

Contents/Links

<u>Introduction: New York Wine Industry – The Renaissance</u>	4
The Renaissance	4
The New York Tradition	4
The Farm Winery Boom	5
The Increasing Options	6
The New York Renaissance	6
New York Wine & Grape Foundation	7
The New York Wine Course and Reference	8
Special terms – their use in the United States and i	n thi
resource	ç
New York Wine Reference - Industry Timeline	11
New York Wine Industry Timeline of New York Sta	te's
History of Winemaking and Viticulture	11
New York Wine Industry Quick Facts	38
New York State Viticultural Areas Chart Summary	40
Notes:	41
New York Wine Regions Map	42
Great Links!	43
History and Profile of New York's Viticultural Areas	44
Long Island	44
Hudson River Region	54

Finger Lakes	59
Lake Erie	68
Niagara Escarpment	73
Champlain Valley of New York	76
New York's Grape Varieties	78
Major Grape Varieties Grown in New York State	78
Native (Labrusca) Varieties	79
Hybrid (French American) Varieties	80
Vinifera (European) Varieties	8
Soils of New York State	113
Introduction	113
Regional Soil and Physiographic Characteristics	113
Long Island	113
Hudson River	114
Finger Lakes	115
Lake Erie and Niagara Escarpment	116
Champlain Valley of New York	117
New York State Mean Annual Temperature Map	118
New York State Growing Degree Days Map	119
Soil map: Lake Erie and Niagara Escarpment	120
Soil map: Finger Lakes Region	12

Soil map: Hudson River Region	122
Soil map: Long Island	123
Soil map: Champlain Valley of New York	124
New York Viticulture	125
Introduction	125
Vineyard Establishment	126
Pruning and Training Vines in New York State	127
Care of Grafted Vines	130
Soil Management and Disease Control	130
Harvesting Winegrapes in New York	133
Winemaking in New York State	135
Making Wine from Native Grapes	135
Production of Wine from Hybrid Varieties	137
Making Vinifera Wines in New York State	138
Tools of Winemaking	141
Special Steps for Sparkling Wine	143
Final Steps	144
Marketing of the Wine	145
Reading the New York Wine Label	146
New York Wine Course Curricula - Short Course	147
New York Wine Course Curricula - Comprehensive Course	150
Bibliography	153

THE NEW YORK WINE COURSE AND REFERENCE

Text: James Trezise, New York Wine & Grape Foundation

Photography: Randall Tagg Photography Copyright © 2017 (unless otherwise noted)

Design: Book Marshall Productions

Project Director: Susan Spence, New York Wine & Grape Foundation

You may print all or part of this document for your reference or for educational purposes. The New York Wine Course and Reference may not be reproduced and re-sold for any purpose.

Published May 2017

New York Wine Industry-

The Renaissance

The New York wine industry is experiencing a dramatic and exciting renaissance. Several of the nation's oldest and most historic wineries are launching new product lines. New "farm"

wineries are opening in every region of the state. Decades of scientific experimentation are yielding a broader mix of winegrape varieties and improved wine making techniques. And New York is fast earning the reputation it deserves as one of the world's premier wine producing regions.

The New York Tradition

New York was among the first states to grow grapes and produce wine - a centuries-old tradition which serves as a foundation for today's strong growth. Brotherhood Winery in the Hudson River Region, established in 1839, is the nation's oldest continuously operating winery. Great Western Winery, which began in 1860 as the Hammondsport and Pleasant Valley Wine Company, became U.S. Bonded Winery No. 1 and quickly established an international reputation for sparkling wines made in the Finger Lakes. Today the Great Western brand is owned and marketed by Constellation Brands, Inc. (formerly Canandaigua Wine Company), and the Pleasant Valley Wine Company has been reestablished.

In the following years, several other wineries opened in the Finger Lakes: Gold Seal Vineyards in 1865, Eagle Crest Vineyards



The first grape vines were planted in the Finger Lakes region in 1829 by the Rev. William Warner Bostwick. Using a few cuttings of Isabella and Catawba vines from the Hudson River valley, he planted them in his garden behind the Episcopal rectory. Image: Courtesy of the Glenn Curtis Museum.

in 1872, The Taylor Wine Company in 1880, and Widmer's Wine Cellars in 1888. These wineries helped put New York on the world's wine making map with their production of sparkling wines, dessert wines such as ports and sherries, and table wines. Constellation Brands, Inc. also owns and markets the Gold Seal, Taylor and Widmer brands, accounting for a large share of New York's total production.

The Farm Winery Boom

In the 1960's and early 1970's, several wineries began operations-such as Benmarl Wine Company and Cascade Mountain Vineyard in the Hudson River Region, and Bully Hill Vineyards and Dr. Konstantin Frank's Vinifera Wine Cellars in the Finger Lakes. But the real boom in New York wineries started with the Farm Winery Act of 1976, which essentially made it more economically feasible to own and operate a winery producing fewer than 50,000 gallons

per year. Today, farm wineries may produce up to 150,000 gallons per year.

In the last 41 years (from 1976 to 2017), the number of wineries in New York has increased more than tenfold to 405 in New York State with 302 in Federally recognized viticultural regions 20, in Lake Erie, 129 in Finger Lakes, 62 in the Hudson River Region, 76 on Long Island, 8 in the Niagara Escarpment, and 7 in the



New York's Hudson River region is the oldest wine-growing district in the US, and this site at Benmarl Winery and Vineyard is home to one of the oldest vineyards in the area.

Champlain Valley of New York. There are 103 wineries in other areas of the state. Of New York's 405 producers, 391 have been established since 1976.

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 the planting of vines to the marketing of wines. And most offer tours and wine tastings, which helps explain why over 3 million tourists visit New York wineries each year.

The Increasing Options

Another key factor explaining the farm winery boom is the ability of grape growers and wine makers to select their own market niche. Traditionally, New York wines were made with Native American grapes, which remain very popular among consumers. But since 1976, and especially in the last 25 to 30 years, farm wineries in particular have concentrated on making wines from French-American and especially traditional European grape varieties.

The French-American varieties, developed by French scientists in the 19th century, combine the hardiness of American vines with the flavor characteristics of European wines. Among the best known are Seyval, Aurora, Baco Noir and Chancellor. The Cornell University affiliated New York State Agricultural Experiment Station in Geneva, New York,

has also developed several popular new wine grape varieties such as Cayuga, Corot Noir, Chardonnel, Geneva Red, Melody, Noiret, Traminette and Valvin Muscat.

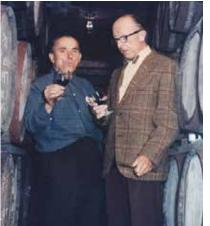
Two European immigrants, Charles Fournier and Dr. Konstantin Frank, pioneered the trend toward classic European (Vitis vinifera, abbreviated here as V. Vinifera or vinifera) grapes and wine. The two men, both deceased in the mid 1980's, proved that the delicate vinifera vines could be

successfully cultivated in New York's climates. Their vision and determination has spread from the Finger Lakes to the rest of New York and throughout the eastern United States. Vinifera wines account for an ever-increasing portion of New York's total production, and their impact in improving the state's wine growing reputation has been enormous. In addition, plantings of the vinifera varieties have increased nearly 400% since 1980.

The New York Renaissance

The new wines, new wineries and renewed commitment to quality have sparked New York's wine growing renaissance. The nation's third largest wine producing state with average annual production of about 20 million gallons, New York and its dis-

> tinct regions are earning increased recognition for innovation and quality.



New York now has ten officially recognized viticultural areas similar to the "appellations of origin" in France-Lake Erie; Niagara Escarpment; Finger Lakes; Seneca Lake; Cayuga Lake; Hudson River

Dr. Konstantin Frank (left) and Charles Fournier (right). Photo: Courtesy of the Glen Curtis Museum

Region; Long Island; The Hamptons, Long Island; North Fork of Long Island; and Champlain Valley of New York. Each region has distinct combinations of soil, topography, and climate that make the regional wines unique.

In all of New York's viticultural areas, the presence of large bodies of water are crucial elements in creating ideal "mesoclimates" for growing premium grapes. And New York's geographical latitude — similar to that of Europe's finest grape growing regions — makes the Empire State a great place to produce world-class wines.

New York Wine & Grape Foundation

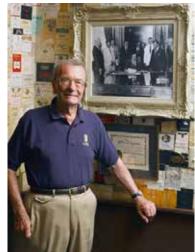
The New York Wine & Grape Foundation is a unique partnership between the public and private sectors, charged with the responsibility of conducting comprehensive promotion and research programs to support the State's grape and wine industry.

Headquartered in the famous Finger Lakes region, the Foundation was created by the State of New York in 1985 as a private, non-profit organization. The enabling legislation was sponsored by Assemblyman Richard Keane, Senator William Smith (retired), and 24 of their colleagues — and received unanimous support from the State legislature. The law established a financing mechanism for promotion

and research—providing the industry with both short-term assistance and the potential for long-term viability. The Foundation's programs are developed by a 17-member Board of Directors in consultation with other representatives from industry and State government. The 15 Directors from private industry include grape growers and processors, restaurateurs, retailers, wholesalers, researchers and representatives from other industry segments throughout the

State. The Commissioners of Agriculture & Markets, and Empire State Development Corporation, are also represented on the Board of Directors.

The Foundation has sponsored numerous research projects involving vinevard productivity, grape processing, table grape production and marketing, and product development and market research. The promotion program involves grape juice, wine and table grapes, with most activities normally beginning



Mark Miller was deeply involved in the passage of the 1976 Farm Winery Act signed into law by Governor Hugh Carey.

in May and reaching a peak from September through December in tandem with the fall grape harvest and peak sales season for the various grape products. The Foundation's activities are designed to support all uses of New York-grown grapes from all regions of the state.

New York is the nation's third largest producer of grapes and wine. The State's 1,631 family-owned vineyards cover about 37,000 acres of land and produce an average annual grape crop of 169,000 tons worth over \$50 million. About 73% of the crop is used for grape juice, 25% for wine, and 2% for table consumption. There are currently 405 wineries, 5 major juice producers, and 25 table grape marketers throughout

the State's major grape growing regions-Western New York (includes Chautaugua, Cattaraugus, Erie & Niagara Counties), the Finger Lakes region, the Hudson Valley, and on the east end of Long Island, Within these regions there are now nine



The Wine Lab and Data Bank stored at the New York State Agricultural Experiment Station has been instrumental in the development of our wine industry.

"viticultural areas" (or appellations of origin) established by the Federal Government: Lake Erie, Niagara Escarpment, Finger Lakes (including Seneca Lake and Cayuga Lake appelations), Hudson River Region, Long Island (including North Fork of Long Island and The Hamptons) and Champlain Valley of New York.

More information about the Foundation and the industry is available from: New York Wine & Grape Foundation, 800 S. Main Street Suite 200, Canandaigua, NY 14424, Phone: 585-394-3620 or by visiting our web site at http://www.newyorkwines.org

The New York Wine Course and Reference

The New York Wine Course and Reference was developed by the New York Wine & Grape Foundation as a resource for wine educators and other wine professionals to educate themselves and others about the wines and wine industry of New York State. The enclosed curriculum includes two courses: a single class, two-hour version; and a three class, six-hour curriculum. Accompanying the wine courses is the New York Wine Reference, the first work of its kind to assemble all pertinent data on the New York wine industry. Detailed information on the soils, climate, grape varieties, viticultural areas, wineries, viticulture, and wine making technology have been assembled from numerous sources and are presented here in an accessible format. We encourage you to share the link to the Reference, but if you print the book, it may not be reproduced for unauthorized sale.

The wine industry of New York is particularly dynamic and any information regarding wineries or vineyard acreage may quickly become outdated. Please note that the New York Wine & Grape Foundation periodically updates the Reference and posts it to the web site as possible, but some surveys that supply our data are not done on an annual basis. For the most current statistical reports available, please feel free to e-mail the Foundation at: info@newyorkwines.org or visit the website of the National Agricultural Statistics Service at http://www.nass.usda.gov

Two reports in particular may be of interest: The Annual Fruit Report and the Winery and Grape Processing Plants report can be found by clicking here: **Annual Fruit Report**

The more detailed Winery Report (under Special Surveys) can be found by clicking here: Winery Report

Special terms - their use in the United States and in this resource

"Champagne" - The US Government allows for some of our wines to be called Champagne if the label also indicates the viticultural region that produced the wine - such as "Finger Lakes Champagne". Many of our producers utilize the term Sparkling Wine even though they have produced the product via methode champenoise.

"Sherries and Ports" - The US Government allows producers of wine to use terms which are restricted in some regions of the world. For this reason you will see us refer to sherries and ports - which refer to particular styles of wine in the US rather than wine produced in a particular region or fashion.

"Viticultural Areas" - The Federal Government (US Department of the Treasury - Alcohol and Tobacco Tax and Trade Bureau) considers and approves "viticultural areas" similar to the "appellations of origin" in France, which may be used on wine labels and in advertisements.



The New York Wine Reference Timeline

New York Wine Industry Timeline of New York State's History of Winemaking and Viticulture

1647- Grapes planted on Manhattan Island by the 1664 Dutch.

First grapes planted by 1667 French Huguenot settlers in Ulster County. European

> varieties fail and they begin cultivation of wild grapes.

Robert Prince establishes the Linnaen Gardens in

Flushing.

1801 Catawba grape variety



1737

found in woods near the Catawba River in North Carolina by a Mr. Murray.

Isabella grape introduced to



the East by William Prince of Linnaen Gardens, Obtained from a garden in South Carolina by a Mrs. Isabella Gibbs.

1818 Elijah Fay plants first vineyard in Chautaugua County.

First commercial 1827 vineyard and winery in the Hudson Valley planted by Richard **Underhill on Croton Point** on the Hudson River.

Reverend William 1829 Bostwick plants first



vineyard in the Finger Lakes in his rectory garden in Hammondsport, NY.

1839



First commercial winery in the Hudson Valley opened by Jean Jacques

named Blooming Grove. 1840 later to be named Brotherhood Winery.

First grapes grown in 1848 the Niagara district.

Edward McKay plants 1850 the first vineyard on Canandaigua Lake.

Andrew Reisinger, a 1850 "vinedresser" from Germany, plants a vineyard and introduces pruning and training to the Finger Lakes.

1853

William Kniffin, a Hudson 1855 Valley stone mason from Clintondale, develops the pruning system that bears his name.

> Concord grape variety introduced by Ephraim Bull of Concord, NH rap-idly becomes the most popular wine and table grape.

Delaware grape variety released by A.Thompson of Delaware, Ohio; originated in the garden of Paul Provost of Frenchtown, NJ. Elijay Fay's son, Joseph, opens the first winery in Brocton, Chautaugua County

Charles D.Champlin and several partners establish the Pleasant Valley Winery, hiring champagne makers



from the Ohio Valley. Urbana Wine Company founded, later to be known as Gold Seal

Vineyards.

Andrew Caywood develops



the Dutchess grape in Ulster County.

Niagara grape developed in Lockport, NY by Hoag and

1945

1859 Clark, Monument plaque reads: "ORIGINAL NIAGARA GRAPE VINE ~ Results of Crossing Concord by Cassady ~ 1868 ~ First 1860 Fruited ~ 1872 ~ Frected by NY State Horticultural Society ~ 1927".

Great Western Champagne

takes the first gold medal 1865 ever won by an American wine in foreign competition in Vienna. 1867



1872 for growing wine industry;



shortly thereafter establishes a vinevard.

New York Agricultural **Experiment Station** founded.

The Taylor Wine Company established.

Widmer's Wine Cellars 1873 established in Naples.

> Some New York wineries survive by making

Prohibition -

sacramental wines, grape juice and by providing 1880 grapes to home



winemakers.

Charles Fournier ioins Urbana Wine Company (Gold Seal) as winemaker from 1882 Veuve Clicquot Ponsardin.

> Charles Fournier introduces French-American hybrid

1882 varieties to New York.

Widmer's Wine Cellars 1888 begins labeling their wines with varietal names.

1919-Canandaigua Industries 1933 Company founded by Marvin Sands.

Photo provided by Constellation Brands

1934 Gold Seal's Charles Fournier New York State Champagne Brut wins the only gold medal awarded at the California State Fair. Fair officials subsequently 1936 bar non-Californian wines

from the competition. Gold Seal hires Dr. Konstantin Frank as a 1941 consultant to begin production of vinifera varieties. Experimental plantings of numerous varieties and root-stocks

begin.

First commercial vinifera wines are produced at Gold Seal.

Taylor Wine Company buys 1950 the Pleasant Valley Wine Co. (Great Western).

> Taylor subsidiary Great Western introduces the first French-American hybrid varietal wines.

Canandaigua Industries 1953 changes its name to Canandaigua Wine Company. Canandaigua Wine Company goes public.

1987

1961 Alex and Louisa Hargrave plant first commercial vinifera vineyard on Long Island.

1961

Governor Hugh Carey signs the Farm Winery Act, allowing small farm wineries to sell all their

1964 production at the winery and drastically lowering licensing fees. Benmarl Wine Company in the **Hudson Valley becomes** 1972

the State's first Farm Winery, followed shortly by Glenora

1973 and Wagner in the Finger



Lakes and Merritt Estate in Chautaugua.

1973 Coca-Cola buys the Taylor Wine Company.

> Seagram Wine Company acquires Gold Seal

Vinevards. 1976

Coca Cola sells Taylor and



Great Western to the Seagram Wine Company.

Governor Mario Cuomo initiates comprehensive market-oriented legislation to support the grape and wine industry. Canandaigua Wine Company buys Batavia Wine Cellars.

1977 New York Wine & Grape Foundation created by State legislation to finance promotion and research in 1979

support of grape industry.

Widmer Wine Cellars

in Naples, N.Y. and 1983 Manischewitz brand assets of the Monarch Wine Company in Brooklyn acquired by Canandaigua 1984 Wine Company. The Manischewitz brand was produced for over 20 years at Widmer. as well as a number of 1984 wines formerly produced

at the Taylor Wine Co. in Hammondsport, N.Y. Taylor, Great Western and 1985

Gold Seal are sold as part of a package to Vintners International.

Governor Cuomo extends the public-private partner-1987 ship with the New York Wine & Grape Foundation for three additional years.

New York Wine & Grape Foundation launches new export program for New York Wine Industry.

New York State enacts

comprehensive legislation to ease regulatory burdens and increase marketing opportunities of wine and grape industry.

Canandaigua Wine Company, already expand-1990 ing through the acquisition of other companies and brands, purchases certain labels from Vintner's International Company Inc. - New York labels 1991 acquired include Taylor and

The State of New York decreased the excise tax on sparkling wines from 95 cents to 19 cents per

Great Western.

1993 gallon, bringing it in line with table wines. This was a major step by government to help strengthen the growing New York industry.

The facilities of Pleasant Valley Wine Company/ Great Western Winery were purchased and re-opened as a winemaking facility.

New York wineries number in excess of 110. compared with just 19 in 1976 and 63 in 1985, with all growth in the small, premium sector and concentrated primarily in the Finger Lakes and on Long Island.

Canandaigua Brands, Inc. is formed as the parent company of Canandaigua Wine Company and Barton Incorporated after

a decade of acquisitions resulting in a diversified product portfolio expanding beyond the wine business.

Arbor Mist launched by Canandaigua Wine Company. This is the creation of a new category - wine with fruit - and sales expanded rapidly shipping 100 million cases in the first 100 days of distribution.

Canandaigua Brands, Inc. acquires Mathew Clark, plc, a company based in the United Kingdom, leading to increased access to that market. Name changes to Constellation Brands. Inc. – to better illustrate the scope of the companies' product base and the number of brands covered.

Rieslings win Gold in Alsace - 1996 Semi-Dry Rieslings from Dr. Konstantin Frank's and Fox Run Vinevards each win a Gold medal in competition in Strasbourg's Rieslings of the World Competition.

SAN DIEGO NATIONAL WINE COMPETITION

1997 Vidal Ice Wine



1998

1998

 Casa Larga Vineyards wins Best of Category

SAN **F**RANCISCO

INTERNATIONAL WINE COMPETITION.

