Delaware grape variety released by A Thompson of Delaware, Ohio.

1865 Urbana Wine Company (later Gold Seal Vineyards) is founded by John W Davis, HH Cook, AJ Startzer and others.

1872 The Niagara grape is developed by Claudius L Hoag and B Wheaton Clark in Lockport, NY.

1873 New York's Great Western Champagne becomes the first American wine to win a gold medal in a European wine competition.

1880

Master cooper, Walter Taylor establishes the Taylor Wine Company. Today Taylor's family operates Bully Hill Vineyards and Constellation Brands owns the original Taylor Wine Company name.

The New York State Agricultural Experiment Station was established by an act of New York State Legislature.

1919

18th Amendment Ratified (Prohibition Begins).

1933

21st Amendment Ratified (Prohibition Repealed).

1934

Charles Fournier joins Urbana Wine Company as winemaker from Veuve Clicquot Ponsardin.

1936

Charles Fournier introduces French–American hybrid varieties to New York.

1941

Widmer's Wine Cellars (Finger Lakes; est 1888) begins labeling their wines with varietal names.

1945

Marvin Sands and family purchases a winery, establishes Canandaigua Industries (now Constellation Brands).

1950

Gold Seal's New York State Champagne Brut wins the only gold medal awarded at the California State Fair. Officials subsequently bar non-Californian wines from the competition.

1953

Gold Seal hires Dr Konstantin Frank as a consultant to begin production of vinifera varieties. Experimental plantings of numerous varieties and root-stocks begin.

1960

The Gold Seal team of Fournier and Devaux produces the first commercial New York vinifera wines (Chardonnay and Riesling).

1962

Dr Konstantin Frank creates Vinifera Wine Cellars which quickly gains a reputation for making premium riesling.

1964

Taylor subsidiary Great Western introduces the first French–American hybrid varietal wines

1973

Alex and Louisa Hargrave plant the first commercial vinifera vineyard on Long Island's North Fork.

Charles Fournier plants vinifera vines on the east side of Seneca Lake. German native Hermann J Wiemer plants vinifera on the west side of Seneca Lake.

1976

Governor Hugh Carey signs the Farm Winery Act, drastically lowering licensing fees for small farm wineries and allowing them to sell all their production at the winery.

1982

Hudson Valley AVA established (June 4). Finger Lakes AVA established (September 1).

1983

Lake Erie AVA established (October 21).

1985

New York Wine & Grape Foundation (NYWGF) created to finance promotion and research of the state-wide industry.

The Hamptons, Long Island AVA established (May 16).

1986

The North Fork of Long Island AVA established (October 10).

NYWGF hosts first New York Food & Wine Classic, the first statewide wine competition in New York. Wagner Vineyards 1984 semisweet Johannesburg Riesling and Rolling Vineyards Farm Winery 1985 Dry Seyval share the competition's top prize in a tie vote for the Governor's Cup.

1988

Seneca Lake and Cayuga Lake AVAs established (March 25).

1993

NYWGF launches their Export Program.

1996

Total New York wineries increases 5x in the 20 years following the Farm Winery Act — primarily small production premium brands.

1998

Arbor Mist launched by Canandaigua Wine Company. Sales expanded rapidly, shipping 100 million cases in the first 100 days of distribution.

2000

Canandaigua Brands changes its name to Constellation Brands to better reflect its global portfolio of wines, beers, & spirts.

2001

Long Island AVA established (May 15).

2005

Niagara Escarpment AVA established (September 8).

2012

Long Island Sustainable Winegrowing launches; it's the first third-party sustainable certification program on the East Coast.

2013

Two New York wines are served at President Barack Obama's Inaugural Luncheon — a 2009 Merlot from Bedell Cellars (North Fork of Long Island) and the 2019 Tierce Dry Riesling (Finger Lakes).

Finger Lakes native Christopher Bates becomes the 199th Master Sommelier in the World.

2015

New York wines win a total of 965 top awards (gold or above in national or international competitions OR 90 points or above by a leading publication).

2016

Champlain Valley AVA established (August 22)..

2018

Upper Hudson AVA established (December 6).

Finger Lakes is named the top wine region in USA Today's 10 Best Reader's Choice national poll.