Four wines from four wineries win "Best of Category" awards in this prestigious competition:

1998 Dry Riesling Dr. Konstantin Frank Vinifera Wine Cellars

Diamond

Goose Watch Winery

1998 Vignoles Late Harvest Swedish Hill Winery

1998 Vignoles Ice Wine 1999

> Wagner Winery *Brewery* Restaurant

Top awards given to two New York wines at the

ATLANTA WINE SUMMIT: 1999

> 1999 Select Harvest Gewürztraminer -Palmer Vinevards - Best US Unfortified **Dessert Wine**

Cream Sherry - Hunt Country Vineyards - Best US Fortified Wine

Top awards given to New York wines at several leading national and international wine competitions:

LONG BEACH GRAND CRU WINE COMPETITION

1997 Blanc de Blanc - Chateau

2000

2000

Lafayette Reneau - Sweepstakes Winner

1999 Johannisberg Riesling, Semi-Dry – Dr. Konstantin Frank Vinifera Wine Cellars – Chairman's Best of Class

PACIFIC RIM INTERNATIONAL WINE COMPETITION

1999 Johannisberg Riesling, Semi-Dry – Dr. Konstantin Frank Vinifera Wine Cellars -Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION

1999 Rkatsiteli - Dr. Konstantin Frank Vinifera Wine Cellars -Chairman's Award

SAN DIEGO NATIONAL WINE COMPETITION

Bayside Blush - Goose Watch Winery - Triple Gold and Best of Class 1998 Late Harvest Vignoles -

Preiean Winery - Best of Class

Top awards at leading national and international wine competitions:

LOS ANGELES COUNTY FAIR

2000 Johannisberg Riesling -Chateau Lafayette Reneau – Best of Class

1997 Blanc de Blanc - Pugliese Vineyards – Best of Class

PACIFIC RIM INTERNATIONAL WINE COMPETITION

1998 Chardonnay - Palmer Vineyards – Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION 1998 Late harvest Vignoles -

Anthony Road Wine Company -Chairman's Award 2000 Johannisberg Riesling – Dr. Konstantin Frank Vinifera Wine Cellars - Chairman's Award 1998 Vidal Blanc Ice Wine - Hunt Country Vineyards – Chairman's Award

2001

1999 Optimus - Swedish Hill Winery - Chairman's Award

SAN DIEGO NATIONAL WINE COMPETITION

2000 Salmon Run Riesling - Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class



LONG BEACH GRAND CRU WINE COMPETITION

1998 Blanc de Noir - Goose Watch Winery - Sweepstakes Award 2001 Traminette – Goose Watch Winery - Chairman's Best of Class

LOS ANGELES COUNTY FAIR

Diamond - Goose Watch Winery -Best of Class 2001 Riesling - Standing Stone Vineyards – Best of Class

NEW WORLD INTERNATIONAL WINE COMPETITION 1998 Blanc de Blancs - Glenora

Wine Cellars - Best of Class Bartlett Pear - Goose Watch Winery - Best of Class 2000 Delaware - Swedish Hill Winery - Best of Class Svenska White - Swedish Hill -Best of Class

PACIFIC RIM INTERNATIONAL WINE COMPETITION

Diamond - Goose Watch Winery -**Best of Class**

RIVERSIDE INTERNATIONAL WINE COMPETITION

2000 Late Harvest Vignoles - Anthony Road Wine Company -Chairman's Award

May - The Fédération Internationale des

Vins et Spiritueux (FIVS), based in Paris, creates a new organizational structure under the dynamic leadership of James Finkle of Canandaigua Wine Company.

June - New York Rieslings take a step out in front at the SAN FRANCISCO INTERNATIONAL WINE COMPETITION

3 - Rieslings won Double Gold: Dr. Konstantin Frank Vinifera Wine Cellars' 2001 Salmon Run Riesling, Lamoreaux Landing Wine Cellars and Swedish Hill Vineyards each for 2001 Riesling; and 2 won Gold medals (Dr. Konstantin Frank Vinifera Wine Cellars' 2001 Dry Riesling and 2001 Semi-Dry Riesling) In addition, four New York

Rieslings won silver medals and

three more won bronze medals.

2002

AMENTI DEL VINO WINE COMPETITION

2002

Lakewood Vineyards -2003 - 2002 Borealis Double Gold Medal and Best Of Show

October - Senator Hillary Rodham Clinton revives New York Farm Day as a means of celebrating New York wine and foods in the Senate Caucus room, helping colleagues in DC understand the importance of agriculture to New York State's economy.

With the acquisition of BRL Hardy of Australia, Constellation becomes the largest wine company in the 2002

world. Top awards at leading national and international wine competitions:

INTERNATIONAL EASTERN WINE COMPETITION

2002 Riesling -Ravines Wine Cellars - Best Dry Riesling

SAN FRANCISCO INTERNATIONAL WINE COMPETITION

August - The New

2003 Country Concord - Swedish Hill Winery - Best of Class

York Wine & Food Classic - the leading competition for New 2003 York wines - is held for the first time outside New York State at Copia, the Center for American Food, Wine & the Arts, in Napa, California. The media attention

from the event creates a whole new level of awareness for the quality of New York wines.

2004

Top awards at leading national and international wine competitions:

FINGER LAKES INTERNATIONAL WINE COMPETITION

2002 Riesling - Lakewood Vineyards – Best Riesling

JERRY MEAD'S NEW WORLD INTERNATIONAL WINE COMPETITION



16

2001 Johannisberg Riesling Ice Wine - Pindar Vinevards - Best of Class

Los Angeles Wines of THE WORLD

2005

2001 Merlot - Peconic Bay Winery - Best of Class 2003 Cavuga White - Swedish Hill Winery - Best of Class

PACIFIC RIM INTERNATIONAL WINE COMPETITION

2003 Rkatsiteli – Dr. Konstantin Frank Vinifera Wine Cellars – Best of Class Bartlett Pear - Goose Watch Winery – Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION

Svenska Red - Swedish Hill Winery - Chairman's Award

San Francisco INTERNATIONAL WINE COMPETITION

Heron Hill Winery Finger Lakes 2002 Riesling (Ingle Vineyard)

was voted Best of Show White Wine

JERRY MEAD'S NEW WORLD INTERNATIONAL WINE COMPETITION

2001 Johannisberg Riesling Ice Wine – Pindar Vineyards – Best of Class

LA WINES OF THE WORLD

2001 Merlot - Peconic Bay Winery - Best of Class 2003 Cayuga White - Swedish Hill Winery - Best of Class

LONG BEACH GRAND CRU WINE COMPETITION

2003 Dry Riesling - Hosmer Winery - Chairman's Best of Class

PACIFIC RIM INTERNATIONAL WINE COMPETITION

2003 Rkatsiteli - Dr. Frank's Vinifera Wine Cellars - Best of Class NV Bartlett Pear - Goose Watch Winery - Best of Class

Top awards at leading national and international wine competitions:

CANBERRA INTERNATIONAL RIESLING CHALLENGE

2004 Riesling Ice Wine -Sheldrake Point Vineyard -Best North American Riesling

JEFFERSON CUP INVITATIONAL

2004 Vignoles -Lakewood Vineyards - Best Non-Vinifera Whit

JERRY MEAD'S NEW

WORLD INTERNATIONAL WINE COMPETITION 2006

2003 Riesling – Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class

L.A. COUNTY FAIR

NV Cassis - Clinton Vineyards, Inc. - Best of Class NV Country Concord - Swedish Hill Winery - Best of Class

LONG BEACH GRAND CRU WINE COMPETITION

2004 Dry Riesling - Dr.

Konstantin Frank Vinifera Wine Cellars - Chairman's Best of Class 2004 Cayuga White - Swedish Hill Winery - Chairman's Best of Class

NV Country Concord - Swedish Hill Winery - Chairman's Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION

NV Diamond - Goose Watch Winery - Best White Wine

Top awards at leading national and international wine competitions:

CANBERRA INTERNATIONAL RIESLING CHALLENGE

2005 Reserve Riesling - Atwater Estate Vinevards – Best North American Riesling

FINGER LAKES INTERNATIONAL WINE COMPETITION

2005 Johannisberg Riesling -

Chateau LaFayette Reneau – Best Rieslina 2004 Riesling Ice Wine December Harvest - Sheldrake Point Vineyard & Simply Red Bistro -**Best Ice Wine**

INTERNATIONAL EASTERN WINE COMPETITION

2005 Dry Riesling - King Ferry Winery Inc. (Treleaven) - Riesling Champion and Best of Class for Dry Riesling

LA COUNTY FAIR WINES OF THE WORLD

2002 Blanc de Blanc - Lieb Family Cellars – Best of Class 2004 Late Harvest Vignoles -Prejean Winery - Best of Class

LONG BEACH GRAND CRU WINE COMPETITION

NV Pear Mead Honey - Earle Estates Meadery – Best of Class NV Diamond - Goose Watch Winery - Best of Class 2005 Melody - Goose Watch Winery - Best of Class

Top awards at leading national and international wine competitions:

ATLANTIC SEAROARD WINE COMPETITION

2006 Dry Riesling - Fox Run Vinevards - Best of Category 2004 Estate Merlot – Jamesport Vineyards - Best of Category 2005 Pinot Noir. Estate Bottled - Oak Summit Vineyard - Best of Category

BIG E NORTHEAST GOLD WINE COMPETITION

NV White Cat – Hazlitt 1852 Vineyards – Best Grape Wine NV White Cat - Hazlitt 1852

Vineyards - Best New York Wine 2007

FLORIDA STATE FAIR INTERNATIONAL WINE COMPETITION

2005 Fiori delle Stelle, Vidal Ice Wine - Casa Larga Vineyards -Best of Class NV Spumante Blush - Swedish Hill Winery - Best of Class

INDY INTERNATIONAL WINE COMPETITION 2006 Cayuga White - Cayuga

Ridge Estate Winery - Best of

Class 2005 Night Pasturel, Apple Ice Wine, Ice Harvest Cider - Slyboro Cider House – Best of Class 2006 Diamond - Thirsty Owl Wine Company – Best of Class NV Catawba - Torrev Ridge Winery - Best of Class NV Midnight Blues - Torrey Ridge Winery - Best of Class NV Scarlet Red - Torrey Ridge Winery - Best of Class, Best Alternate Honey Wine NV Sparkling Honey Mead -

Montezuma Winery – Best Honey Wine

JEFFERSON CUP INVITATIONAL

2006 Riesling Reserve - Fox Run Vineyards – Jefferson Cup Winner

JERRY MEAD'S NEW WORLD INTERNATIONAL WINE COMPETITION

NV Extra Dry Champagne – Lucas Vineyards – Best New World Sparkling Wine, Best of Varietal, and Best of Class 2006 Rkatsiteli – Dr. Konstantin Frank Vinifera Wine Cellars - Best of Varietal and Best of Class

LONE STAR INTERNATIONAL WINE COMPETITION

2006 Rkatsiteli – Dr. Konstantin Frank Vinifera Wine Cellars -Grand Star Award

LONG BEACH GRAND CRU WINE COMPETITION

NV Niagara – Earle Estates

Meadery - Best of Class NV Red Raspberry – Earle Estates Meadery Wine - Best of Class 2006 Pinot Blanc - Glenora Wine Cellars, Inc. - Best of Class 2006 Riesling, Homestead Reserve - Hazlitt 1852 Vineyards - Best of Class 2006 Riesling, Ice Wine -Lamoreaux Landing Wine Cellars - Best of Class NV Blue Waters Riesling -

Swedish Hill Winery - Best of Class 2005 Vignoles Late Harvest -Swedish Hill Winery - Best of Class NV Peach - Torrey Ridge Winery -

Los Angeles INTERNATIONAL WINE COMPETITION

Best of Class

2005 Traminette - Goose Watch Winery - Best of Class 2006 Dry Riesling - Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class NV Spumante Blush - Swedish

Hill Winery - Best of Class

PACIFIC RIM INTERNATIONAL WINE COMPETITION

2006 Dry Riesling - Anthony Road Wine Company - Best of Class 2006 Dry Riesling - Konstantin D. Frank & Sons Vinifera Wine Cellars - Best of Class 2004 Sauvignon Blanc – Duck Walk Vineyards – Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION

2006 Johannisberg Riesling - Chateau LaFayette Reneau -Best of Show White Wine

SAN FRANCISCO CHRONICLE WINE COMPETITION

NV Strawberry - Baldwin Vineyards – Best of Class 2005 Chardonnay - Lamoreaux Landing Wine Cellars - Best of Class

2005 Chardonnay Reserve -Lamoreaux Landing Wine Cellars - Best of Class

SAN FRANCISCO INTERNATIONAL WINE COMPETITION

NV Percussion - Penguin Bay Winery - Best White Hybrid NV Diamond - Goose Watch Winery - Best Native American White

Top awards at leading national and international wine competitions:

ATLANTIC SEABOARD WINE COMPETITION

2006 Pinot Noir – Duck Walk Vineyards – Best of Category NV Extra Dry Cayuga White - Lucas Vineyards - Best of Category 2005 Reserve Merlot – Osprev's Dominion - Best of Category 2006 Sauvignon Blanc - White

Springs Winery - Best of Category

FINGER LAKES INTERNATIONAL WINE 2008 COMPETITION

> 2006 Chardonnay – Chateau LaFayette Reneau – Best Chardonnay

HILTON HEAD WINE **F**ESTIVAL

2006 Chardonnay Late Harvest – Pindar Vineyards - Best of Show Dessert Wine

INTERNATIONAL EASTERN WINE COMPETITION

2005 Fiori delle Stelle. Vidal Ice Wine - Casa Larga Vineyards -**Best Dessert Wine**

INTERNATIONAL WINE & SPIRITS COMPETITION

2005 Fiori delle Stelle. Vidal Ice Wine - Casa Larga Vineyards -**Best in Class** 2006 Semi-Dry Riesling -

Rooster Hill Vineyards - Best Semi-Dry Riesling

INDY INTERNATIONAL WINE COMPETITION

NV Célèbre – Dr. Konstantin Frank

Vinifera Wine Cellars - Best of Class 2007 White Catawba – Lakewood Vinevards – Best of Class 2006 Vidal Blanc Ice Wine -Mazza Chautaugua Cellars – Best of Class NV Sparkling Honey Mead -Montezuma Winery - Best of Class 2007 Gewürztraminer – Penguin Bay Winery - Best of Class 2007 Rosé of Chambourcin -Penguin Bay Winery - Best of Class 2007 Cayuga White - Swedish Hill Winery - Best of Class NV Svenska White - Swedish Hill Winery - Best of Class NV Niagara - Torrey Ridge Winery - Best of Class NV Scarlet Red - Torrev Ridge Winery - Best of Class

2006 Traminette - Torrev Ridge Winery - Best of Class

JEFFERSON CUP INTERNATIONAL WINE COMPETITION

2007 Vignoles – Anthony Road Wine Company – Jefferson Cup

JERRY MEAD'S NEW WORLD INTERNATIONAL WINE COMPETITION

NV Snow Goose – Goose Watch

Winery – Best New World White Wine, Best Varietal, Best of Class NV Catawba – Torrey Ridge Winery – Best Varietal, Best of Class 2006 Traminette – Goose Watch Winery - Best of Class 2005 Chardonnay - Pindar Vineyards – Best of Class NV Svenska White - Swedish Hill Winery – Best of Class

LODI INTERNATIONAL

WINE AWARDS

2006 Chardonnay Reserve -Pindar Vineyards – Best of Class

LONG BEACH GRAND CRU WINE COMPETITION

NV Diamond - Goose Watch Winery -Sweepstakes 2007 Pinot Grigio - Goose Watch Winery – Best of Class NV Bella Rosa – Merritt Estate Winery - Best of Class NV Catawba Rosé – Torrey Ridge Winery – Best of Class

Los Angeles INTERNATIONAL WINE & SPIRITS COMPETITION

2007 Traminette – Goose Watch Winery - Best of Class 2006 Late Harvest Riesling Reserve, Ingle Vineyards -Heron Hill Winery – Best of Class 2005 LaBarrique Chardonnay Peconic Bay Winery – Best of Class 2007 Gewürztraminer – Penguin

Bay Winery - Best of Class 2007 Cavuga - Swedish Hill Winery - Best of Class NV Svenska White - Swedish Hill Winery - Best of Class

NATIONAL WOMEN'S WINE COMPETITION 2007 Riesling - Glenora Wine

Cellars - Best of Class NV White Cat - Hazlitt 1852 Vineyards - Best of Class 2006 Late Harvest Vidal Blanc -Heron Hill Winery - Best of Class 2006 Semi-Dry Riesling – Heron Hill Winery - Best of Class 2006 Riesling - Prejean Winery -Best of Class NV Alexandria Bav Rosé -Thousand Islands Winery - Best

PACIFIC RIM INTERNATIONAL WINE COMPETITION

of Class

2005 Chardonnay, Barrel Fermented – Chateau LaFayette Reneau - Best of Class

Marsh Distillery - Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION

2006 Rosé - White Springs Winery – Sweepstakes Rosé Wine

SAN DIEGO INTERNATIONAL WINE COMPETITION

2006 Vignoles - Thousand Islands Winery – Sweepstakes

SAN FRANCISCO CHRONICLE WINE COMPETITION

2009

NV Doobie Blues - Swedish Hill Winery- Best of Class NV Viking Red – Swedish Hill Winery- Best of Class

SAN FRANCISCO INTERNATIONAL WINE COMPETITION

2007 Vignoles - Lucas Vineyards – Best Vignoles

Top awards at leading national and

international wine competitions:

ATLANTIC SEABOARD WINE COMPETITION

2008 Riesling, Semi-Dry -Chateau Lafayette Reneau – Best of Category, Best of Show 2007 Pinot Noir – Dr. Konstantin Frank Vinifera Wine Cellars – Best of Category 2008 Gewürztraminer -Hazlitt 1852 Vineyards - Best of Category

2007 Sauvignon Blanc - Vineyard 48 - Best of Category 2007 Meritage - Wagner Vineyards - Best of Category

FINGER LAKES INTERNATIONAL WINE COMPETITION

2008 Riesling - Thirsty Owl Wine Company - Best Riesling

FLORIDA STATE FAIR INTERNATIONAL WINE COMPETITION

2006 Fiori delle Stelle, Vidal Ice

Wine - Casa Larga Vineyards -Best of Show Dessert Wine

INDY INTERNATIONAL WINE COMPETITION

2002 Brut - Chateau Frank -Sparkling Wine of the Year NV Creamy Apricot - Earle Estates Meadery – Best of Class NV Bartlett Pear - Goose Watch Winery – Best of Class

INTERNATIONAL EASTERN WINE COMPETITION

2006 Tierce, Dry Riesling - Fox Run Vineyards – Best Dry Riesling, Riesling Champion, **Best White Wine** 2007 Finale White Port – Goose Watch Winery – Best of Class NV White Stag - Hazlitt 1852 Vinevards - Best of Class NV Fredonia - Liberty Vinevards & Winery - Best of Class 2008 Cayuga White - Lucas Vinevards - Best of Class NV Queen's Flight Honey Brandy - Montezuma Winery & Hidden

NV Sparkling Honey Mead -Montezuma Winery & Hidden Marsh Distillery - Best of Class 2007 Valvin Muscat - Penguin Bay Winery - Best of Class 2007 Marechal Foch - Swedish Hill Winery - Best of Class NV Svenska White - Swedish Hill Winery - Best of Class NV Bandit White - Torrev Ridge Winery - Best of Class NV Catawba Rosé – Torrey Ridge Winery - Best of Class 2008 Riesling - Penguin Bay Winery – Best Semi-Sweet Riesling

INTERNATIONAL WINE & Spirit Competition (UNITED KINGDOM)

2005 Block E Chardonnay -Macari Vineyards - Best of Class

JEFFERSON CUP INVITATIONAL

2008 Harmony – Inspire Moore Winery & Vinevards - Jefferson Cup

2000 Brut Seduction - Sparkling

2009 Framboise - Inspire Moore Winery & Vinevards - Jefferson Cup 2008 Gewürztraminer -Sheldrake Point Winery -Jefferson Cup

JERRY MEAD'S NEW

WORLD INTERNATIONAL WINE COMPETITION NV Tuxedo White - Penguin Bay

Winery - Best of Class

LONG BEACH GRAND CRU WINE COMPETITION

2008 Riesling, Semi-Dry – Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class 2008 Melody - Goose Watch Winery - Best of Class 2008 Pinot Grigio – Goose Watch Winery - Best of Class 2008 Rosé of Isabella - Goose Watch Winery - Best of Class 2008 Riesling - Penguin Bay -Best of Class NV Bella Rosa - Merritt Estate Winery - Best of Class

NV Niagara – Torrey Ridge Winery - Best of Class

Los Angeles INTERNATIONAL WINE & SPIRITS COMPETITION

2007 Late Harvest Night Watch - Waters Crest Winery - Best **Dessert Wine** 2008 Dry Riesling - Chateau LaFayette Reneau – Best of Class

PACIFIC RIM INTERNATIONAL WINE COMPETITION

2007 Riesling, Semi-Dry – Dr.

Konstantin Frank Vinifera Wine Cellars - Best White Wine 2008 Homestead Reserve Riesling – Hazlitt 1852 Vineyards - Best of Class NV White Stag – Hazlitt 1852 Vineyards – Best of Class 2007 Valvin Muscat – Penguin Bay Winery – Best of Class NV Blue Waters Chardonnay -Swedish Hill Winery - Best of

Class

2007 Excelcia - Swedish Hill Winery - Best of Class 2007 Marechal Foch – Swedish Hill Winery - Best of Class NV Naturel – Swedish Hill Winerv - Best of Class NV Spumante Blush – Swedish Hill Winery - Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION

NV Catawba Rosé – Torrey Ridge Winery – Sweepstakes Rosé Wine

SAN DIFGO INTERNATIONAL WINE COMPETITION

2007 Riesling, Semi-Dry - Dr.

Konstantin Frank Vinifera Wine Cellars - Best of Show White Wine 2007 Late Harvest Chardonnay -Wölffer Estate Vineyard - Best of Show Dessert Wine

San Francisco CHRONICLE WINE COMPETITION

Pointe – Best of Class and Sweepstakes Award 2005 Chambourcin - Goose Watch Winery - Best of Class 2007 Diamond - Goose Watch Winery - Best of Class 2007 Cayuga White - Swedish Hill Winery - Best of Class NV Pinot Noir Brut Rosé - Goose Watch Winery - Best of Class

WORLD WINE CHAMPIONSHIPS

2007 Gewürztraminer Reserve -Dr. Konstantin Frank Vinifera Wine Cellars - Best New York White and Best Overall White Wine

Top awards at leading national and international wine competitions:

AMENTI DEL VINO

2008 Late Harvest Riesling, Bunch Select - Dr. Konstantin Frank Vinifera Wine Cellars – Best of Show

ATLANTIC SEABOARD WINE COMPETITION

2010

2004 Brut - Chateau Frank -Best of Category 2008 Gewürztraminer - Dr. Konstantin Frank Vinifera Wine Cellars - Best of Category 2008 Late Harvest Riesling, Bunch Select – Dr. Konstantin Frank Vinifera Wine Cellars – Best of Show 2009 Dry Riesling - Glenora Wine Cellars - Best of Category 2008 Pinot Noir Rosé - Glenora Wine Cellars – Best of Category NV 30th Anniversary – Lucas Vineyards – Best of Category 2009 Blues - Lucas Vineyards -Best of Category 2008 Pinot Noir – Oak Summit