2019

NYWGF rebrands from "Uncork New York" to "Boldly, NY".

NYWGF Executive Director Sam Filler named "40 under 40 Tastemaker" by Wine Enthusiast.

2020

The Liquor Control Board of Ontario, Canada —one of the world's largest wine-purchasers — offers New York wines for sale through their Destination and Vintages collections.

NYWGF launches the statewide Sustainability Certification Pilot Program.

NYWGF Research Program celebrates 35 years and over $6 MILLION invested in grape research benefitting New York growers and wineries.

2021

Global Vintner Paul Hobbs releases inaugural vintage of Finger Lakes based winery Hillick & Hobbs.

Hermann J Wiemer's Fred Merwarth Named International Winemaker of the Year by Wine Enthusiast.

Boldly, NY.

www.newyorkwines.org

DATA TABLES

U.S. Wineries - By State
January 2022
Source: Wines Vines Analytics

State	Winery Count	%
California	4,807	43%
Oregon	871	8%
Washington	863	8%
Texas	487	4%
New York	444	4%
Pennsylvania	379	3%
Virginia	331	3%
Ohio	318	3%
Michigan	228	2%
North Carolina	191	2%
Missouri	161	1%
Colorado	161	1%
All other states	2,041	18%
Total U.S. Wineries	11,282	100%

U.S. Wineries - Annual Production (Cases)
2021 Production (prelim)
Source: Wines Vines Analytics

State	Winery Count	Net Production	%
California	4,807	280,200,000	85%
Washington	863	15,100,000	5%
New York	444	12,000,000	4%
Oregon	871	5,100,000	2%
Texas	487	2,000,000	1%
Michigan	228	1,300,000	0%
Illinois	123	1,300,000	0%
North Carolina	191	1,100,000	0%
Pennsylvania	379	1,100,000	0%
Indiana	115	1,000,000	0%
Virginia	331	1,000,000	0%
All other states	2,680	9,400,000	3%
Total U.S. Wineries	11,282	330,600,000	100%

Note: Winery production includes all wine produced at a location including custom production for other wineries. When summary totals are reported geographically, these custom amounts are netted out to prevent double counting.

2011 USDA VINEYARD SURVEY		
	TONS	ACRES
NATIVE GRAPES	155,691	24,027
HYBRID GRAPES	16,352	3,078
VINIFERA GRAPES	15,058	4,430
OTHER	899	268
TOTALS	188,000	31,803

2011 USDA VINEYARD SURVEY – REGIONAL SUMMARY					
(COUNTIES / ACRES)	NATIVE	HYBRID	VINIFERA	OTHER	TOTAL
FINGER LAKES	4,683	2,209	2,155	346	**9,393**
LONG ISLAND	-	-	1,895	146	**2,041**
HUDSON VALLEY	126	55	86	127	**394**
CHAUTAUQUA-ERIE	18,227	93	42	322	**18,684**
OTHER COUNTIES	991	721	252	NA	**1,291**

2017 CENSUS OF AGRICULTURE		
AVA	FARMS	ACRES
FINGER LAKES	423	10,709
LONG ISLAND	53	1,815
HUDSON VALLEY	79	446
UPPER HUDSON	43	117
NIAGARA ESCARPMENT	58	1,067
LAKE ERIE	338	17,977
CHAMPLAIN VALLEY	21	122
THOUSAND ISLAND REGION	33	140
LAKE ONTARIO SOUTH SHORE	20	297
OTHER COUNTIES	107	387
UNALLOCATED (PRIVACY ISSUES)	-	65
TOTALS	**1,175**	**33,142**

The 2017 Census of Agriculture provides additional perspective on vineyard land in New York State. The report on 'grapes' (not specific variety) at the County level has been aggregated by AVA.