Vineyard – Best of Category

2007 Cabernet Franc - Osprey's

Dominion - Best of Category

BEST OF RIESLING

2008 Riesling - Cayuga Ridge Estate - Best Riesling from the New World

CANBERRA INTERNATIONAL RIESLING CHALLENGE

2008 Late Harvest Riesling -Sheldrake Point Winery - Best Sweet Riesling in the World

DENVER INTERNATIONAL WINE COMPETITION

2009 Sauvignon Blanc - Castello di Borghese Vinevard & Winery -**Best Varietal**

FINGER LAKES INTERNATIONAL WINE COMPETITION

2008 Semi-Sweet Riesling -**Anthony Road Wine Company** - Best Riesling 2007 Chardonnay Reserve -Prejean Winery - Best

Chardonnay

FLORIDA STATE FAIR INTERNATIONAL WINE COMPETITION

NV Blanc de Blanc - Swedish Hill Winery - Best Sparkling Wine

INDY INTERNATIONAL WINE COMPETITION 2009 Semi-Dry Riesling -

Belhurst Estate Winery -Wine of the Year 2009 Gewürztraminer - Belhurst Estate Winery - Best of Class 2008 Cayuga White - Cayuga Ridge Estate – Best of Class 2008 Late Harvest Riesling. Bunch Select - Dr. Konstantin Frank Vinifera Wine Cellars -Best of Class NV Noiret - Liberty Vineyards & Winery - Best of Class 2007 Cabernet Franc - Swedish

INTERNATIONAL RIESLING FOUNDATION TROPHIES

Hill Winery – Best of Class

FOR BEST RIESLINGS

2010 -2009 Riesling - Lakewood Vineyards - Medium Sweet Wine Trophy

INTERNATIONAL EASTERN WINE COMPETITION

Chateau Lafayette Reneau - Best of Class 2008 Late Harvest Riesling, Bunch Select – Dr. Konstantin Frank Vinifera Wine Cellars -Best **Dessert Wine**

2009 Dry Riesling - Eagle Crest

Vineyards – Riesling Best of Class

2009 Riesling, Semi-Dry -

JEFFERSON CUP INVITATIONAL

2009 Riesling, Semi-Dry - Chateau Lafavette Reneau -Jefferson Cup 2008 Vidal Blanc Ice Wine - Hazlitt 1852 Vinevards -Jefferson Cup 2008 Late Harvest Riesling - Sheldrake Point Winery -Jefferson Cup

2009 Vidal Blanc - Swedish Hill Winery – Jefferson Cup

JERRY MEAD'S NEW WORLD INTERNATIONAL WINE COMPETITION

2008 Riesling Martini-Reinhardt

Selection, Berry Select – Anthony

Road Wine Company - Best of Class NV Pinot Noir Brut Rosé - Goose Watch Winery -Best New World Sparkling Wine 2008 Vidal Blanc - Knapp Vineyards Winery & Restaurant -**Best of Class** NV Percussion – Penguin Bay Winery - Best of Class

LONE STAR INTERNATIONAL

2009 Riesling, Semi-Dry – Dr. Konstantin Frank Vinifera Wine Cellars - Grand Star Award for White Table Wine

LONG BEACH GRAND CRU WINE COMPETITION

2009 Dry Riesling - Belhurst Estate Winery – Best White Wine 2009 Gewürztraminer – Belhurst Estate Winery – Best of Class NV Golden Pheasant – Belhurst Estate Winery – Best of Class 2009 Riesling, Semi-Dry -Belhurst Estate Winery – Best of Class NV River Run Rosé – Covote Moon Vineyard – Best of Class 2009 Twisted Sister - Coyote Moon Vineyard – Best of Class NV Golden Spumante - Goose Watch Winery - Best of Class NV Pinot Noir Brut Rosé – Goose Watch Winery – Best of Class 2009 Villard Blanc - Goose Watch Winery – Best of Class 2007 Late Harvest Vidal Blanc -Heron Hill Winery - Best of Class 2009 Dry Riesling - Lucas Vineyards – Best of Class NV Tuxedo Red – Penguin Bay Winery - Best of Class 2009 Gewürztraminer, Estate, Catherine Valley - Rooster Hill Vineyards - Best of Class 2009 Vidal Blanc - Swedish Hill

Winery - Best of Class NV Catawba – Torrey Ridge Winery – Best Rosé Wine

Los Angeles INTERNATIONAL WINE & SPIRITS COMPETITION

2007 Riesling, Ingle Vineyard -

Heron Hill Winery – Best of Class NV Naturel Sparkling Wine -Belhurst Estate Winery – Best of Class 2002 Blanc de Blancs - Chateau Frank - Best of Class 2007 River Run Rosé - Covote Moon Vineyard - Best of Class 2008 Late Harvest Riesling. Bunch Select – Dr. Konstantin Frank Vinifera Wine Cellars -Best of Class NV Pinot Noir Brut Rosé - Goose Watch Winery - Best of Class NV Snow Goose - Goose Watch Winery - Best of Class 2009 Rosé of Chambourcin -Penguin Bay Winery - Best of Class 2009 Vidal Blanc - Swedish Hill

Winery - Best of Class

NEXTGEN WINE COMPETITION

2008 Late Harvest Riesling. Bunch Select – Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class

PACIFIC RIM INTERNATIONAL WINE COMPETITION

2006 Fiori delle Stelle, Vidal Ice Wine - Casa Larga Vineyards -**Best Dessert Wine** 2008 Dry Riesling – Anthony Road Wine Company - Best of Class 2008 Riesling Martini-Reinhardt Selection, Berry Select – Anthony Road Wine Company - Best of Class 2008 Vignoles - Anthony Road Wine Company - Best of Class 2009 Dry Riesling - Belhurst Estate Winery – Best of Class 2009 Melody - Goose Watch

Winery - Best of Class

2011

2008 Pinot Grigio – Goose Watch Winery - Best of Class 2009 Vidal Blanc - Swedish Hill Winery - Best of Class NV Diamond – Torrey Ridge Winery - Best of Class NV Niagara - Torrey Ridge Winery - Best of Class

2008 Riesling Martini-Reinhardt – Anthony Road Wine

Company – Trophee d'Excellence

RIESLING DU MONDE

RIVERSIDE INTERNATIONAL WINE COMPETITION

2006 Fiori delle Stelle, Vidal Ice Wine - Casa Larga Vineyards - Sweepstakes Dessert Wine

SAN DIEGO INTERNATIONAL WINE COMPETITION

2008 Vidal Blanc Ice Wine Hazlitt 1852 Vineyards – Best of Show Dessert Wine

SAN FRANCISCO

CHRONICLE WINE COMPETITION

2008 Diamond - Goose Watch Winery - Judge's Choice Award NV Snow Goose - Goose Watch Winery - Judge's Choice Award 2008 Gewürztraminer - Keuka Springs Vineyard - Best White Wine 2008 Pinot Gris. Estate Grown -Prejean Winery – Judge's Choice Award NV Svenska Red - Swedish Hill Winery - Best of Class NV Spumante Blush - Swedish Hill Winery –Judge's Choice Award

SAN FRANCISCO INTERNATIONAL WINE COMPETITION

2009 Diamond - Goose Watch Winery – Best Native American Varietal 2009 Riesling - Whitecliff Vineyard – Best White Wine

WORLD WINE CHAMPIONSHIPS

2008 Late Harvest Riesling, Bunch Select – Dr. Konstantin Frank Vinifera Wine Cellars -Best New York Dessert Wine NV Cab Merlot – Casa Larga Vineyards - Best New York Red Wine 2008 Dry Riesling - Chateau Lafavette Reneau - Best New York White Wine

WORLD VALUE WINE **CHAMPIONSHIPS**

2009 Riesling – Glenora Wine Cellars - Best Value United States Riesling

Top awards at leading national and international wine competitions:

ATLANTIC SEABOARD WINE COMPETITION

2010 River Time - Coyote Moon

Vineyards – Best of Category 2009 Traminette – Fulkerson Winery – Best of Category 2008 Cabernet Franc - Hazlitt 1852 Vineyards - Best of Category 2009 Gewürztraminer - Hazlitt 1852 Vineyards - Best of Category 2010 Riesling Estate Reserve

- Martha Clara Vinevards - Best of Show 2010 So Vin Yon Blonk - Martha Clara Vineyards – Best of Category NV Awosting White - Whitecliff Vineyard – Best of Category

2010 Chardonnay - Whitecliff

Vineyard – Best of Category

CANBERRA INTERNATIONAL RIESLING CHALLENGE IN **A**USTRALIA

2010 Riesling Ice Wine -Sheldrake Point Vineyard - Best American Riesling

FINGER LAKES INTERNATIONAL WINE

COMPETITION

2009 Late Harvest Riesling -Zugibe Vineyards – Best Riesling

INDY INTERNATIONAL WINE COMPETITION

NV Classic Cream Sherry – Goose Watch Winery - Best of Class NV Pintail – Montezuma Winery – Best of Class 2010 Delaware - Swedish Hill Winery - Best of Class NV Saint Lawrence Red -**Thousand Islands Winery** - Best of Class

INTERNATIONAL EASTERN WINE COMPETITION

2010 Pinot Blanc - Glenora Wine Cellars - Best of Class NV Liquid Wisdom – Hickory Hollow Wine Cellars - Best of Class 2010 Riesling – Keuka Spring Vineyard - Best of Class 2009 Riesling, Semi-Dry – Lucas Vineyards – Best of Class

2010 Seyval Blanc - Lucas Vineyards – Best of Class NV Sauvignon Blanc - Merritt Estate Winery – Best of Class NV Diamond – Torrey Ridge Winery – Best of Class 2010 Cranberry – Woodbury Vineyards – Best of Class

INTERNATIONAL WOMEN'S WINE COMPETITION

2009 Gewürztraminer – Hazlitt 1852 Vineyards – Best of Class

JEFFERSON CUP INVITATIONAL

2010 Dry Riesling - Chateau Lafayette Reneau – Jefferson Cup NV White Cat – Hazlitt 1852 Vineyards – Jefferson Cup NV White Stag – Hazlitt 1852 Vineyards - Jefferson Cup 2010 Late Harvest Vignoles -Swedish Hill Winery -Jefferson Cup

JERRY MEAD'S NEW WORLD INTERNATIONAL WINE COMPETITION

2009 Dry Riesling - Belhurst Estate Winery - Best of Show White Wine 2009 Gewürztraminer – Belhurst Estate Winery - Best of Class 2004 Brut - Chateau Frank -Best of Class 2009 Pinot Noir - Chateau Lafavette Reneau - Best of

Class NV Bella Ice - Merritt Estate Winery - Best of Class 2005 Blanc de Blancs -Sparkling Pointe - Best

New World Sparkling Wine

LONG BEACH GRAND CRU WINE COMPETITION

NV Isabella – Belhurst Estate Winery - Best of Class 2010 Riesling, Semi-Dry - Chateau Lafayette Reneau -Best of Class 2009 River Run Rosé – Covote Moon Vineyards – Best Rosé 2008 Homestead Reserve

Riesling – Hazlitt 1852 Vineyards - Best of Class 2010 Long Stem White -Lakewood Vineyards - Best of Class NV Diamond – Torrey Ridge Winery - Best of Class

Los Angeles INTERNATIONAL WINE & SPIRITS COMPETITION

Frank - Best of Class

2006 Blanc de Blancs - Chateau

2010 Riesling, Estate – Chateau Lafavette Reneau – Best of Class 2010 Brianna - Coyote Moon Vinevards - Best of Class 2010 Twisted Sister - Covote Moon Vineyards - Best of Class 2009 Riesling - Traminette -Fulkerson Winery - Best of Class NV Bella Rosa - Merritt Estate Winery – Best of Class 2008 Chardonnay, Estate -Sherwood House Vinevards -

2001 Brut Seduction - Sparkling

Best of Class

Pointe - Best of Class

2010 Cayuga White – Swedish Hill Winery – Best of Class 2009 Dry Riesling – Swedish Hill Winery - Best of Class 2010 Diamond - Thirsty Owl Wine Company – Best of Class

MONTEREY

INTERNATIONAL WINE COMPETITION 2008 Late Harvest Vidal Blanc - Heron Hill Winery - Best Dessert Wine

NEW YORK WORLD WINE & Spirits Competition

2009 Naked Chardonnay -Covote Moon Vineyards - Best Chardonnay 2009 River Run Rosé - Coyote Moon Vineyards - Best Rosé

NEXTGEN WINE COMPETITION

2010 Dry Rosé - Belhurst Estate Winery – Best Rosé NV Bramble Berry - Hazlitt 1852 Vinevards - Best of Class 2008 Vidal Blanc Ice Wine -Niagara Landing Wine Cellars -Best Dessert & Late Harvest Wine

INTERNATIONAL WINE COMPETITION NV Edelweiss - Merritt Estate

PACIFIC RIM

Winery - Best of Class 2010 Riesling, Semi-Sweet -Red Tail Ridge Winery – Best of Class NV Diamond – Torrey Ridge Winery - Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION

2009 Dry Gewürztraminer - Hazlitt 1852 Vineyards -**Sweepstakes White Wine**

SAN DIEGO INTERNATIONAL WINE COMPETITION

2009 Dry Riesling - Belhurst Estate Winery - Best Riesling

SAN FRANCISCO

CHRONICLE WINE COMPETITION

NV Spumante Blush - Swedish Hill Winery - Best of Class NV Valvin Muscat - Swedish Hill Winery – Best of Class

SOMMELIER CHALLENGE

2010 Gewürztraminer -Sheldrake Point Vinevard - Best of Show White Wine

Top awards at leading national and international wine competitions:

ATLANTIC SEABOARD WINE COMPETITION 2011 Riesling, Semi Dry -

Belhurst Estate Winery – Best Riesling 2006 Blanc de Noirs - Chateau Frank – Best of Show 2010 Pinot Noir Blanc - Chateau Lafayette Reneau - Best Vinifera Blush

2012

2010 Pinot Gris – Dr. Konstantin Frank Vinifera Wine Cellars – Best Pinot Gris 2010 Gewürztraminer -Hazlitt 1852 Vineyards – Best Gewürztraminer

CANBERRA INTERNATIONAL RIESLING COMPETITION

2008 Late Harvest Riesling. Bunch Select – Dr. Konstantin Frank Vinifera Wine Cellars - USA Embassy Perpetual Trophy - Best American Riesling

INDY INTERNATIONAL WINE COMPETITION

2011 Ellatawba - 21 Brix Winery - Best Rosé

INTERNATIONAL EASTERN WINE COMPETITION

2010 Gewürztraminer – Anthony Road Wine Company - Best of Class 2009 Riesling, Art Series -Anthony Road Wine Company -

Best of Class 2010 Chardonnay – Hazlitt 1852 Vineyards – Best of Class NV Viking Red - Swedish Hill Winery - Best of Class

INTERNATIONAL WOMEN'S

WINE COMPETITION

2011 Fire Boat White - Covote Moon Vineyards - Best of Class

JEFFERSON CUP INVITATIONAL

Winery & Vineyard – Jefferson Cup 2010 Riesling Ice Wine - Sheldrake Point Winery -Jefferson Cup 2011 Marechal Foch - Swedish Hill Winery – Jefferson Cup

2011 Harmony - Inspire Moore

JERRY MEAD'S NEW WORLD INTERNATIONAL WINE COMPETITION

2006 Blanc de Noirs - Chateau

Frank - Best New World Sparkling Wine 2010 Dry Riesling – Chateau Lafayette Reneau – New World **Grand Champion** 2010 Grüner Veltliner – Dr. Konstantin Frank Vinifera Wine Cellars – Best of Class 2010 Chardonnay – Hazlitt 1852 Vineyards - Best New World Chardonnay 2010 Vidal Ice Wine - Hazlitt 1852 Vineyards – Best of Class NV Bella Rosa – Merritt Estate Winery - Best of Class 2006 Blanc de Blancs -Sparkling Pointe – Best of Class NV Riesling Cuvee – Swedish Hill Winery - Best of Class 2010 Vignoles, 25th Anniversary – Swedish Hill Winery – Best of Class

LONG BEACH GRAND CRU WINE COMPETITION

NV Ella's Red – 21 Brix Winery – **Best of Class** 2010 Dry Riesling - Chateau Lafayette Reneau – Best of Class

2010 Long Stem White Lakewood Vinevards -Chairman's Award. Best of Class NV Marquette - Covote Moon Vinevards - Best of Class NV Twisted Sister - Coyote Moon Vineyards – Best of Class 2011 Diamond - Goose Watch Winery - Best of Class 2011 Rose of Isabella - Goose Watch Winery - Best of Class NV Classic Catawba - Swedish Hill Winery – Best of Class NV Classic Niagara – Swedish Hill Winery – Best of Class 2010 Late Harvest Vignoles -Swedish Hill Winery – Best of Class 2011 Riesling – Swedish Hill Winery – Best of Class

Los Angeles INTERNATIONAL WINE & Spirits Competition

2006 Blanc De Noirs - Chateau Frank - Best of Class 2011 River Time - Coyote Moon Vinevards – Best of Class NV Golden Spumante – Goose Watch Winery - Best of Class

MONTEREY WINE COMPETITION

2010 Traminette – Goose Watch Winery - Best Traminette NV Bella Rosa - Merritt Estate Winery - Best Sweet Red 2010 Late Harvest Vignoles -Swedish Hill Winery - Best of Show Dessert

NEW YORK WORLD WINE & Spirits Competition

2011 Crescent - Coyote Moon Vinevards - Best White Hybrid

PACIFIC RIM INTERNATIONAL WINE COMPETITION

2011 Ella's House White - 21 Brix Winery - Best White Wine 2009 Fiori delle Stelle Riesling Ice Wine - Casa Larga Vineyards -Best of Class 2008 Fiori delle Stelle Vidal Ice

Wine - Casa Larga Vineyards -Best of Class 2011 Rosé of Isabella - Goose Watch Winery - Best of Class NV Riesling Cuvée – Swedish Hill Winery - Best of Class

RIVERSIDE INTERNATIONAL

WINE COMPETITION NV Raspberry – 21 Brix Winery –

Best of Class 2009 Late Harvest Vidal Blanc - Arrowhead Spring Vineyards -**Sweepstakes Dessert** 2006 Blanc de Noirs - Chateau Frank - Best of Class 2011 Riesling – Keuka Spring Vineyards - Best of Class NV Reds, Whites & Blues Rosé -Liberty Vineyards & Winery – Best of Class 2011 Diamond - Thirsty Owl Wine Company – Best of Class 2010 Marguette - Thousand Islands Winery - Best of Class

Swedish Hill Winery – Winery of

the Year

SAN DIEGO INTERNATIONAL WINE COMPETITION

2009 Fiori delle Stelle Vidal Ice Wine – Casa Larga Vineyards - Best of Show Dessert Wine

SAN FRANCISCO CHRONICLE WINE COMPETITION

2010 Gewürztraminer Reserve -Dr. Konstantin Frank Vinifera Wine Cellars - Best White Wine 2010 Marquette – Coyote Moon Vinevards - Best of Class 2010 Diamond - Goose Watch Winery - Best of Class NV Golden Spumante - Goose Watch Winery - Best of Class NV White Renard - Woodbury Vineyards - Best of Class

ULTIMATE WINE CHALLENGE

2011 Dry Riesling -Dr. Konstantin Frank Vinifera Wine Cellars - Chairman's Trophy

U.S. NATIONAL WINE COMPETITION

NV White Stag - Hazlitt 1852 Vinevards - Best of Class 2011 Riesling – Penguin Bay Winery - Best of Class 2010 Spiced Apple - Vizcarra Vinevards at Becker Farms -Sweepstakes

WORLD WINE CHAMPIONSHIPS

2006 Blanc de Noirs -Dr. Konstantin Frank Vinifera Wine Cellars - Best Northeastern Sparkling Wine

Top awards at leading national and international wine competitions:

BIG E NORTHEAST GOLD WINE COMPETITION

NV Célèbre - Dr. Konstantin Frank Vinifera Wine Cellars -Best Grape Wine

NV Apple Enchantment – Earle Estates Meadery – Best Fruit Wine

CRITICS CHALLENGE INTERNATIONAL

2011 Dry Riesling – Swedish Hill Winery - Best of Class Riesling

2013

INTERNATIONAL EASTERN WINE COMPETITION 2008 Blanc de Noirs - Sparkling

Pointe - Best Sparkling Wine 2003 Brut - Sparkling Pointe -Best of Class 2011 Dry Gewürztraminer -Knapp Vineyards Winery - Best of Class 2011 Riesling Select Harvest -

Glenora Wine Cellars - Best of Class

2011 Vidal Ice Wine - 21 Brix Winery - Best of Show

JEFFERSON CUP INVITATIONAL

NV Naturel Sparkling Wine -

2012 Vidal Blanc Ice Wine - Hazlitt 1852 Vineyards – Jefferson Cup 2012 Riesling, Reserve - Dr. Konstantin Frank Vinifera Wine Cellars - Jefferson Cup 2012 Riesling, Semi-Dry - Fox Run Vineyards – Jefferson Cup NV Cabin Fever - Hazlitt 1852 Vineyards – Jefferson Cup

WORLD INTERNATIONAL WINE COMPETITION 2008 Blanc de Noirs - Sparkling

Pointe - Best New World Sparkling Wine

JERRY MEAD'S NEW

2011 Signature White - Glenora Wine Cellars - Best of Class 2010 Vignoles - Swedish Hill Winery - Best of Class 2011 Viognier - Goose Watch Winery - Best of Class

LONG BEACH GRAND CRU WINE COMPETITION

NV Blanc de Blancs - Swedish Hill Winery – Best of Class

2012 Riesling, Reserve – Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class NV Ellatawba – 21 Brix Winery – Best Rosé 2012 La Crescent – Coyote Moon Vineyards – Best of Class 2011 Diamond – Thirsty Owl Wine Company – Best of Class 2012 Vidal Ice Wine - Hazlitt 1852 Vinevards – Best of Class NV Strawberry Wine – Baldwin Vinevards - Best of Class

NEW YORK WINE & SPIRITS COMPETITION

2012 Riesling, Reserve - Dr. Konstantin Frank Vinifera Wine Cellars - Best in Show White Wine

PACIFIC RIM INTERNATIONAL WINE COMPETITION

2007 Blanc de Blancs - Chateau Frank - Best of Class 2007 Blanc de Noirs -Dr. Konstantin Frank Vinifera Wine Cellars – Best of Class

Belhurst Estate Winery - Best of Class NV Célèbre -Dr. Konstantin Frank Vinifera Wine Cellars – Best of Class 2012 Gewürztraminer -Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class 2012 Riesling – Dr. Konstantin Frank Vinifera Wine Cellars -Best of Class 2011 Dry Riesling - Swedish Hill Winery - Best of Class 2011 Marechal Foch - Swedish Hill Winery - Best of Class NV Catawba – Torrey Ridge Winery - Best Dessert Wine NV Niagara - Torrev Ridge Winery - Best of Class NV Blue Sapphire - Torrev Ridge Winery - Best of Class 2011 Vidal Ice Wine - 21 Brix Winery – Best of Class

RIVERSIDE INTERNATIONAL WINE COMPETITION

NV Naturel Sparkling Wine -Belhurst Estate Winery - Best of Class 2012 Moscato, Semi-Sparkling -Villa Bellangelo - Best of Class 2012 Riesling, Semi Dry -Belhurst Estate Winery – Best of Class 2012 Dry Riesling - Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class 2010 Cabernet Franc - Hazlitt 1852 Vinevards – Best of Class 2010 Noiret – Anyela's Vineyards - Best of Class 2011 Diamond – Goose Watch Winery – Best of Class NV Reds. Whites & Blues -Liberty Vineyards & Winery - Best of Class NV Catawba - Torrev Ridge Winery - Best of Class NV Island Mama – Coyote Moon Vinevards – Best of Class NV Dolce di Moscato - Hunt Country Vineyards – Best of Class NV Niagara – Torrev Ridge Winerv - Best of Class 2010 Late Harvest Vignoles -

Swedish Hill Winery - Best of Class

NV Razzle Dazzle Raspberry -Coyote Moon Vineyards - Best of Class

NV Raspberry Reflections – Earle Estate Meadery – Best of Class

INTERNATIONAL WINE COMPETITION 2011 Riesling Ice - Wagner

Vinevards - Best of Show **Dessert Wine**

SAN DIEGO

SAN FRANCISCO CHRONICLE WINE COMPETITION

2011 La Crescent – Coyote Moon Vineyards – Best of Class 2011 Fire Boat Red - Coyote Moon Vineyards – Best of Class 2011 Casa Papa Red - Covote Moon Vineyards - Best of Class

2011 Riesling - Keuka Spring Vinevards - Best White Wine

SAN FRANCISCO INTERNATIONAL WINE COMPETITION

2012 Marechal Foch - Swedish Hill Winery – Best Hybrid Red Varietal

SOMMELIER CHALLENGE INTERNATIONAL WINE COMPETITION

2012 Riesling, Reserve -Dr. Konstantin Frank Vinifera Wine Cellars - Best of Show White Wine

ULTIMATE WINE CHALLENGE COMPETITION

2012 Riesling, Semi-Dry -Dr. Konstantin Frank Vinifera Wine Cellars - Chairman's Trophy 2011 Pinot Gris – Dr. Konstantin Frank Vinifera Wine Cellars -Chairman's Trophy

U.S. NATIONAL WINE COMPETITION

2007 Blanc de Noirs -Dr. Konstantin Frank Vinifera Wine Cellars - Best of Class 2003 Brut Seduction - Sparkling Pointe - Best of Show Sparkling NV Spumante Blush – Swedish Hill Winery – Best of Class 2012 Dry Riesling - Dr. Konstantin Frank Vinifera Wine Cellars - Best of Show 2011 Vidal Blanc - Swedish Hill Winery - Best of Class 2011 River Time - Coyote Moon Vineyards – Best of Class

WINEMAKER CHALLENGE COMPETITION

2011 Traminette – Goose Watch Winery - Best Traminette

- 2014 -

In 2014 New York wines won a total of 836 top awards

(gold, double gold, Best of Class, Best of Category, or Best of Show in national or international competitions; or scored over 90 by a top-rated publication).

Here is a select list of awards for New York wineries in International Competitions.

Critics Challenge - Best of Class - Dr. Frank Wine Cellars 2012 Grüner Veltliner

Denver International Wine Competition - Best of Class - Chateau Frank Célèbre

Florida State Fair International Wine Competition - 2 Best of Category winners: Best Dessert Wine - Hazlitt 1852 Vineyards 2012 Vidal Blanc Ice Wine; Best White Wine - Hazlitt 1852 Vineyards 2012 Homestead Reserve Riesling

Indy International - Best of Class - Dr. Konstantin Frank Vinifera Wine Cellars 2012 Sauvignon Blanc

International Wine Channel TV Awards - Best of Show - Dr. Konstantin Frank Vinifera Wine Cellars 2012 Riesling

Los Angeles international Wine & Spirits Competition- 3 Best of Class winners: Keuka Spring Vineyards 2013 Dry Riesling, Humphrey's Vineyard; Sparkling Pointe Vineyards & Winery 2010 Brut; Thirsty Owl Wine Company 2013 Traminette

New World International Wine Competition - 2 Best of Category winners: Best White Wine - Fulkerson Winery 2013 William Vigne Juicy Sweet; Best Ice Wine - Hazlitt 1852 Vineyards 2012 Vidal Blanc Ice Wine

New York World Wine & Spirits Competition - 2 Best of Category winners: Best Riesling - Dr. Frank Wine Cellars 2012 Riesling Reserve; Best Sparkling Wine - Chateau Frank 2009 Blanc de Blancs

Pacific Rim International – 1 Best of Category and 3 Best of Class winners: Best of Category - Sparkling Wine - Chateau

Frank 2008 Blanc de Blancs; Best of Class - Americana Vineyards & Winery 2012 Riesling; Dr. Konstantin Frank Vinifera Wine Cellars 2012 Riesling Reserve; Penguin Bay Winery 2012 Dry Riesling

Riverside International Wine Competition – 4 Best of Class winners- Chateau Frank 2008 Blanc de Blancs; Chateau Frank Célèbre; Chateau Lafayette Reneau 2012 Dry Riesling, Estate; Keuka Spring Vineyards 2013 Après Vignoles

San Francisco Chronical Wine Competition – 4 Best of Class winners: Dr. Konstantin Frank Vinifera Wine Cellars 2012 Grüner Veltliner; Goose Watch Winery 2012 Diamond; Keuka Spring Vineyards 2012 Vignoles; Keuka Spring Vineyards 2012 **Après**

Winemaker Challenge - Best of Show White Wine - Penguin Bay Winery 2012 Riesling

- 2015 -

In 2015 New York wines won a total of 965 top awards

(gold or above in national or international competitions OR 90 points or above by a leading publication) Here are a few of the top awards in international competitions:

Canberra International Riesling Challenge - Best of Show - Sheldrake Point Winery - 2014 Wild Ferment Riesling Ice Wine Florida State Fair -

Best White Wine - Dr. Frank Wine Cellars 2013 Riesling, Semi-Dry;

Best Rosé - Arbor Hill Griesa Hill Iona Rosé:

Best Sparkling Wine - Chateau Frank - Célèbre Rosé

Jerry Mead's New World International Wine Competition - Best New World White Wine - Hazlitt 1985 Vinevards 2013 Sauvignon Blanc

Monterey Wine Competition - Best Riesling Dr. Konstantin Frank Vinifera Wine Cellars - 2013 Dry Riesling

Pacific Rim International Wine Competition – Best of Show Dessert Wine – Penguin Bay Winery 2013 Vidal Blanc Ice Wine

San Francisco Chronicle Competition - Best White Wine - Dr. Konstantin Frank Vinifera Wine Cellars 2013 Riesling, Semi-Dry

San Francisco International Wine Competition –

Best Blanc de Blanc – Chateau Frank 2009 Blanc de Blancs;

Best Sparking Riesling – Swedish Hill Riesling Cuveé;

Best Traminette – Whitecliff Vineyard 2013 Traminette;

Best Vignoles – Keuka Spring Vineyards 2014 Vignoles

The Wine Advocate - Scores of 94 points -

Sheldrake Point Winery 2014 Riesling Ice Wine;

Wölffer Estate Vineyard 2012 Descencia Botrytis Chardonnay;

Wölffer Estate Vineyard 2012 Diosa Late Harvest

Wine Enthusiast - Scores of 94 Points -

Fox Run Vineyards 2011 Reserve Riesling;

Hermann J. Wiemer (3 wines) - 2012 Cabernet Franc, Magdalena Vineyard; 2013 Riesling, Josef Vineyard; 2013 Riesling, HJW Vineyard

- 2016 -

In 2016 New York wines won a total of 605 top awards

(gold or above in national or international competitions OR 90 points and above by a leading publication) Here are a few of the top awards in international competitions and some of the highest ratings:

East Meets West - Eastern Division -

Best Late Harvest / Dessert Johnson Estate Winery Pink Catawba

Best Riesling – Wagner 2013 Riesling Select

Florida State Fair International Wine Competition -

Best of Show Sparkling - Liberty Vineyards & Winery 2013 Sparkling Riesling

Best of Show White – Owera Vineyards Owaghera White

Best of Show Blush / Rosé – Torrey Ridge Winery Catawba

Best of Show Dessert Wines - Liberty Vineyards & Winery - Catawba Ice Wine

Monterey Wine Competition – Best American Red Hybrid – 21 brix Thirsty Elephant

Pacific Rim International Wine Competition – Best White Wine - Thirsty Owl Wine Company 2014 Diamond

Ultimate Wine Challenge - Chairman's Trophy - Wagner Vineyards 2013 Select Riesling

The Wine Advocate – 92 Points - Dr. Konstantin Frank Vinifera Wine Cellars 2014 Riesling Reserve

Wine & Spirits – 27 wines between 90 and 93 points – three at 94 Points

Fox Run Vineyards 2013 Tierce Dry Riesling

Hermann J. Wiemer Vineyard 2014 Late Harvest Riesling

Hermann J. Wiemer Vineyard 2011 Seneca Lake Cuvée Brut

Wine Enthusiast – 84 wines at 90 and above, including 35 as Best Buy, Cellar Selections or Editor's Choice awards– 3 at 93

Raphael Vineyards 2013 Primo Reserve Estate Bottled Red Wine (Cellars Selection)

McCall Wines 2012 Reserve Cabernet Franc (Editor's Selection)

Boundary Breaks 2013 No 90 Late Harvest Riesling

Wine Review Online – 9 ratings with 4 at 94 or above

21 Brix Thirsty Elephant - 94 Points

Adirondack Winery 2013 Meriate - 94 Points

Dr. Frank Wine cellars 2014 Grüner Veltliner – 94 Points

Wölffer Estate Vineyards 2013 Late Harvest Diosa – 96 Points





A "flight" of wines ready for tasting in a competition

New York Wine Industry Quick Facts

Ranking: Third largest wine producer in the U.S.

Products: Table wines, sparkling wines, dessert

wines, flavored wines, non-grape fruit

wines, honey wines

Volume: 150 million gallons (200 million liters,

> 200 million bottles) average annual production (Finger Lakes 85%, Hudson

River 10%, Other 5 %)

Wineries: 405 statewide (Finger Lakes - 128, Long

> Island - 76, Hudson River Region - 63, Lake Erie - 20, Niagara Escarpment -8, and Champlain Valley of New York -6 and 98 scattered in other areas of the

state.)

Growth: 391 wineries established since Farm

Winery Act of 1976

Average Crush: 169,000 tons from over 1,631 growers

Gross Wine Sales: Over \$500 Million at the farm gate, not

including wholesale sales

Excise Taxes: Over \$40 Million to Federal and State

Governments

Employees: About 3,000 at wineries; about 12,000 in vineyards

Tourist Visits: Nearly 5 million annually

New York's Viticultural Areas: American Viticultural Areas -As established by the Federal Government. (From west to east)

Lake Erie: characterized by the temperature-moderating effects of Lake Erie, captured by the parallel Allegheny Plateau

Niagara Escarpment: characterized by the temperature moderating effects created by Lake Ontario to the north, the Niagara River to the west and the actual Niagara Escarpment - the limestone ridge - which captures the moderating effects of these two large bodies of water.

Finger Lakes: characterized by the "lake effect" mesoclimates along several of the glacier carved Finger Lakes, the "air drainage" of sloping hillsides, and glacial soils conducive to drainage.

Seneca Lake: Located within the greater Finger Lakes AVA, characterized by the "lake effect" meso-climates along Seneca lake, the "air drainage" of sloping hillsides, and glacial soils conducive to drainage.

Cayuga Lake: Located within the greater Finger Lakes AVA characterized by temperature-moderating effects created by increased "air drainage" due to steep valley slopes, and the release of heat stored in Cayuga Lake.

Hudson River Region: characterized by the temperaturemoderating flow of the Hudson River and the northward channeling of maritime breezes from the Atlantic Ocean.

Champlain Valley of New York:

characterized by temperature and moderating effects of being on the leeward side of the Adirondack Mountains and next to Lake Champlain, and soils that are rocky, sandy and clay-filled.

Long Island: characterized by the temperature moderating effects of the bodies of water that surround Long Island: Atlantic Ocean, Great Peconic Bay and Long Island Sound: as well as the soil which promotes rapid drainage.

The Hamptons, Long Island: (the south fork of Long Island, located within the Long Island AVA), characterized by the temperature moderating effects of the Atlantic Ocean and the prevalent sandyloam soil.

North Fork of Long Island:

Located within the Long Island AVA, characterized by the long growing season and unique meso-climate produced by Long Island Sound and Great Peconic Bay.



Vineyards in the Hudson River Region. The Hudson River is just over the green ridge near the top of the photo.

New York State Viticultural Areas Chart Summary

Area	Established	Square Miles (2008)	Acres of Vineyard	Bonded Wineries (2017)	Growing Season Days	Unique Attributes
LAKE ERIE	11/21/1983	3,495	18,684	20	200	Plateau Lake Effect, Soil
FINGER LAKES	10/01/1982	4,000	9,432	128	190-205	Topography Lake Effect, Soil
SENECA LAKE	09/03/2003	320		60	190	Topography Lake Effect, Soil
CAYUGA LAKE	04/25/1988	N/A		31	200/205	Topography Lake Effect, Soil
HUDSON RIVER REGION	07/06/1982	3,500	159	63	180/195	River Valley, Soil
LONG ISLAND	07/16/2001	1,170	2,041	76	215-233	Peninsula, Ocean Effect, Soil
NORTH FORK OF LONG ISLAND	10/10/1986	159		65	233	Peninsula, Ocean Effect, Soil
THE HAMPTONS - LONG ISLAND	06/17/1985	213		5	215	Peninsula, Ocean Effect, Soil
NIAGARA ESCARPMENT	10/11/2005	28	883	8	200	Topography Lake Effect, Soil
CHAMPLAIN VALLEY	9/21/2016			6	150/165	Topography Lake Effect, Soil

Notes:

"Viticultural Areas"— The Federal Government (US Department of the Treasury, Alcohol and Tobacco Tax and Trade Bureau considers and approves "viticultural areas" similar to the European "appellations of origin", such as Burgundy, in France, which may be used on wine labels and in advertisements.

"Growing Season" indicates the annual average of days

between spring and fall freezes which could adversely affect the cultivation of grapes.

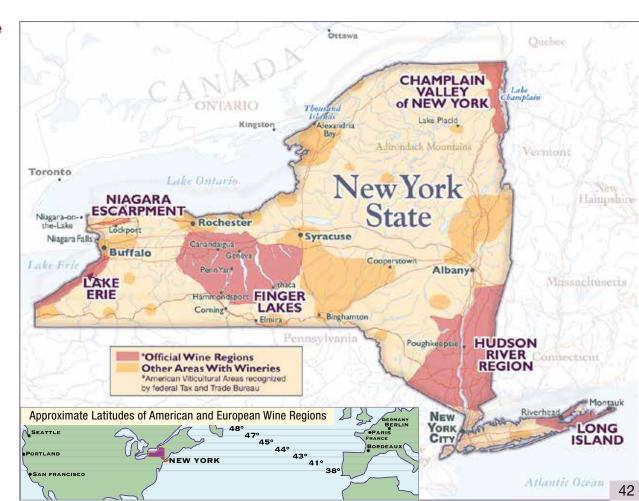


Lush vineyards along the shoreline of beautiful Seneca Lake in the Finger Lakes.

New York's Wine Regions Map

Within New York's six official wine regions, there are now ten officially recognized viticultural areas similar to the "appellations of origin" (such as Burgundy) in France -Lake Erie: Niagara Escarpment; Finger Lakes; Seneca Lake; Cavuga Lake: Hudson River Region; Long Island; The Hamptons, Long Island; North Fork of Long Island and Champlain Valley of New York.

Each region has distinct combinations of soil. topography, and climate that make the regional wines unique.



GREAT LINKS!

Web links to great sources of information about New York's Wine Regions



The New York Wine Guide

Tips on wine touring and tasting, complete wineries listings and maps by region, statistics, and much more!

Download



The home page of our web site: www.NewYorkWines.org

AWARDS

Find out which New York wines are winning in competitions world-wide. Click here



outcrops or muck land areas."

Long Island

Date established: July 16, 2001

Counties: Nassau and Suffolk

Square miles: 1,170

Acres of land: 749,146

Acres of vinevard: 2.593

Bonded wineries: 76

Branch offices/Satelite stores: 17

Growing season: 215-233 days

Unique viticultural characteristics:

Items in quotes are taken

from the Code of Federal Regulations, 27 CFR Part 9, describing the information included in the application for the Long Island AVA, which in turn was taken from the petition put forth by representatives of the region to establish the AVA. Unique viticultural characteristics:

 Peninsula: Long Island is relatively low profile - meaning little slope to the land, which in turn means that it is all highly influenced by the proximity to large bodies of water - the Atlantic Ocean to the south, Long Island Sound to the north, and Great Peconic Bay in between the North Fork and The Hamptons.

"...the moderating influence of the Long Island viticultural area's surrounding water Is evident in the temperature data."

Go To



Click on map for complete Long Island wineries listings, the best maps, and more.

- Ocean, Sound and Bay Effect: "On average the Long Island viticultural area experiences 204 frost-free days during the growing season."
- "On an average basis, the Long Island viticultural area has the lowest levels of precipitation of all surrounding areas with 42 inches annually."

Soil: The soils of the Long

- Island viticultural area are very low in organic matter, and contain few, if any, large mineral deposits or exposed rock formation. "...the Long Island viticultural area is unique from its bordering regions in that it lacks any real undulations, rock
- **History:** Grape growing and limited wine production dates back to the settlement of the area over 300 years ago, but most significant activity has occurred since 1979.
- Label: "Long Island" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.

"LONG ISLAND"

On July 16, 2001 a viticultural region named "Long Island" was established to encompass the two sub-regions of The Hamptons and The North Fork. The area covers the counties of Nassau and Suffolk. It is surrounded by three very important and influential bodies of water

- the Atlantic Ocean, Great Peconic Bay and Long Island Sound. The region contains 52 vineyards with approximately 2,593 acres of grapes and 76 bonded wineries.

"The record demonstrates that the soils of Long Island viticultural area are glacial in origin. In general, the soils of the viticultural area contain. a greater percentage of sand and gravel and a lower percentage of silt, loam, and clay than in the soil associations and series found in bordering areas. Soils in the Long Island viticultural area lack any real percentage of natural limestone when compared to surrounding regions. The soils of the viticultural area are more acidic and make an agricultural liming program indispensable to any vineyard

operation. Because of this factor, the soils of the viticultural area are also slightly lower in natural fertility and waterholding capacity than neighboring areas. ...this difference in soil types leads to a very unique and distinct "terroir" for the Long Island viticultural area—sandy loams will warm up faster, drain better, and allow deeper root penetration than





soils in bordering areas, which contain greater amounts of silt, clay and rock."

"The soils of Long Island viticultural area are fairly uniform in that they are predominantly glacial till and glacial outwash in nature, are very low in organic matter, and contain few, if

any large mineral deposits or exposed rock formation." "One of the most distinctive features of the Long Island viticultural area is the vast quantity of sandy loam soil deposited during the Pleistocene Epoch of the Quaternary Period. This soil was deposited during the last four major glacial stages of this Epoch. Because of this, the area between surface soil and bedrock areas is several hundred feet."

Long Island is one of the earliest parts of New York State to be settled by Europeans. The eastern end of the region has retained much of its agricultural base through the centuries of development and remains a strong agricultural zone today.

The emphasis on grapes versus other crops is a relatively new development, but the grape growing and wine producing industries have seen rapid growth since the most recent modern planting programs started in 1979.