EXISTING EXPORT MARKETS FOR NEW YORK WINES – DECEMBER 2021		
Aruba	Greece	Norway
Barbados	Hong Kong	Poland
Belgium	Hungary	Romania
Bermuda	Ireland	Singapore
Canada	Italy	South Korea
China	Japan	Sweden
Denmark	Luxembourg	Switzerland
Dominican Republic	Malta	Taiwan
France	Mauritius	Ukraine
Germany	Netherlands	United Kingdom

SOURCES

- **Publications**
  - *First Winery on the North Fork*, Cutchogue New Suffolk Historical Council
  - *Horticultural Department Geological History of the Chautauqua Grape Belt*, Ralph Stockman Tarr, 1896
  - *A History of Wine in America: From the Beginnings to Prohibition*, Thomas Pinney, 1989
  - *The Wines of America*, Leon Adams, 1990
  - *The Niagara Escarpment*, Walter M Tovell, 1992
  - *Culture in A Glass*, Richard Figiel, 1995
  - *Reexamination of Scarp Development along the Niagara Escarpment*, David W Hintz, 1997
  - *Geology of New York: A Simplified Account*, Yngvar W Isachsen, 2000
  - *The Vineyard: A Memoir*, Lousia Thomas Hargrave, 2003
  - *Terroir of the Finger Lakes of New York*, Meinert & Curtin, 2005
  - *Training Systems for New York Vineyards*, Robert Pool, 2000; Revised by Justine Vanden Heuvel, 2011
  - *Rise of the Machines*, Robert Taylor, 2012
  - *Wines of Eastern North America*, Hudson Cattell, 2014
  - *Circle of Vines: The Story of New York Wine*, Richard Figiel, 2014
  - *Finger Lakes Wine and the Legacy of Dr Konstantin Frank*, Tom Russ, 2015

- *Grapes of the Hudson Valley*, Stephen Casscles, 2015
- *Russell Hearn of Premium Wine Group: Winemaker profile*, Louise Hargrave, 2015
- *The Wines of Long Island*, José Moreno-Lacalle, 2019
- *How Vineyard Acreage and Varieties in New York have Changed Since the mid-1950s*, Tim Martinson, 2021
- *Wine Enthusiast's 2021 Wine Star Awards*, 2021
- *Sustainable Wine Growing in a Challenging Climate*, Kathleen Wilcox, 2021
- *VP PRO Q&A Gabriella Macari*, Pamela Vachon, 2022
- *Social Sustainability and Inclusivity Can Secure the Future of Wine*, Amber Lucas, 2021
- *Sustainability in the New York Wine Region*, Decanter, 2022
- *New York State Of Wine: Beyond World-class Rieslings And Catchy Rosés, Bold Visions Take Root*, Willliam McIlhenny, 2021

- **Data & Surveys**
  - Wines Vines Analytics
  - NOAA National Climate Data Center
  - 2019 Economic Impact Study of the New York Wine & Grape Industries
  - 1A Beacon, NY — Average Temperatures
  - Diagrams and Technical Information for the Niagara Peninsula, Dr Anthony B Shaw
  - Great Lakes Integrated Sciences and Assessments – Hudson Valley
  - Consumer & Trade Perceptions of Sustainable Wine US Sustainable Winegrowing Webinar 2022

- **Websites**
  - Constellation Brands
  - Dr Konstantin Frank Winery: Konstantin's Story
  - Hermann J Wiemer Vineyard: Estate Overview
  - Premium Wine Group
  - Sparkling Pointe
  - American Wine Expert Online Course
  - TTBGov | American Viticultural Area
  - Charles Schumer Press Releases
  - New York Wines Press Releases
  - Wine Searcher
  - Jancis Robinson
  - Berry Bros & Rudd
  - Virginia Wine
  - Austrian Wine
  - The Great British Vineyards Guide
  - International Riesling Foundation
  - Meritage Alliance
  - Welchs
  - Cornell Cooperative Extension — Finger Lakes Grape Program
  - Cornell Cooperative Extension — Lake Erie Grape Program
  - Cornell Cooperative Extension — Suffolk County
  - New York State Agricultural Experiment Station
  - Seneca Lake Wine Trail
  - Cayuga Lake Wine Trail
  - Champlain Valley Wine Trail
  - Canandaigua Lake Facts
  - Keuka Lake Facts
  - Seneca Lake Facts
  - Cayuga Lake Facts
  - Long Island Sustainable Winegrowing
  - New York Sustainable Winegrowing

Boldly,
NY.

www.newyorkwines.org