The Hamptons, Long Island

Date established: June 17, 1985

Counties: Suffolk

Townships: Southampton and East Hampton

Square miles: 213

Acres of land: 136,448

Acres of vineyard: Approximately 120

Bonded wineries: 5

Branch offices/Satelite stores: 2

Growing season: 215 days

Looking west over the tip of the South Fork of Long Island - Mauntauk Point to the Hamptons along South Shore.



Unique viticultural characteristics:

- Peninsula: Surrounded on 3 sides by water—Atlantic Ocean to the south and east, and Peconic Bay to the north. Width from 1/2 to 10 miles.
- Ocean Effect: In winter the area receives warmed southwest winds from the Atlantic that have a buffering effect. The area is kept cooler in summer due to southern ocean breezes.
- Soil: Higher percentage of silt and loam than the North Fork, resulting in greater water holding capacity and less irrigation. Soils are deep, well suited to cultivation.
- **History:** Productive agricultural area for 300 years. In 1979 the area again came into focus with significant vinifera grape plantings.
- Label: "The Hamptons, Long Island" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.

"THE HAMPTONS, LONG ISLAND"

A viticultural area known as "The Hamptons, Long Island" was established on the Southern Fork of Eastern Long Island in June of 1985. The area, unique for its topography and climatic patterns, encompasses 213 square miles of Suffolk County located within the townships of Southampton and

East Hampton, and includes Gardiners Island.

The area has been a productive agricultural growing region since English settlers first arrived in 1640. Southampton was the first town to be settled, and by the late 18th century the profusion of towns bearing names with a common ending caused the area to become known as simply—"The Hamptons".

Winegrapes were introduced to the area in the early 18th century, when the wine and fruit from small, cultivated vineyards was used primarily for personal consumption. Winegrapes did not become a major focus of the area until 1979 with the installation of two vinifera grape plantings. Today there are nearly 150 acres of vinifera grapes in The Hamptons and the area is home to 5 wineries.

The 136,448 acres that comprise The Hamptons are located on a peninsula or "fork"—bounded on the south and east by the Atlantic Ocean and on the north by Peconic Bay. To the west is the remainder of Long Island where the north and south forks meet. The peninsula is 54 miles long—10 miles at its widest point and 1/2 mile at its narrowest.

The peninsula is largely responsible for the unique mesoclimate of The Hamptons. In the fall, prevailing southwest winds are warmed by the Atlantic Ocean, which has accumulated heat during the summer and fall months. As these breezes pass over land, they buffer temperatures and ward

exception.

off early frosts. In the spring, southern breezes coming from a cooled ocean pass over the warming land and create fog. The fog becomes trapped in the hills and rolling areas of The



The lighthouse at Mauntauk Point.

Hamptons, keeping average temperatures lower and preventing premature bud break.

The Hamptons growing season averages 215 days despite lower than average temperatures and sunshine in the spring. Fall temperatures are also lower than average, but abundant sunshine and normal parcipitation during harvest are the norm rather than the

> The soils of The Hamptons are distinctly different from those of the surrounding areas and are well-suited to farming. The soils are rolling or hilly, deep, and well drained. The surface layer is a silt loam, with a fine sandy loam found at deeper levels. This silt and loam composition gives the soil excellent water holding capacity; so irrigation is seldom required.

The long growing season in The Hamptons makes it one of the best regions in New York for growing such classic European red wine varieties as Cabernet Sauvignon and Merlot. The majority of the region's acreage is planted with these varieties and such white wine varieties as Chardonnay, Gewürztraminer and Riesling.

North Fork of Long Island

Date established: October 10, 1986

Counties: Suffolk

Square miles: 158.5

Acres of land: 101,440

Acres of vineyard: Approximately 2,000

Bonded wineries: 65

Branch offices/Satelite stores: 12

Growing season: 233 days

Townships: Riverhead, Shelter Island and Southold

(including all mainland and island areas)

Martha Clara Vineyards



Unique viticultural characteristics:

- Peninsula: Surrounded on three sides. by major bodies of water—Long Island Sound (north), Peconic Bay (south), Atlantic Ocean (east). Width from 1/2 to 6 miles.
- Ocean Effect: Breezes from surrounding waters moderate heat in summer and cold in winter; extend period of freeze-free temperatures; increase (desirable) winter precipitation relative to summer; and create "humid continental" climate classification.
- Soil: Compared with South Fork ("The Hamptons") viticultural area, contains less silt and loam (i.e. less water-holding capacity, which requires more irrigation); slightly higher in natural fertility.
- **History:** Grape growing and limited wine production dates back to the settlement of the area, but most significant activity has occurred in the past two decades.
- Label: "North Fork of Long Island" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.



"NORTH FORK OF LONG ISLAND"

The viticultural area, "North Fork of Long Island", was established in November 1986. Located in Suffolk County on eastern Long Island, the area consists of 158.5 square miles, which includes all of the land areas in the Townships of Riverhead, Shelter Island and Southold.

Grape growing and limited wine production on Long Island dates back to the late 1600's. But only in recent years have there been commercial vineyards, most planted to vinifera on the North Fork. The total grape acreage on the North Fork is approximately 2000 acres, with more plantings scheduled for the future. The region is home to 65 wineries within the designated viticultural region and 1 outside the designated region.

The 101,440 acres of land on the North Fork, although attached to a larger island, comprise a peninsula. Its three boundaries are Long Island Sound on the north, Peconic Bay to the south, and the Atlantic Ocean to the east. The western boundary is the line separating Brookhaven and Riverhead Townships. The peninsula is 6 miles wide at its widest point and a half mile wide at its narrowest point.

It is the sea surrounding the North Fork that makes it a distinct grape growing area. The surrounding waters render the viticultural area more temperate than many other interior places at the same latitude. The area is regularly fanned by a breeze coming off the surrounding waters. The air moderates the heat in the summer and the cold in the winter. These breezes also extend the periods of freeze-free temperatures, reduce the range of daily and annual temperatures, and increase the amount of winter precipitation relative to summer precipitation. The growing season averages about 233 days at Riverhead.

The second distinctive characteristic of the North Fork is its. soils. The North Fork generally has a smaller percentage of silt and loam than the soils found on the South Fork. As a result, they have less water-holding capacity than the South Fork and require more irrigation. The North Fork soils are also slightly higher in natural fertility than the soils of the South Fork.

The North Fork has within its boundaries distinct and unique grape growing conditions. Its vineyards are mainly planted with such classic European (vinifera) grape varieties such as Cabernet Franc, Cabernet Sauvignon, Chardonnay.

Gewürztraminer. Merlot and Riesling. The well-drained soils. long growing season, and protection from extremely cold winters are helping the area gain international acclaim as a serious new wine region.





Hudson River Region

Date established: July 6, 1982

Square miles: 3.500

Acres of land: 1.6 million

Acres of vineyard: 159 Bonded wineries: 62

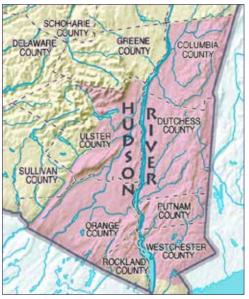
Branch offices/Satelite stores: 3

Growing season: 180–195 days

Counties: Columbia, Dutchess, Putnam; eastern portions of Ulster and Sullivan; nearly all of Orange; northern portions of **Rockland and Westchester**

Unique Viticultural Characteristics:

- River Valley Although the region the best maps, and more. gets some temperature moderating effect from the Hudson River, the steep palisades are more important as a conduit of maritime air and weather generated by the Atlantic Ocean.
- Soil: Glacial deposits of shale, slate, schist and limestone form the soil throughout the region, which is in a geological division known as Taconic Province.



Click on map for complete Hudson River wineries listings,

- History: Cradle of the State's wine industry. Considered to be the oldest winegrowing district in the United States; wine has been made here continuously for 300 years.
- Label: "Hudson River Region" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.

"HUDSON RIVER REGION"

In July of 1982 a viticultural area known as the "Hudson River Region" was established in New York State. The region consists of approximately 3,500 square miles and encompasses all of Columbia, Dutchess, and Putnam Counties; the eastern portions of Ulster and Sullivan Counties; nearly all of Orange County; and the northern portions of Rockland and

Westchester Counties.

The Hudson River Region is the oldest wine-growing district in the United States. Wine has been made here continuously for over 300 years, since French Huguenots first settled at New Paltz in 1677. The first commercial winery was established in 1827 on Croton Point, and the

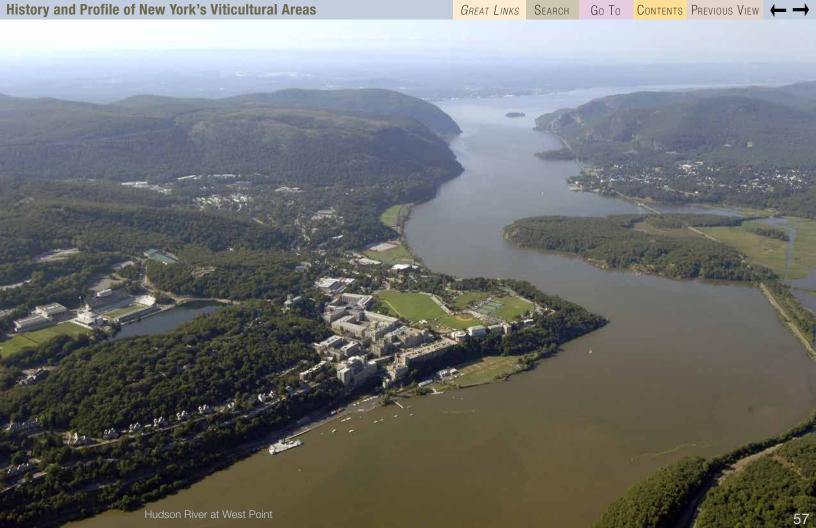
oldest continually active winery in the United States was established in 1839 at Washingtonville. Today its formal name is Brotherhood America's Oldest Winery, Ltd. Currently there are 159 acres of grapevines growing in the area (90% are in Columbia and Ulster Counties) and the region is home to 62 wineries within the defined district and several others either outside the district or which produce products other than wine made from grapes.



Goblet trellising system.

In all of the State's viticultural areas, the presence of large bodies of water is crucial in creating the ideal meso-climate for growing premium winegrapes. And although this region gets some temperature moderating effects from the Hudson River. the steep palisaded valley is more important—as a conduit for maritime air and weather generated by the Atlantic Ocean. Not all the vineyards





are near the river slopes, however, and some can be found scattered all the way to the Connecticut border. The warm ocean breezes extend the growing season in the Hudson River Region to between 180-196 days.

The Hudson River Region has been referred to as one of the most complex geological regions in the world. The vineyards in the area are in a geological division known as the Taconic

Province. Glacial deposits of shale, slate, schist and limestone form the soil throughout the region.

The mainstay wines of the region have been mostly white French-American varietals, particularly the popular Seyval Blanc. White vinifera varieties also grow well here, and in the past few years, plantings of these varieties have increased.





Finger Lakes

Date established: October 1, 1982

Counties: Livingston, Monroe, Wayne, Seneca, Ontario, Yates: portions of Tompkins, Schuyler, Steuben, Chemung, Cortland, Onondaga and Cavuga

Square miles: 4,000

Acres of land: Over 2.5 million

Acres of vineyard: 9,432 **Bonded wineries: 129**

Branch offices/Satelite stores: 28 Growing season: 190-205 days

Unique viticultural characteristics:

- Topography: Sloping hillsides result in increased "air drainage".
- Lake Effect: Temperature control of the Finger Lakes creates less severe extremes in winter and summer, and buffers against spring and fall frosts.
- Soil: Shallow layer of topsoil on sloping shale beds.

• History: The center of the New York wine industry since the Civil War. Grape growing and wine production date back to the 1820's. First vinifera (European) plantings in the East

were in this region.

• Label: "Finger Lakes" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.

Lake Ontario **OSWEGO** COUNTY WAYNE COUNTY FINGER LAKES MONROE ONIARIO COUNTY CANANDAIGUA LAKE COUNTY CAYUGA LAKE KEUKA SENECA LAKE LAKE STELLBEN

Click on map for complete Finger Lakes wineries listings, the best maps, and more.

"FINGER LAKES"

The "Finger Lakes" viticultural area was established in October of 1982. The area includes over 4,000 square miles in Livingston, Monroe, Wayne, Seneca, Ontario and Yates Counties; and portions of Tompkins, Schuyler, Steuben and Cayuga Counties. The Finger Lakes is the second largest

grape-growing area in the State, with 9,432 acres of labrusca (native), French-American, and vinifera (European) grapes (95 percent of the grapes are grown in only six counties).

The general Finger Lakes region is home to 129 wineries - most within the officially designated region, but several outside as well.

The Finger Lakes has been the center of the New York wine industry since the Civil War, but grape growing and wine production date back to the 1820's when a local minister began producing sacramental wine for his parishioners. Today, about 90% of the State's wine is made here, and the area is still home to New York's largest wineries. The Finger Lakes was also the birthplace of the "vinifera revolution" more than 30



Canandaigua Lake

years ago. It was in the vineyards surrounding Keuka Lake that Charles Fournier and Dr. Konstantin Frank collaborated on their first vinifera vintages, and proved to skeptics that old-world grapes could indeed thrive in the East and produce world-class wines. Since then, the vinifera revolution has spread not only to New York's other wine regions, but also throughout the eastern United States.

Ice Age glaciers carved the narrow, deep Finger Lakes, creating ideal conditions for growing grapes. The moving ice masses deposited a shallow layer of topsoil on sloping shale beds above the lakes, providing drainage crucial for grape growing.

The glaciers also provided the vineyards with protection from the extremes in weather. The deep lakes retain their summer warmth in the winter and their winter cold in the spring. On cold fall nights, the steep slopes of the shorelines offer no perch for cold, dense air to settle. Instead, it slides down to the lake, which is still holding its summer warmth. The lake heats the cold air, causing it to rise and allow more cold air to drain from the hillside.

In the spring the process is reversed and the cold water delays budding until the danger of frost has passed. The growing season in the Finger Lakes averages about 190 days, and in recent years has often exceeded 200 days.

Of all New York's viticultural areas, the Finger Lakes is probably the most diverse in terms of its wine production, producing all types of wines from all types of grapes. The area is recognized by many wine publications as having the most important vineyards for wine production in the eastern United States.

Seneca Lake

Date established: September 3, 2003 Counties: Portions of Schuyler, Yates, Ontario and Seneca Square miles: 320 Acres of land: 204,600

Bonded Wineries: 61

Branch offices/Satelite stores: 17

Growing season: 190 days Acres of vineyard: 3,756



Unique viticultural characteristics:

• Topography: The valley that Seneca Lake rests in and its lake bed are key factors in the topography. The sloping



- Lake Effect: This is the deepest of the Finger Lakes and it covers a total area of 67.7 square miles. The lake bed extends below sea level (in some places in excess of 600 feet deep). This makes the body of water very stable, maintaining a yearround temperature of 39.5 degrees Fahrenheit at 150 feet.
 - Soil: The bedrock underlying soils around Seneca Lake are primarily shale, with southern regions of the lake being a mixture of sandstone and shale. Soil depth and slope of the hillsides can vary dramatically.
 - History: The heat storing capacity of Seneca Lake has made it one of the prime vineyard sites in New York State. The first winery was built in 1866, and In 2013 there are 61 wineries located within the official AVA. The move toward Vinifera varieties has spurred on much of this growth.
 - Label: "Seneca Lake" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.

"SENECA LAKE"

In September 2003 a viticultural region named "Seneca Lake" was established within the boundaries of the approved Finger Lakes region. The area is located within the counties of Schuyler, Yates, Ontario and Seneca. It surrounds and is adjacent to Seneca Lake, which lies between Keuka Lake and Cayuga Lake. The region contains many vineyards with approximately 3,756 acres of grapes and includes 61 bonded wineries.

The lake is glacially formed and moderates temperatures year round, keeping vines cooler in the spring (to avoid late frosts) and warmer in the summer (to avoid early frost). As the deepest of the Finger Lakes, Seneca can offer this protection to a vast area of land and through very difficult growing conditions. Soil

> conditions and sloping hillsides help the water and air drain properly from vineyards.



Hermann J. Wiemer

The heat storing capacity of the lake extends the growing season in the vicinity by several days, making it possible to grow grapes in a region that might normally be too cold.

There are many waterfalls in the area that allow interested parties to view the geology of the area - revealing the shale bedrock - which can also lend mineral characteristics to some of the wines.

The first winery on Seneca Lake was opened in 1866. In 2016 there are 61 wineries open around the lake.

Cayuga Lake

Date established: April 25, 1988 Counties: Seneca, Tompkins, Cayuga **Bonded wineries: 31**

Branch offices/Satelite stores: 2

Growing season: 200-205 days



Unique viticultural characteristics:

- Topography: Sloping hillsides result in increased "air drainage".
- Lake Effect: Moderating effect of Cayuga Lake creates less severe temperature extremes in winter and summer, and buffers against spring and fall frosts.



- Soil: Shallow layer of topsoil on sloping shale beds.
- History: Cayuga Lake is one of two major land formations in the Finger Lakes that resulted from glacial activity

in the Pleistocene epoch. It is separated from the second major basin (Seneca Lake) by both topography and soil type. Growers and vintners became interested in Cayuga Lake in the late 1970's when it was found that Cayuga's lower altitude and its depth created a meso-climate well suited for growing vinifera varieties. The lake's wineries have been established since 1980.

• Label: "Cayuga Lake" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.

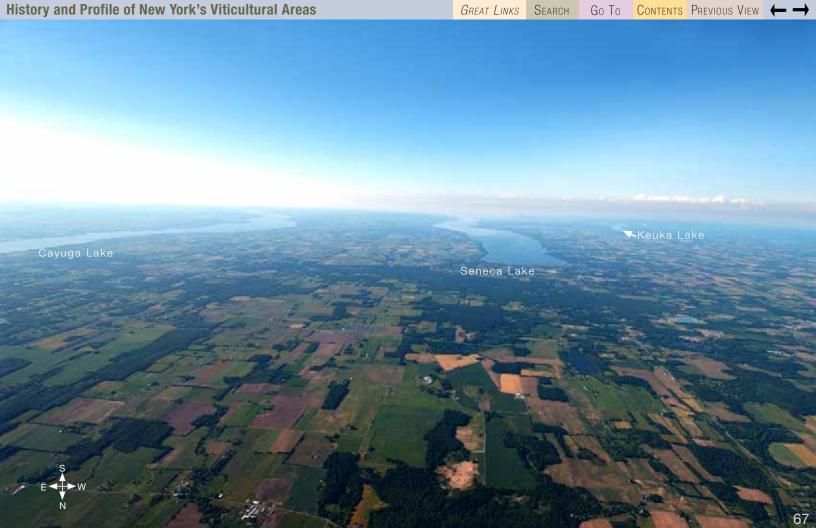
"CAYUGA LAKE"

In April 1988 a viticultural region named "Cayuga Lake" was established within the boundaries of the approved Finger Lakes region. The area is located within the counties of Seneca, Tompkins, and Cayuga. It surrounds and is adjacent to Cayuga Lake, which lies between Seneca Lake and Owasco Lake. The region has 31 bonded wineries.

Like the rest of the Finger Lakes, the bedrock within the Cayuga Lake Region is predominantly shale and the mesoclimate is affected by both Cayuga Lake and its adjacent hills. What distinguishes the region from the rest of the Finger Lakes is its altitude. The maximum elevation within

the viticultural area is no more than 800 feet above the surface of Cayuga Lake. Altitudes to the east, west, and south of the area are between 1,000-2,000 feet. This lower altitude, combined with the depth of Cayuga Lake, makes the growing season 10-15 days longer than in the rest of the Finger Lakes region and particularly well suited for the growing of vinifera varieties.







Lake Erie

Date established: November 21, 1983

Counties: Erie. Cattaraugus. Chautaugua (plus parts of Pennsylvania and Ohio

bordering Lake Erie)

Square miles: 3,495 (in New York State)

Acres of land: 25,000

Acres of vinevard: 18.684

Bonded wineries: 20

Branch offices/Satelite stores: 3

Growing season: 200 days

CANADA Lake Erie ERIE COUNTY CATTARAUGUS CHAUTAUOUA LAKE CHAUTAUOUA COUNTY

Click on map for complete Lake Erie wineries listings, the best maps, and more.

Unique viticultural characteristics:

- Plateau: Running parallel to Lake Erie, the high elevation of the Allegheny Plateau traps the temperature moderating effects of the Great Lake in a 3-mile wide band.
- Lake Effect: Lake Erie creates a "lacustrine climate" buffering against late spring and early fall frosts; reducing convectional thunderstorms, total rainfall and fog.
- Soil: Gravely loam predominant.

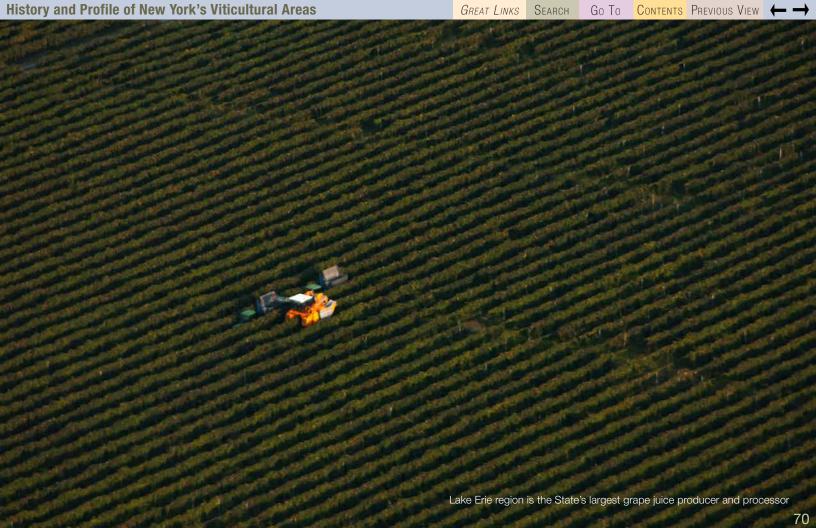
- **History:** Grape growing and wine production dates back to early and mid 1800's. In the past two decades a significant number of vineyard sites have been cleared and replanted to French- American and vinifera (European) wine grape varieties.
- Label: "Lake Erie" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.

"LAKE ERIE"

The "Lake Erie" viticultural area was established in November 1983. The area encompasses 25,000 acres of land in portions of three states-New York, Pennsylvania and Ohio. In New York the 3,495 square miles

includes Erie, Cattaraugus, and Chautaugua counties. There are 18,684 acres of vineyard in New York's portion of the Lake Erie region. Although winegrape varieties have been introduced in recent years, 90% of Lake Erie's vineyard plantings are of the native Concord variety. As a result, the Lake Erie region is the State's largest grape juice producer and processor.

The Lake Erie viticultural area has a 150-year history of grape growing and winemaking. In 1818 a Baptist deacon, Elijah Fay, planted the first vineyard in western New York with wild vines he had brought from New England. Finding the wild



grapes harsh and unsuitable for dry wine, Fay eventually replaced them with Isabella and Catawba. In 1859, almost thirty years after the Deacon made his first wine, his son opened the first of several wineries in the region.

In the early 1800's the temperance movement was born in New York's Saratoga County, and by 1835 the society was advocating total abstinence from alcohol. Chautaugua County, where the Fays lived, was one of the centers of the temperance crusade. Prohibitionists urged the region's farmers to grow grapes but to use them for table grapes instead of wine. Thus, the Concord grape variety was introduced to the region. It was this combination of the "Dry" influence, and the later development of the area grape juice industry by ardent Prohibitionists Charles and Thomas Welch. that caused the Lake Erie district to become a juice and fresh fruit region instead of a major wine center.

Of all the Great Lakes, Lake Erie provides the best protection against extremes in weather. Lake Erie is lower in latitude and downwind from the other Great Lakes. As a result, the great stretches of Lakes Superior and Huron considerably moderate arctic air masses





moving across these lakes to Lake Erie. This effect is then locally enhanced. In spring the cold water of the lake serves to cool the climate against early warm spells, retarding premature bud growth. In summer, the water temperature of Lake Erie is warmer than any other Great Lake. These higher temperatures are carried over into fall, warming the air and warding off early fall frosts. The lake also serves to decrease precipitation in the region during the summer, largely by reducing the occurrence of thunderstorms and devastating hail. On average, the growing season of the region is slightly over 200 days.

Elevation and physical features also play an important role in limiting the area influenced by lake effect. The high elevation



Allegheny Plateau runs parallel to Lake Erie, and traps the moderating effects of the lake, limiting the greatest influence to a three-mile-wide band. Within this narrow band, soils of gravelly loam predominate.

Over half of New York's total vineyard acreage is in the Lake Erie region. While the vast majority of the grapes are still Concords, some vineyards are planted to varieties used specifically for winemaking. Labrusca (native) and French-American varietals account for the greater part of the wine grapes used by the area wineries, but an increasing number of vinifera (European) plantings, primarily Chardonnay and Riesling, are also appearing.



Niagara Escarpment

Established October 11, 2005

Counties: the whole region is encompassed within Niagara County

Square Miles: 28

Acres of land: 18.000

Acres of Vineyard: 883

Growing season: 200 days

Number of wineries: 8 in the official region and 14 in the

general area

Branch offices/Satelite stores: 1

in the official region and 1 in the general area

The geography of the Niagara Escarpment and surrounding area have a unique climate that is one of the warmest in New York State due to proximity to the Great Lakes and the escarpment itself, which traps warm air currents from Lake Ontario. The dolomitic limestone soil of the Escarpment and the gravel silts near the lakeshore, along with a moderate climate, are ideal for growing grapes and a wide variety of fruit. The Niagara Escarpment was officially recognized as an American Viticultural Area (AVA) in 2005 and the larger "Greater Niagara" region is one of the fastest growing wine regions in the nation.



Click on map for complete Niagara Escarpment wineries listings, the best maps, and more.

It is interesting that this escarpment – this ancient geological structure, this ridge that can be easily seen... but not

perhaps readily recognized for what it does, this remnant of a lake from a different time — is finally being recognized for the impact that it has on the growing region. According to the entry in the US Federal Register, the area "derives its name from the Niagara Escarpment, a limestone ridge that runs for more than 650 miles through the Great Lakes

region. The Niagara Escarpment forms a horseshoe that begins near Rochester, New York, continues west through southern Ontario, Lake Huron, and the upper peninsula of Michigan, and ends in eastern Wisconsin." This ridge has long been recognized for its influence by our neighbors in Ontario, Canada, in the promotion of wines from the Niagara Peninsula, but on the New York side grape growing and wine making are experiencing a renaissance.

This limestone ridge forms one of the factors that nature has brought together to nurture grapevines. Lake Ontario to the north, the Niagara River to the west, and the Escarpment

to the south all work together to protect the vines. The escarpment holds the air warmed by the lakes' waters and protects the land in the immediate area from drastic temperature changes.

New York's Niagara Escarpment is a bit different from the rest of the greater escarpment in that it has a higher degree of slope than that found in neighboring Ontario. This provides more protection through better air drainage. (Cold air doesn't come in and sit like a puddle on top of the vines, but rather "drains" down the gently sloping land to lower elevations.)

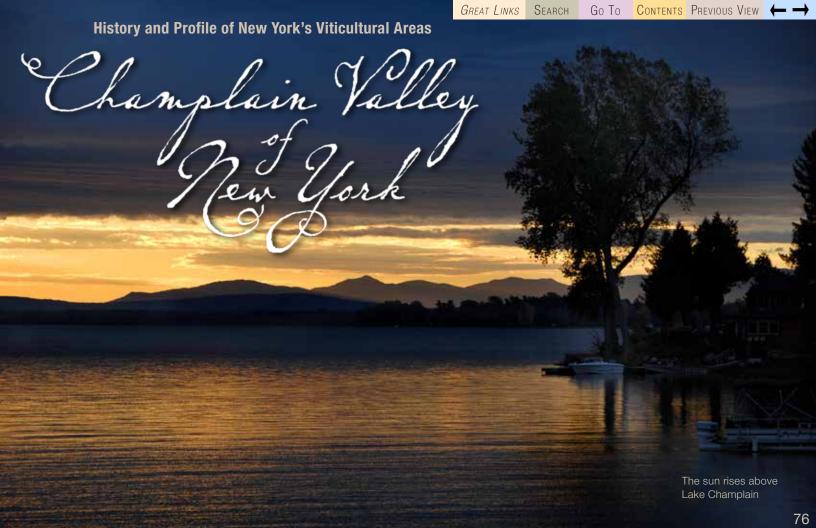
Topography and soil play an important roll in defining a viticultural area and in the production of fine wines.

According to the application for the official designation as a viticultural area, the Niagara Escarpment's "well drained soils, a steady but moderate water supply" in combination with the mineral content found in the soils, "result in superior pigment and flavor compounds in the resultant wine."



Niagara Falls (center) illustrates the altitude drop that makes up the ridge - the Niagara Escarpment, creating the climate for growing grapes

So... from an ancient lake bed we have the rising new viticultural area... be sure to pay a visit and see just what those vines are gaining from their association with the great waters of Niagara.



The Champlain Valley of New York

Date established: September 21, 2016

Counties: Clinton and Essex

Bonded wineries: 7

Branch offices/Satelite stores: 2 Growing season: 160 – 170 days

Unique viticultural characteristics:

- Topography: Sloping hillsides result in increased "air drainage".
- Lake Effect: Temperature control of Lake Champlain creates less severe extremes in winter and summer, and buffers against spring and fall frosts.
- Soil: Shallow layer of topsoil on sloping shale beds.
- Label: "Champlain Valley" indicates that at least 85% of the grapes used in making the wine were grown in the designated area.



Click on map for complete Champlain Region wineries listings, the best maps, and more.

"CHAMPLAIN VALLEY"

The Champlain Valley of New York AVA encompasses land that was once underwater on the western side of ancient Lake Vermont. With the rising of the land as the weight of glaciers released its unrelenting weight, new land was created on the eastern side of the Adirondack Mountains. The rocky, sandy, and clay-filled soils and the harsh but dry land on the leeward side of the Adirondacks favor the new varieties of cold hardy grapes that are well-adapted to this region. The area is bounded by Canada to the north, mountains to the west, the Hudson Valley to the south, and, to the east, the Vermont side of the Champlain Valley that benefits from the moderating effects of Lake Champlain and the prevailing westerly winds.



Amazina Grace Vinevard

New York's Grape Varieties

Major Grape Varieties Grown in New York State

INTRODUCTION

NATIVE VARIETIES

White and Pink Native Varieties **Red Native Varieties**

HYBRID VARIETIES

White French Hybrids Red French Hybrids New York Hybrids

VINIFERA VARIETIES

White Vinifera Varieties **Red Vinifera Varieties**

Please Note: The New York Wine industry is dynamic constantly growing and changing - which requires that The New York Wine Course & Reference be updated as often as practical. These pages covering the varieties of grapes grown in New York State were written many years ago and will be updated as often as possible, but they are not intended to be an exhaustive list of types of products grown and produced.



Niagara Variety. This and similar illustrations were taken from "The Grapes of New York", a book produced in 1907 by the New York Agricultural Experiment Station in Geneva, N.Y.

It is especially important to note that in the years that have passed since the Wine Course & Reference was first published the prognosis for the survival and use of many grape varieties in New York State has changed drastically. For example, red hybrids had been on the down swing at that time while today, with the increased interest in red wine and health, they are often sought after. Plantings of viniferas such as Riesling have also increased due to the excellent reputation New York has earned for these wines. It should also be noted that some small New York wineries are experimenting with and producing new types of wines from labrusca varietals with stunning results, so there could in fact be a renaissance for these grapes in the future for New York.

Please note: Grape acreage is based on the 2011 Vineyard survey of the National Agricultural Statistics Service. This is the best estimate available at this point in time and is felt to be conservative in nature.

"Other areas of the State" may also include acreage found in a named region, but revealing the acreage may reveal too much about a single producer's information, so they are reported here.



INTRODUCTION

New York's unique role as one of America's oldest wine regions and a pioneer in winegrowing has provided a diverse legacy in its vineyards. Native varieties, French-American hybrids (also known as hybrid direct producers) and vinifera varieties all play a role in producing an array of wines more extensive than that of any other state in the U.S. In discussing the wine varieties of New York State, three distinct categories must be considered: Native American grape species; the classic, European vinifera species; and hybrids of the previous two categories.

Native "Labrusca" Varieties

Often labeled "labrusca" varieties, these native producers are more often hybrids of labrusca varieties and another species. Forming the backbone of the early New York wine industry, the native varieties came into use when it became apparent that European vines lacked the disease resistance and winter hardiness to survive in New York's climate. Several native species found in the United States provided the raw material for the early native hybrids. Vitis labrusca, and more disease-and pest-resistant species such as V. riparia, V. rupestris, V. bourquiniana and V. aestivalis, were hybridized with V. vinifera to produce the native hybrids in the 1800's. Later, these species were used in the French hybridization program to create resistant varieties following

the phylloxera and grape disease epidemics that struck France in the mid-1800's. Of the native varieties used in commercial winemaking today, only the Concord is believed to have a 100% V. labrusca background. Niagara, Catawba and Diamond are believed to be predominantly labrusca with a small amount of V. vinifera. Delaware is a hybrid of bourquiniana-vinifera-labrusca, Elvira is a labrusca-riparia cross, and Dutchess is a result of a vinifera-labruscabourquiniana-aestivalis cross. With the exception of Dutchess, and a handful of others, these native varieties exhibit the "foxy" or pungent grapey quality typical of any variety with a predominantly labrusca background.

Hybrid (French American) Varieties

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. Attempting to develop new wine grape varieties by 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, or HDP's, were important in the first half of this century, improved rootstocks, insecticides and fungicides permitted the return of vinifera varieties to most vineyards. Simultaneously, a drive to improve the overall quality of French wine promoted the elimination of what were considered vines of marginal quality, hybrid and vinifera alike. A parallel phenomenon has occurred in New York State, with much acreage of native and hybrid varieties being abandoned in favor of higher quality hybrids or vinifera varieties. While certain hybrids, such as Seyval and Vignoles, continue to be popular and make excellent wine, other hybrids, notably many of the reds, are steadily declining in acreage. Still, the hybrids currently represent the majority of the acreage devoted to dry table wines in the State, and will continue to play a key role for some time to come.

Seven hybridizers developed the varieties most commonly used in New York today. Francois Baco (1865-1947) created 7,000 hybrids, only two of which were to become commercially important. Baco Noir or Baco #1 was one of these. Eugene Kuhlmann (1858-1932) of Alsace developed Marechal Foch and Leon Millot. A civil engineer by profession, J.F. Ravat bred vines between 1929 - 1935,

and his name has been associated with one particular variety, Ravat 51 or Vignoles. For years, the name Ravat was synonymous with Vignoles and used as a varietal name until the federal government put a stop to that in 1988. Albert Seibel was one of the most prolific and successful hybridizers, producing, among others, DeChaunac, Chelois, Chancellor, Cascade, Rosette, Rougeon and Aurora. He was active from 1886 until his death in 1936. Bertille Seyve, who married the daughter of another famous hybridizer, Villard, used the name Seyve-Villard for his hybrids. His hybrid number 5276 became the Seyval Blanc.

Vinifera (European) Varieties

Vitis vinifera is the native species of Europe, originating in an area south of the Black Sea. From there it spread to Egypt, Greece, Italy, Spain and France. Through cultivation and selection. those varieties that



Cabernet Sauvignon on the vine.

established themselves were recognized and named by wine growers. By the time vineyard planting in America began

in earnest, most of the major grape varieties commercially available today had been named. Early attempts to establish vinifera vineyards failed in the eastern part of the U.S., although many attempts were made. The first successful commercial plantings of vinifera grapes were made by Dr. Konstantin Frank at Gold Seal Vineyards in the 1950's, although U.P. Hedrick had success with certain vinifera varieties at the New York Agricultural Experiment Station in the 1930's and 1940's. Since 1985, the New York Wine & Grape Foundation has sponsored well over \$100,000 of research at Cornell aimed at vinifera production on a statewide basis.

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. Cabernet Sauvignon, Merlot, Pinot Noir, Chardonnay, Riesling, and Sauvignon Blanc are among the most widely accepted varieties in the world, and have all found homes in New York State. These varieties have created the most interest among winegrowers and consumers alike, and have contributed to more new acreage of vineyards in the past decade than native and hybrid varieties combined. On Long Island, New York's newest and warmest growing region, vinifera varieties account for nearly 100% of the nearly 2,500 acres of vineyards present.



MAJOR NATIVE AMERICAN GRAPE **VARIETIES**

WHITE AND PINK VARIETIES

Catawba Niagara Dutchess Delaware Elvira Other

RED VARIETIES

Concord Other

WHITE AND PINK VARIETIES



Variety: CATAWBA

Origin: Labrusca X Vinifera, 1802, North Carolina

New York Introduction:

Introduced to New York, possibly from the Ohio River Valley, in the Mid-1800's

Viticultural Characteristics:

Winter hardy and vigorous, Catawba produces moderate yields of reddish-pink grapes. Vines susceptible to downy mildew and phylloxera. Late ripening, grapes can be low in sugar and high in acid if vines are not grown on favorable sites.

Acreage:

Long Island: Less than 10 acres Hudson River: Less than 10 acres

Finger Lakes: 844 acres

Niagara Escarpment: 22 acres

Lake Erie: 322 acres

Other Areas of the State: 33 acres

Total New York: 1,221 acres (acreage includes Catawba

used for juice and table grapes.)

Vinification: Often hot-pressed or given limited skin contact to yield pink juice, Catawba was used in the 1970's to create "pop" wines. Today it is used to produce wine coolers and bulk process "champagne." In fact, Catawba has been the workhorse grape in the New York sparkling wine industry for over a century. It is believed that a Catawba-based sparkling wine from Great Western won medals in European wine competitions in the late 19th century.

Taste and Aroma Characteristics: "Foxy", but not pungently so. Produces clean crisp wines. Early harvesting diminishes the grapiness of aroma.

Future of Variety in New York State: Good as long as there is a solid demand for this type of sparkling wine. The variety has also been helped by a revival by Bully Hill Vineyards and other wineries.



Variety:

Origin: Bourquiniana-viniferalabrusca hybrid, P. H. Provost, New Jersev. 1850

New York Introduction: Probably sometime in the 1860's.

Viticultural Characteristics:

Winter hardy, vigorous, but susceptible to fungus diseases and phylloxera, Delaware produces moderate yields of red grapes in small, compact clusters. Sugars are higher and acidity is lower than Catawba.

Acreage:

Long Island: Less than 10 acres **Hudson River:** Less than 10 acres

Finger Lakes: 80 acres Lake Erie: 55 acres

Other Areas of the State: 33 acres

Total New York: 168 acres (includes acreage for table

grapes.)

Vinification: Cold tank fermentation. Variety is prized for its use in sparkling wine, therefore hot-pressing and skin contact are avoided.

Taste and Aroma Characteristics: Less pungent and foxy

than Catawba, Delaware can make a pleasant, fruity table wine. Wines still have a pronounced labrusca character; from a consumer acceptance stand-point this variety is best used in production of sparkling wines where the foxy nature of the grape is not as apparent.

Future of Variety in New York State: Good, still a favorite for upstate sparkling wine production.



Variety: NIAGARA

Origin: Concord X Cassady, Hoag and Park in New York, 1872

New York Introduction: Almost immediately introduced in Niagara County after its discovery.

Viticultural Characteristics: Very vigorous, winter hardy, and productive,

Niagara is moderately susceptible to major grape diseases. Produces large, compact clusters of white grapes that are both low in acidity and sugar.

Acreage:

Long Island: Less than 10 acres **Hudson River:** Less than 25 acres

Finger Lakes: 898 acres Niagara County: 368 acres



Lake Erie: 1.501 acres

Other Areas of the State: 60 acres

Total New York: 2,827 acres (includes acreage used in juice

and table grape production.)

Vinification: Cold fermentation in stainless steel. Finished with appreciable amounts of residual sugar in most cases.

Taste and Aroma Characteristics: The most pungent and foxiest of the commercially grown native varieties, the resulting wines appeal to ardent fans of this grapey flavor.

Future of Variety in New York State: Good. Has a bright future in white grape juice production and the table grape market as supplements to a large wine audience.



Variety:

Origin: Labrusca X Vulpina, J. Rommel, Missouri in 1870

New York Introduction: Probably introduced in the Finger Lakes region in the late 1800's.

Viticultural Characteristics: Winter hardy with normal vigor, Elvira produces moderate yields of small, tight clusters of white grapes. While disease resistant, the tight clusters are subject to cracking and rot at harvest time. Grapes are low in sugar with moderate acidity.

Acreage:

Hudson River: Less than 10 acres

Finger Lakes: 450 acres Lake Erie: 121 acres

Long Island: Less than 10 acres Other Areas of the State: 60 acres

Total New York: 631 acres

Vinification: Standard cool fermentation. Wine is almost

always used for blending – not as a varietal wine.

Taste and Aroma Characteristics: Undistinguished labrusca aroma and flavor with a clean crisp finish.

Future of Variety in New York State: Good. This is a particularly promising variety for value-priced sparkling wines.

Variety:



DUTCHESS

Origin: A vinifera- labrusca-bourquinianaaestivalis hybrid developed by Andrew Cavwood in Marlboro, NY in 1868.

New York Introduction: Shortly after its discovery in the Hudson Valley.

Viticultural Characteristics: Vigorous,

productive vine with low winter hardiness and disease resistance, Dutchess produces small, compact clusters of white grapes. Late-ripening, it is suited to only the most



favorable sites in upstate New York.

Acreage:

Finger Lakes: Less than 10 acres Lake Erie: Less than 10 acres

Total New York: Total acreage in the State is probably less than 30 acres. This variety no longer reported separately as

of the 2011 survey.

Early morning near Lake Erie

Vinification: Cool fermentation. No oak aging employed. Best when finished with 1% or more residual sugar.

Taste and Aroma Characteristics: Makes a clean, neutral white wine without foxy aroma or flavor.

Future of Variety in New York State: Poor. Given its low tolerance to cold temperatures and disease, it is likely that the variety will eventually be replaced with hardier varieties more suited to making high quality wine.



OTHER WHITE NATIVE VARIETIES



Variety: **MOORE'S DIAMOND**

A labrusca-vinifera hybrid developed by J. Moore in New York in 1870. Diamond, as it is often called, resembles Niagara in the quality and taste of its fruit while the vine characteristics resemble those of Concord. At one time used in the production of varietal wine, this variety is declining in use. Between

1996 and 2006 reported acreage has increased from 30 to 93 in New York, mainly in the Finger Lakes region.

Acreage:

Finger Lakes: 54 acres

Other Areas of the State: 45 acres

Total New York: 99



Original Niagara grape vine

RED VARIETIES



Variety: CONCORD

Origin: Developed by Ephraim Bull in Concord, Mass. in 1849.

New York Introduction: Uncertain

Viticultural Characteristics:

Winter hardy, disease resistant and productive, Concord ripens in late mid-season, producing medium clusters of blue-black grapes. Sugar level in grapes tends to be low and acidity high.

Acreage:

Long Island: Less than 10 acres

Hudson River: 52 acres Finger Lakes: 2,221 acres Niagara County: 366 acres Lake Erie: 16,166 acres

Other Areas of the State: 78 acres

Total New York: 18,883 acres (includes acreage devoted to

juice and table grapes.)

Vinification: Hot-pressed to extract color for sweet, red wines or pressed without skin contact to produce juice for sparkling wine production. Always finished with more than 1% residual sugar, often as much as 10% for sweet dessert wines.

Taste and Aroma Characteristics: Very grapey, identical to the flavors of Concord grape jelly.

Future of Variety in New York State: Good. The vast majority of Concords are used for grape juice and other unfermented products. Continues to be used in the production of some value-priced sparkling wine, and dessert wines, with some small wineries making stunningly good table wines. Future as table and juice grape seems especially bright.



Agwam variety, as illustrated in The Grapes of New York. Cultivated around 1860 - no. longer commercially grown.

OTHER RED NATIVE VARIETIES

Variety: **FREDONIA**



Developed in Geneva, New York as a cross of Champion and Lucile in 1927. Variety is similar to Concord in appearance, but ripens two weeks earlier and may exceed the yields of Concord with proper management. Fruit is susceptible to downy mildew and lacks the intensity of Concord's foxy aroma and flavor. As of 2006, New York had a total of 63 acres of Fredonia, mostly planted in the Lake Erie region. It is now primarily used for table grapes and in juice production.

Acreage:

Lake Erie: 32 acres

Other Areas of the State: 27 acres

Total New York: 59 acres



Variety:

A labrusca variety developed by H. Ives of Ohio in 1844, Ives is a winter hardy vine of weak vigor and productivity, unless grafted to a vigorous rootstock or grown in a favorable site. Small, loose clusters of black grapes ripen in mid-season and are utilized in the same manner

as Concord. There are about 39 acres of Ives planted in New York State, most of it in the Finger Lakes region.



Variety: **ISABELLA**

One of the first successful native wine grapes, Isabella was discovered in South Carolina prior to 1816. This variety was once more widely planted, but had been largely replaced by other varieties. From

1996 to 2001, however, acreage increased from 27 acres to 39, almost all likely to be found in the Finger Lakes region. Acreage was not reported in the 2011 survey.



Concords ready for harvest.

MAJOR FRENCH-AMERICAN AND **NEW YORK GRAPE VARIETIES**

WHITE WINE GRAPES

Aurora

Sevval Blanc

Vidal Blanc

Vignoles (Ravat 51)

Other

RED WINE GRAPES

DeChaunac

Baco Noir

Chancellor

Chelois

Marechal Foch

Other

NEW YORK VARIETIES

(Developed at the New York State Agricultural Experiment Station)

New York White Varieties

Cayuga

Traminette

Valvin Muscat

Other White New York Varieties

New York Red Varieties

GR7

Other Red New York Varieties

WHITE WINE GRAPES

Variety:

AURORA (Seibel 5279)

Origin: Developed in France early in this century by the grape breeder Albert Seibel, it is a hybrid of Vitis lincecumii, Vitis rupestris and Vitis vinifera.

New York Introduction: Introduced to commercial winegrowers by Philip Wagner of Maryland who imported some of the first French-American hybrid grapes to this country.

Viticultural Characteristics: Moderately hardy, vigorous vine with medium to large compact clusters. Early budding and early ripening, vine and grapes are susceptible to black rot and powdery mildew. Can produce excellent yields and can be harvested early with moderate acid levels.

Acreage:

Long Island: 0 acres

Hudson River: Less than 10 acres

Finger Lakes: 628 acres Lake Erie: Less than 10 acres Other Areas of the State: 31 acres

Total New York: 659 acres

Vinification: Cold fermentation in stainless steel. Normally finished with at least 1% residual sugar. No barrel aging



employed. Wine released early in the year after harvest; does not benefit from aging.

Characteristics: Aroma and flavor characteristics are very simple; wines vary from neutral to fruity. At its very best, Aurora can have a fresh fruity aroma reminiscent of melons with good mouth-feel and a clean crisp finish. It is frequently used to make simple jug wines.

Future of Variety in New York State: Poor. Although once the most widely planted white hybrid grape in New York State, it lacks the character of many other hybrids that make superior varietal wine. Due to the acreage planted to this variety, it seems its role will continue, but mostly to produce blended wines.



Variety: **SEYVAL BLANC** (Sevve-Villard 5-276)

Origin: A hybrid developed by the firm Seyve-Villard started by Bertille Seyve and Victor Villard in 1919 in France. A hybrid crossing Vitis vinifera, Vitis rupestris and Vitis lincecumii.

New York Introduction: Probably introduced through Philip

Wagner or released through the New York State Agricultural Experiment Station at Geneva.

Viticultural Characteristics: A hardy, low to moderately vigorous vine with excellent disease resistance. Produces moderate to high yields and frequently requires cluster thinning to prevent over cropping. Buds and ripens early, producing medium to often very large compact clusters of grapes.

Acreage:

Long Island: Less than 10 acres

Hudson River: 15 acres Finger Lakes: 175 acres Lake Erie: 57 acres

Other Areas of the State: 68 acres

Total New York: 315 acres

Vinification: This versatile grape can be vinified like a fine Chardonnay or a Riesling. Responds well to both barrel fermentation and malolactic fermentation treatment as well as cool, tank fermentation finished with some residual sweetness.

Taste and Aroma Characteristics: Hints of citrus, melon. and green apple often present. Medium to light bodied, well balanced with a crisp finish, Seyval is certainly the equal of all but the finest vinifera wine grapes. When barrel fermented, takes on the qualities of a light Chardonnay.

Future in New York State: Good. An excellent, consistent producer of high quality grapes. Can produce fine wines in several different styles. However, the big problem with this varietal is precisely the wide ranges of styles currently produced by New York wineries. This has confused consumers, who would otherwise snap it up if they realized how good a dry wine it can make.



Variety: VIDAL BLANC (Vidal 256)

Origin: Developed by J.L. Vidal in Bordeaux. The grape is a cross of Ugni Blanc and Seibel 4986.

New York Introduction: Probably introduced to New York through the New York State Agricultural Experiment Station at Geneva.

Viticultural Characteristics: Hardy, vigorous and disease resistant, Vidal Blanc (or "Vidal") is a moderate

vielding producer of large, compact clusters.

Acreage:

Long Island: 10 acres or less Hudson River: Less than 10 acres

Finger Lakes: 144 acres

Lake Erie: Less than 10 acres Other Areas of the State: 78 acres Total New York: 222 acres

Vinification: Generally given a cool fermentation in stainless steel with no malolactic fermentation or no barrel aging. Usually finished with some residual sweetness. Capable of making excellent late harvest wines.

Taste and Aroma Characteristics: Tends to be fruitier and more Riesling-like than Seyval; also higher in acid and more aromatic, but lighter in body. Probably the finest white hybrid grape for wine production after Seyval Blanc.

Future of Variety in New York State: Good. The New York industry has made good progress in their ability to work with this grape. Several good dry and semi-dry Vidals have been developed in the last few years, and the grape is also very well suited to late harvest and ice wines. Culturally, the grape is ideally suited to the cooler climates of New York State.



Variety: **VIGNOLES** (Ravat 51)

Origin: Developed by J.F. Ravat, a French hybridizer who began his work in 1929. It is a cross between Pinot Noir and a Seibel hybrid.

New York Introduction: Possibly through Philip Wagner in Maryland.

Viticultural Characteristics: Hardy, late ripening and moderately vigorous vine. Moderate yielding with small,

compact clusters. Susceptible to powdery mildew and bunch rot but also capable of acquiring "noble rot" and producing excellent late harvest wines.

Acreage:

Long Island: Less than 10 acres Hudson River: Less than 10 acres

Finger Lakes: 81 acres Lake Erie: Less than 10 acres Other Areas of the State: 59 acres

Total New York: 140 acres

Vinification: Cool, tank fermentation. No malolactic fermentation, no barrel aging. Always finished with at least 1% residual sugar. Frequently used to make sweet, late harvest wines.

Taste and Aroma Characteristics: Aromatic, tropical fruit nose, somewhat one-dimensional. Fruit carries through to flavor. Natural high acidity must be balanced with sweetness. Late harvest wines have a strong aroma of apricot.

Future of Variety in New York State: Very Good. As a fruity wine that is almost always produced in a sweet style, the demand for Vignoles is growing due to numerous awards in major competitions of late harvest and ice wines. It can, however, make high-quality table wines and consumers are learning that it pairs very well with a broad range of foods especially spicier versions of Mexican and Oriental cuisine. Culturally, it is ideally suited to the cooler growing regions of New York.

OTHER WHITE FRENCH HYBRIDS

Variety:

VERDELET (Seibel 9110)

Developed by crossing S.5455 and S.4938, this hybrid was named by the Finger Lakes Winegrowers Association in 1970. Vine is of medium vigor, producing low to moderate yields. Ripens in early mid-season producing loose clusters of oval grapes. Small seeds and thin skin make them suitable as table grapes. Sensitive to downy mildew, this variety also has low winter hardiness. Produces a neutral wine of medium acidity.

Variety: **VILLARD BLANC** (Seyve-Villard 12.375)

Hardy, very vigorous and moderate yielding vine, it is the most widely grown white hybrid grape in France. Vine is considered disease resistant, though susceptible to powdery mildew. Produces a medium bodied wine with a relatively neutral flavor and aroma. Wine frequently has clarification problems due to high natural iron content.

RED WINE GRAPES



Variety: **DECHAUNAC** (Seibel 9549)

Origin: Developed by Albert Seibel in France, Named for Canadian enologist, Adhemar DeChaunac.

New York Introduction: Possibly introduced by the New York State Agricultural Experiment Station in Geneva in the 1950's.

Viticultural Characteristics: High yielding, hardy, moderately vigorous

and disease resistant, DeChaunac is ideally suited to the upstate New York growing conditions. Ripens early, producing medium loose clusters of small blue-black grapes. Acreage:

Long Island: 0 acres **Hudson River: 13 acres** Finger Lakes: 70 acres

Lake Erie: Less than 10 acres Other Areas of the State: 14 acres

Total New York: 97 acres

Vinification: Standard vat fermentation: care must be taken not to permit extensive skin contact during fermentation as resulting wine can be inky and dense.

Taste and Aroma Characteristics: Neutral, mediocre aroma and flavor characterize this variety. Oak aging advised to add some element of complexity to wine.

Future of Variety in New York State: Fair. While acreage of this variety has declined steadily since the mid-1970's, the consumer interest in red wines has increased demand and prices for this and other red hybrid varieties.



Variety: BACO NOIR (Baco #1)

Origin: Cross of Folle Blanche and a Vitis riparia. Made by Francois Baco in 1902.

New York Introduction: Uncertain

Viticultural Characteristics: Very vigorous, hardy, early budding and ripening, Baco Noir provides moderate to low yields of small, compact clusters of small, black grapes.

Acreage:

Long Island: 0 acres

Hudson River: Less than 10 acres

Finger Lakes: 51 acres Lake Erie: 0 acres

Other Areas of the State: 172 acres

Total New York: 223 acres

Vinification: Baco Noir benefits from prolonged skin contact during fermentation to intensify the wine's color. A versatile grape, Baco can be used to make Nouveau-style wines as well as elegant, barrel-aged examples. Best examples of these wines are blends with other red hybrids. The naturally high acidity of Baco Noir grapes dictate that the wines be

given a full malolactic fermentation.

Taste and Aroma Characteristics: The best examples of this variety are medium-bodied wines with fruity, black pepper aroma.

Future of Variety in New York State: Good. Dry red wines are increasing in popularity with the wine-drinking public due to positive health benefits. In addition, some wineries have produced fine, award-winning Baco Noir.

Variety:

CHANCELLOR (Seibel 7053)

Origin: Developed by crossing S. 5163 and S. 800. Named in 1970 by the Finger Lakes Wine Grower's Association.

New York Introduction: Uncertain

Viticultural Characteristics: Moderately vigorous and highyielding, Chancellor was at one time the most widely planted hybrid variety in France. With an early bud break, the variety is susceptible to late spring frosts; it is also susceptible to both downy mildew and powdery mildew. Chancellor is moderately winter hardy and ripens in early mid-season, producing medium, compact clusters of black grapes.

Total New York Acreage: 42 acres

Vinification: Standard vat fermentation. Care must be taken not to extract too much color from the skins. Wine benefits from brief aging in oak barrels.



Taste and Aroma Characteristics: Can produce a light to medium-bodied pleasant red wine. Often used in a blend to produce "Nouveau" wines.

Future of Variety in New York State: Good. Like most red hybrids, Chancellor's popularity is increasing due to the health benefits of red wine.

Variety:

CHELOIS (Seibel 10878)

Origin: Cross of two other Seibel hybrids, S.5163 and S.5593

New York Introduction: Uncertain, possibly released from the New York State Agricultural Experiment Station in Geneva.

Viticultural Characteristics: Chelois is an early-ripening, moderately vigorous vine that produces average yields of purple grapes in long, narrow compact clusters. Resistant to most diseases, it is moderately winter hardy and well suited to the upstate New York growing conditions.

This grape was not reported as a varietal in 2011. We know that some acreage still exists as it is used in red hybrid blends.

Total New York Acreage: 38 acres

Vinification: Standard vat fermentation. Wine benefits from a

brief period in oak barrels.

Taste and Aroma Characteristics: Wines are medium bodied with a berry-like fruit and earthy overtones. Variety is at its best when blended with another red hybrid.

Future of Variety in New York State: Fair. Similar to that of other red hybrids, interest is increasing in these varieties due to the health benefits of red wine.



Variety:

MARECHAL FOCH (Kuhlmann 188-2)

Origin: Cross of Gold Riesling and riparia/rupestris hybrid. Made by: Eugene Kuhlmann of Alsace.

New York Introduction: Uncertain

Viticultural Characteristics: Vigorous and early-ripening, Marechal Foch produces small

to moderate yields of small, loose clusters of blue-black grapes. Disease resistant and winter hardy, its early bud break can result in damage to shoots by late spring frosts.

Acreage:

Long Island: 0 acres

Hudson River: Less than 10 acres

Finger Lakes: 24 acres

Other Areas of the State: 80 acres

Total New York: 104 acres

Vinification: Can use standard vat fermentation but makes an especially good Nouveau-style of wine when carbonic maceration is employed.

Taste and Aroma Characteristics: Fruity aroma reminiscent of strawberries and raspberries. Light to medium-bodied with a soft, pleasant finish. Marechal Foch's lower acidity, fruity aroma and flavor make it an ideal blending wine for other more herbaceous and acidic hybrid varieties.

Future of Variety in New York State: Good. Similar to that of other red hybrids, interest is increasing in these varieties due to the health benefits of red wine

OTHER RED FRENCH HYBRIDS

Variety:

CASCADE (Seibel 13053)

A vigorous, disease resistant, and winter hardy variety but prone to virus infection. Early ripening and prone to bird damage, Cascade produces moderate yields of large, loose clusters of blue grapes. As of 1990, there were 32 acres of this variety planted primarily in the Finger Lakes; this varietal was not reported as a category in 1996, 2001, 2006 or 2011. Wine is undistinguished.

Variety:

COLOBEL (Seibel 8357)

Used as a teinturier to add color to weakly pigmented wine, Colobel is moderately vigorous and produces medium yields of compact clusters of blue grapes. It has moderate winterhardiness and disease resistance. In 1996 there were 68 acres of Colobel planted in New York. It was not reported as a variety in 2001.

Variety:

LEON MILLOT (Kuhlmann 194-2)

Same background as Marechal Foch, (Gold Riesling x (rupestris x riparia). Like Foch it is vigorous, winter hardy, disease resistant and early ripening. Its wines tend to be more herbaceous than Foch, with deeper pigment. Thirty acres are reported in the 2001 survey. It was not reported as a variety in 2006.

Variety:

ROSÉTTE (Seibel 1000)

A variety brought to New York by Charles Fournier in the late 1930's, Rosette is a vigorous, low yielding variety that is winter hardy but susceptible to a number of diseases. In 1996 there were 35 acres of this variety planted in New York. It was not reported as a variety in 2006 or 2011.

Variety:

ROUGEON (Seibel 5898)

A vigorous, hardy, moderate yielding variety with only fair disease resistance, Rougeon makes a fruity wine with an excellent color.

Acreage:

Hudson River: Less than 10 acres

Finger Lakes: 53 acres

Other Areas of the State: 52 acres

Total New York: 105 acres

NEW YORK VARIETIES

Developed at the New York State Agricultural Experiment Station



Variety: CAYUGA

Origin: A hybrid of Seyval Blanc X Schuyler, it was developed at the New York State Agricultural Experiment Station in Geneva, New York starting in the 1950's.

New York Introduction: Released for commercial planting in 1972.

Viticultural Characteristics: Vigorous, moderately hardy vine with good disease resistance, Cayuga produces high yields of large, well-filled clusters.

Acreage:

Long Island: 0 acres

Hudson River: Less than 10 acres

Finger Lakes: 322 acres Lake Erie: Less than 10 acres Other Areas of the State: 63 acres

Total New York: 385 acres

Vinification: Fermented in stainless steel at cool temperatures. Wine is not aged in oak nor is malolactic fermentation used. Normally finished with some residual sugar and released the spring following harvest. Many wineries bottle as a varietal.

Taste and Aroma Characteristics: Medium bodied and pleasantly fruity.

Future of Variety in New York State: Good. Since it is best suited to making an off-dry wine, Cayuga may not be



Early spring in the vineyard.

as much in demand as those hybrids suited to making drier wine. However, the quality of the wine is much better than Aurora, for instance, and the vine has better disease resistance.



Variety: TRÁMINETTE

According to New York's Food and Life Sciences Bulletin, "Traminette is a late mid-season white wine grape which produces wine with pronounced varietal character likened to one of its parents, Gewürztraminer. Traminette is distinguished by its superior wine quality combined with good productivity, partial resistance to several fungal diseases, and cold

hardiness superior to its acclaimed parent."

Formerly known as NY65.533.13, Traminette was first officially introduced at the 4th International Symposium on Cool Climate Viticulture and Enology held in Rochester, NY in July, 1996, and is described as "much more winter hardy and disease resistant than Gewürztraminer with a better balance of sugar, acid and pH levels" according to Dr. Bruce Reisch who provided leadership for the development program.

The result of a cross of Joannes Seyve 23.146 X Gewürztraminer by H.C. Barrett in 1965 at the University of Illinois, the grape was originally intended to be a table grape with Gewürztraminer flavor characteristics. It is felt that Traminette will "offer further proof that wines made from hybrid grapes need not be inferior to vinifera" (Dr. Reisch, as guoted in the American Wine Society Journal, Fall 1996). 130 acres are reported as of the 2011 survey.

Acreage:

Long Island: 0 acres **Hudson River: 0 acres** Finger Lakes: 31 acres Lake Erie: 0 acres

Niagara Escarpment: 61 acres Other Areas of the State: 47 acres

Total New York: 139 acres



Variety: **VALVIN MUSCAT**™

"'Valvin Muscat'™ was developed at the New York State Agricultural Experiment Station, Cornell University. It is a complex interspecific hybrid grape resulting from a cross made in 1962 between Couderc 299-35 (an interspecific hybrid known as 'Muscat du Moulin') and 'Muscat Ottonel'

"'Valvin Muscat'TM is a mid-season white wine grape with a distinctive

muscat flavor and no objectionable bitterness. It is suitable

for the production of desirable highly aromatic varietal wines or for blending purposes. It is more winter hardy and disease resistant than muscat grapes that are pure V. vinifera." Information in quotes is taken from: New York's Food and

Life Sciences Bulletin Number 161, 2006 ISSN 0362-0069

Sunrise on Lake Champlain



OTHER WHITE NEW YORK VARIETIES

Variety:

MELODY

Developed by the New York State Agricultural Experiment Station at Geneva, New York, from a cross of Seyval Blanc and a cross of Pinot Blanc and Ontario, Melody was released for commercial planting in 1982. Vigorous and productive, it is moderately winter hardy and has good disease resistance. It ripens in late mid-season producing medium, well-filled clusters with excellent sugar and acid levels. The wine is reminiscent of a fruity Pinot Blanc, and is best when finished in an off-dry style.

Variety:

CHARDONNEL

According to New York's Food and Life Sciences Bulletin, "Chardonnel is a late ripening white grape which can produce a high quality wine with varietal character. Chardonnel is distinguished by its superior wine quality combined with high productivity and cold hardiness superior to its acclaimed parent, Chardonnay. It is the fourth wine grape cultivar to be named by the New York State Agricultural Experiment Station" in Geneva, New York, and is the result of a cross of Seyval and Chardonnay done in 1953. (In its developmental stages the grape was known as GW-9 or NY 45010.)

The vines tend to be productive, moderately vigorous, and moderately winter hardy. Clusters are shouldered and medium-large, very little crop is borne on lateral shoots and cluster thinning is required only infrequently. Wine quality has been rated as good to excellent producing a wine "described as pleasant and delicate with light fruitiness".

NEW YORK RED VARIETIES



Variety:

Origin: A hybrid of Buffalo and Baco Noir, it was developed at the New York State Agricultural Experiment Station in Geneva, New York. The cross was first made in 1947 and has been tested extensively as GR7 and NY 34791.

Items in quotes are according to Bruce Reisch and Steve Luce in an article: Recent Releases and Numbered Selections from the Geneva Grape Breeding Program

New York Introduction: Released for commercial planting in 1980's.

Viticultural Characteristics: "Highly vigorous, highly



productive and winter hardy, with moderate resistance to disease."

Acreage:

Long Island: 0 acres **Hudson River: 0 acres** Finger Lakes: 25 acres Lake Frie: 0 acres

Niagara Escarpment: 0 acres Other Areas of the State: 45 acres

Total New York: 70 acres



The New York State Agricultural Experiment Station at Geneva.

Vinification: "Use hot pressing, short skin contact time or some carbonic maceration." It is used in several red blends. Taste and Aroma Characteristics: GR7 "makes dark red wines with a classical hybrid aroma. It has better tannin structure than Baco Noir and De Chaunac. It is best made as a light (not heavily extracted) wine." According to Dr. Thomas Henick-Kling, it makes a good quality wine with attractive cherry flavors.

Future of Variety in New York State: Good to excellent. Since it is best suited to making an easy drinking red wine, GR7 should experience success. 70 acres are reported in 2011, with most of that in the Finger Lakes.

OTHER NEW YORK RED VARIETIES



Variety: **NOIRET™**

"'Noiret'™ was developed at the New York State Agricultural Experiment Station, Cornell University. It is a complex interspecific hybrid red wine grape resulting from a cross made in 1973 between NY65.0467.08 (NY33277 x 'Chancellor') and 'Steuben."

"Pronounced "nwahr - ay" - is a mid-season red wine grape suitable for the production of



varietal wines. The distinctive red wine is richly colored and has notes of green and black pepper along with raspberry, blackberry, and some mint aromas. A major distinguishing characteristic of this selection is the fine tannin structure that is complete from the front of the mouth to the back. The tannin structure and the absence of any hybrid aromas strongly distinguish this selection from other red hybrid grapes. The vine is moderately winter hardy and moderately resistant to powdery mildew and Botrytis bunch rot."

Acreage:

Long Island: 0 acres **Hudson River: 0 acres** Finger Lakes: 30 acres Lake Erie: 0 acres

Niagara Escarpment: 0 acres Other Areas of the State: 27 acres

Total New York: 57 acres

Information in quotes is taken from: New York's Food and Life Sciences Bulletin Number 159, 2006 ISSN 0362-0069 Information on new grape varieties developed at the New York Agricultural Experiment Station and recently becoming available in wines produced commercially, can be found at: http://grapesandwine.cals.cornell.edu/research/grapereleases.cfm



Variety: **COROT NOIR™**

'Corot noir'™ was developed by the grape breeding program at Cornell University, New York State Agricultural Experiment Station. It is a complex interspecific hybrid red wine grape resulting from a cross made in 1970 between Seyve Villard 18-307 and 'Steuben'

"Pronounced "kor-oh nwahr" - is a mid to late season red wine grape suitable for either blending or the production of varietal wines. The wine has a deep red color and attractive cherry and berry fruit aromas. Its tannin structure is complete from the front of the mouth to the back, with big soft tannins. The vine is moderately winter hardy and moderately resistant to fungal diseases."

As of the 2011 Vineyard Survey, there were 42 acres of Corot Noir in production, with most of that in the Finger Lakes.

MAJOR VINIFERA WINE VARIETIES

WHITE VINIFERA

Chardonnay Riesling

Gewürztraminer Other

RED VINIFERA

Cabernet Sauvignon Merlot

Pinot Noir Cabernet France

WHITE VINIFERA



Variety: **CHARDONNAY**

Origin: Variety believed to have been developed in the Burgundy region of France, where it has been grown for centuries.

NY Introduction: Successfully cultivated by Charles Fournier and Konstantin Frank in the late 1950's at Gold Seal Vineyards in the Finger Lakes region.

Where grown: Cultivated in all five regions.

Acreage:

Long Island: 440 acres

Hudson River: Less than 10 acres

Finger Lakes: 249 acres

Lake Erie & Niagara Escarpment: Less than 10 acres

Other Areas of the State: 176 acres

Total New York: 865 acres

Vinification: Cool fermentation in stainless steel tanks, or barrel fermented. Often aged in small oak cooperage for months at a time.

Taste Characteristics: Produces medium to full-bodied wines, frequently with rich, complex bouquet and flavor. Aroma not grapey, has hints of pineapple, apple, honey, pear, melon and citrus. Depending on manner of vinification may have nutty, buttery, toasty, herbal and / or oaky flavors as well.

Future of Variety in New York: Excellent. Capable of producing world class wines. Strong consumer demand.



Chardonnay in harvest



Variety: **RIESLING**

Origin: All indications point to an origin in the Rhine River Valley of Germany.

New York Introduction: First cultivated successfully by Charles Fournier and Konstantin Frank at Gold Seal Vineyards in the 1950's.

Where grown: Cultivated in all five regions.

Acreage:

Long Island: 59 acres

Hudson River: Less than 10 acres

Finger Lakes: 854 acres Lake Erie: Less than 10 acres

Other Areas of the State: 121 acres

Total New York: 1,034 acres

Vinification: Long, cool to cold fermentation in stainless steel tanks. No small barrel aging is used. Wines are normally

released in the spring or summer after harvest.

Taste and Aroma Characteristics: Produces aromatic light to medium-bodied wines. Rieslings can have exceedingly

complex aromas with floral, herbal and spicy aromas combined with honey and fruit. Excellent sweet wines are made from this grape when it is attacked by the "noble rot" (botrvtis cinerea).

Future of Varietal: Excellent. New York is capable of producing excellent Riesling on a consistent basis, and the popularity of this fruity, quaffable wine has increased modestly for a number of years. Extremely food compatible and lower in alcohol than most Chardonnays, more and more wine consumers have embraced this varietal. Several wineries are urging increased plantings of Riesling in New York.



Variety: **GEWÜRZTRAMINER**

Origin: The Italian Tyrol (northernmost part of Italy)

New York Introduction:

First grown commercially by Konstantin Frank at Gold Seal in the mid-1950's.

Viticultural Characteristics: Moderate vigor, low to moderate yield, does well in loamy, deep fertile soils. Heavy soils with



some clay can yield aromatic wines. Grapes and clusters are small. Thick skinned and pink, the grapes are resistant to most disease; but the vine is prone to viruses and susceptible to late spring frosts.

Acreage:

Long Island: 41 acres

Hudson River: Less than 10 acres

Finger Lakes: 82 acres

Lake Erie: Less than 10 acres

Niagara Escarpment: Less than 10 acres

Other Areas of the State: 32 acres

Total New York: 155 acres

Vinification: Generally given a cool or cold fermentation in stainless steel to accentuate aromatic character of the fruit. Not aged extensively, generally released the year after harvest. Generally finished with at least 1% residual sugar, much more in late harvest wines. Skin contact often used to get maximum aroma from the grapes.

Taste and Aroma Characteristics: Perfumy, spicy nose that resembles tropical fruit or highly aromatic flowers. Components of aroma carry into flavor, creating rich flavorful wines with a spicy finish. Light to medium bodied in weight, the wines tend to be refreshing and crisp.

Future of Variety in New York State: Good. Certainly New York has the proper climate for Gewürztraminer and many excellent examples have been produced here. However, the variety is low yielding and suffers from late spring frosts, making it less profitable to grow than other varieties. Also, fruity wines tend to be out of favor among wine drinkers making this a hard wine to market, not to mention the off-putting name. Once consumers learn how beautifully Gewürztraminer can match with the right food, such as spicy Szechwan, they get over that pronunciation problem!

OTHER WHITE VINIFERA VARIETIES



Variety: **PINOT GRIS**

A somewhat lesser known member of the Pinot family (Pinot Noir, Pinot Blanc) "The clone we have tested is not as cold hardy as our Pinot blanc clone, but is as hardy as the better Pinot noir clones we have tested. It too appears to resist bunch rot. Pinot gris makes a fuller bodied white wine than does Pinot blanc. Both the blanc and gris forms add to

the quality of sparkling wine cuvées and make interesting still wines. They have the potential to offer an interesting alternative to Chardonnay or White Riesling for quality wine production."

Acreage:

Long Island: Less than 10 acres Hudson River: Less than 10 acres

Finger Lakes: 52 acres

Lake Erie: Less than 10 acres

Niagara Escarpment: Less than 10 acres

Other Areas of the State: 43 acres

Total New York: 95 acres

Information in quotes is taken from a bulletin available from Cornell University at http://grapesandwine.cals.cornell.edu/ research/grape-releases.cfm.



Variety: **SAUVIGNON BLANC**

Related to Cabernet Sauvignon, this variety shares its high vigor and low to moderate yields, but tends to be more susceptible to disease. Long Island is the only one of the State's wine regions with a season long enough for it to ripen adequately on a consistent basis from year to year. There it produces a grassy, lean, crisp wine that can

frequently be acidic. Acreage of this variety is small, 106

total acres with most of that on Long Island, but commercial wines of this variety have been well accepted and wider planting is expected.

RED VINIFERA



Variety: **CABERNET** SAUVIGNON

Origin: Probably Bordeaux, but has been linked to the Roman variety Biturica. Recent research shows that it has Cabernet Franc and Sauvignon Blanc in its heritage.

New York Introduction: Probably first planted commercially by Dr. Konstantin Frank at Gold Seal in the 1950's.

Viticultural Characteristics: Vigorous, low yielding vine that does particularly well in well-drained soils of low fertility. Heavy, fertile soils create too much foliage and depress yields. Late budding and late ripening, the vine produces small, thick-skinned grapes in loose clusters that are very resistant to disease.

Acreage:

Long Island: 143 acres

Hudson River: Less than 10 acres

Finger Lakes: 97 acres

Lake Erie: Less than 10 acres

Niagara Escarpment: Less than 10 acres

Other Areas of the State: 28 acres

Total New York: 268 acres

Vinification: Fermented on the skins at ambient temperatures for a few days to several weeks. Extensive aging in small oak cooperage is almost always employed. Wines are released at least a year and a half after harvest.

Taste and Aroma Characteristics: Black current, bell pepper, eucalyptus, mint, black pepper, green olives, tar, cedar, are some of the descriptive terms used when mentioning the flavor and aroma characteristics of Cabernet Sauvignon. Because of the small grape size and high skinto-pulp ratio, the wine is normally tannic and full-bodied. Capable of aging extremely well and producing wines of immense complexity.

Future of Variety in New York State: Very Good to Excellent. Long Island is particularly suited for Cabernet Sauvignon with a growing season long enough to ripen the grapes on a consistent basis. While some examples exhibit an herbaceous character, this will probably diminish as vines get older and cultural practices improve. The North Fork of Long Island has a maritime climate similar to Bordeaux's; it is reasonable to expect similar success. In recent years, several Finger Lakes and Hudson River Region wineries have also produced some fine Cabernet Sauvignon wines.



Variety:

Origin: Bordeaux, perhaps on the St. Emilion side of the Gironde River.

New York Introduction:

Probably grown experimentally by Dr. Konstantin Frank in the Finger Lakes in the 1950's, but permanent plantings first made by Alex Hargrave on Long Island in 1970's.

Viticultural Characteristics:

Moderate vigor with moderate to high yields. Early budding increases danger of late spring frosts, but its early ripening avoids losses due to inclement late autumn weather. Has the ability to withstand wet, heavier soils than Cabernet Sauvignon.

Acreage:

Long Island: 658 acres

Hudson River: Less than 10 acres

Finger Lakes: 82 acres

Lake Erie: Less than 10 acres Other Areas of the State: 23 acres

Total New York: 763 acres

Vinification: Fermented on the skins much like Cabernet Sauvignon. Generally not given as extensive aging as Cabernet, wines tend to have much less tannin and are usually released earlier.

Taste and Aroma Characteristics: Fruitier, softer and sweeter than Cabernet Sauvignon, the wine will frequently have a strawberry or raspberry aroma. Lower in tannins and acid than Cabernet, it is drinkable at a much earlier age, but



still is able to age gracefully. Like Cabernet on Long Island, Merlot frequently has herbal elements in nose and taste; this will diminish with time and improved vine management.

Future of Variety in New York State: Excellent. Earlier ripening and greater yielding than Cabernet Sauvignon, Merlot may become the premier red variety on Long Island. Demand and consumer acceptance of this varietal are growing quickly. This variety has a bright future in New York, including in the Finger Lakes where new plantings have occurred.



Variety: **PINOT NOIR**

Origin: Burgundy region of France

New York Introduction: First planted commercially by Dr. Konstantin Frank at Gold Seal in the 1950's.

Viticultural Characteristics: Moderately vigorous and low yielding, Pinot Noir is susceptible

to viruses, mildew and bunch rot. Thin-skinned grapes in small, tightly packed clusters can rot easily if rainy or humid conditions persist close to harvest. Ripens early but often unevenly.

Acreage:

Long Island: 87 acres

Hudson River: Less than 10 acres

Finger Lakes: 175 acres Lake Erie: Less than 10 acres

Niagara Escarpment: Less than 10 acres

Other Areas of the State: 54 acres

Total New York: 316 acres

Vinification: Because of low pigment and tannin levels in the skin of Pinot Noir, long fermentation on the skins is often performed with stems added to boost tannin levels. Almost always given extensive time in small oak cooperage, except when lighter, "vin gris" style of wine is being made. Usually aged at least one and half years before release since nose improves remarkably with age.

Taste and Aroma Characteristics: Hints of strawberries. plums, and violets often present as well as a "barnyard" or "wet sock" odor that is not unpleasant in this context. Odor and flavor can appear sweet without necessarily having any residual sugar. Older wines tend to have a velvety finish. Bouquet can become exceedingly rich, powerful and complex with age.

Future of Variety in New York State: Good to Excellent. The future of this variety appears to be in the warmer areas of the upstate wine regions, although Long Island's maritime climate may also be conducive to production of quality Pinot Noir. Recent efforts from wineries in both regions have yielded excellent examples, but low yields and demanding viticultural requirement do not make this variety a favorite among grape growers. Consumer demand for Pinot Noir is increasing due to health benefits. New York and especially Finger Lakes Pinot Noir have higher levels of resveratrol (which fights heart disease and cancer) than those from other parts of the world.



Variety: **CABERNET FRANC**

Origin: Long felt to be related to Cabernet Sauvignon, it is now considered possible that it is actually in the heritage of Cabernet Sauvignon.

New York Introduction: Probably first planted commercially by Dr. Konstantin Frank in the 1950's.

Viticultural Characteristics: According to Jancis Robinson,

Cabernet Franc looks very much like Cabernet Sauvignon in the vineyard, but it is well adapted to cooler and damper conditions, "it buds and matures more than a week earlier

than Cabernet Sauvignon... but it is easier to ripen fully and less susceptible to poor weather during harvest." Cabernet Franc also provides greater yields and can adapt to a wider range of soil conditions than Cabernet Sauvignon.

Acreage:

Long Island: 215 acres

Hudson River: Less than 10 acres

Finger Lakes: 211 acres Lake Erie: Less than 10 acres

Niagara Escarpment: Less than 10 acres

Other Areas of the State: 69 acres

Total New York: 495 acres

Vinification: Vintners like to accentuate the fruit characteristics of this grape, and therefore it often goes through a shorter period of fermentation on the skins than Cabernet Sauvignon. Some aging in oak cooperage, but not so much as to overpower the fruit characteristics - older barrels might be used as opposed to new barrels which can have a stronger impact on the wine. Bottling generally takes place about a year and a half after harvest and the wine develops quickly and nicely, drinking beautifully without extensive bottle aging.

Taste and Aroma Characteristics: Soft berry-plum-fruit characterizes Cabernet Franc. According to Robinson, "Cabernet Franc tends to be rather lighter in colour



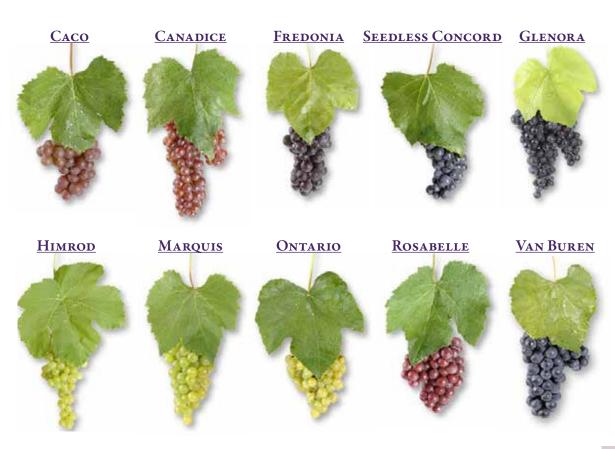
and tannins. and therefore earlier maturing than Cabernet Sauvignon"."It is light to medium bodied with more immediate fruit than Cabernet Sauvignon and some of the herbaceous aromas evident in unripe Cabernet Sauvignon."

Future of Variety in New York State: Very Good to Excellent. This

grape has a bright future in all of New York's regions. Often used as a blending grape with Merlot or Cabernet Sauvignon in the past. In recent years, however, several wineries have produced fine Cabernet Franc varietal wines. The changing consumer patterns which show an increased interest in red wines and New York's climatic conditions make this grape a natural choice for the New York grape grower.



The major table grape variety is Concord, the beautiful blue-skinned grape with a unique aroma that is also used for most grape juice. Other Native American varieties marketed as table grapes include Catawba, Delaware and Niagara. There are also several specialized table grape varieties such as Caco, Canadice, Fredonia, Glenora, Himrod, Marquis, Ontario, Rosabelle, VanBuren, Vanessa, and Einset.... gorgeous colors and a flavor for everyone!



GRAPE JUICE



Ron Prior, PhD at the University of Arkansas. has done some research comparing the health benefits of various juices and has found that "Welch's purple 100% grape juice has far more antioxidant activity than commonly consumed fruit juices such as orange and apple juice, and more per serving than

over 40 commonly consumed vegetables and fruits."

Other research has shown that "white" grape juice (actually yellow in color) is a great drink for infants — easier to digest and offering a higher level of desired components than other fruit juices.

For more mature members of the population, the cardiovascular system also benefits from regular consumption of grape juice, and it also appears that regular consumption of grape juice may help prevent certain types of cancer.

For the most up to date health findings on juices made with grapes, visit http://www.welchs.com and http://www.concordgrape.org.

FRUIT WINES

Grapes account for the vast majority of wines made in New York and elsewhere. but non-grape fruit wines are becoming increasingly popular among both producers and consumers. At least 50 of New York's 400+ wine producers now make some fruit wine, and consumers are often surprised that the wines are not sickeningly sweet but rather balanced with sugar and acid, and reminiscent of the fruit in both aroma and taste.



Northern states like New York, Vermont, Michigan and Minnesota obviously specialize in cold climate fruit wines, while southern states like florida produce a rainbow of flavors from grapefruit to kiwi, star fruit and more.

Soils of New York State

Introduction

Any discussion of the soils of New York State would be incomplete without mention of the unique geological history of the region. The periods of continental glaciation covering much of North America thousands of years ago created most of the topography that makes New York State so ideal for grape growing today. The Great Lakes of Erie and Ontario. all of the Finger Lakes as well as most of Long Island were formed by the action of these continental glaciers. Topography, along with the parent material from which a soil is derived, determine to a great degree a soil's characteristics and its suitability to agriculture.

New York State can be divided into 13 distinct physiographic provinces, or areas having similar parent material and geologic structure. They are the Adirondack Mountains, Catskill Mountains, Allegheny Plateau - Glaciated, Allegheny Plateau - Unglaciated, Tug Hill Plateau, Hudson Highlands, Manhattan Prong, Taconic Mountains, Hudson-Mohawk Lowlands, Mohawk Lowlands, St. Lawrence - Champlain Lowlands, Erie and Ontario Lowlands and Atlantic Coastal Plain. Each of New York's grape growing regions is encompassed in a single one of these provinces with the exception of the Hudson River Region that encompasses or crosses five of these provinces. A discussion of the soil and physiographic characteristics of these regions follows.

Regional Soil and Physiographic Characteristics

Long Island

Long Island is encompassed in the Atlantic Coastal Plain province and is the result of a large moraine or hill of glacial deposits, or till, left by a receding continental glacier. Because of the depth of this debris and the absence of bedrock as a source of parent material for soil, Long Island soils are unconsolidated, without a distinct structure. The north and south forks of eastern Long Island, the locale of nearly all the region's vineyards, are the results of outwash



or gradual erosion of the moraine. These sandy, level soils are moist, well drained and deep, with a naturally high acidity and good physical structure. Years of agricultural use have elevated the soil pH and eliminated most strong acidic conditions. These soils qualify among the finest agricultural soils in the state, and are especially well suited to viticulture.

This representative cross cut of sandy soils on Long Island can be found at Bedell Cellars.

Hudson River Region

This region crosses five physiographic provinces and is composed of more multiple soil types than any other region. Moving north from Manhattan, the first province encountered is that of the Manhattan Prong, a hilly, complex region of highly metamorphosed ancient gneiss. This region encompasses the northern end of Manhattan Island and southern Rockland County, where it forms the Ramapo Mountains. The region continues across the Hudson, and the structure



The Shawangunk Ridge rises above vineyards on the western side of the Hudson Valley. The bedrock revealed in this cliff displays the quartz found in much of the region, resulting in a beautiful white cliff.

underlies Westchester, Putnam and a small part of southern Dutchess County. The hardness of the bedrock in this area and glacial action have resulted in shallow, rocky soils largely unsuitable for agriculture. Bordering the Manhattan Prong to the north is the Taconic Mountains Province, an area of lower elevation that extends from Orange County northward through southeastern Ulster County and across the Hudson River, encompassing Dutchess, Columbia, Rensselaer and Washington counties. The rocks in this province are largely shales, slates, schists and limestones, although the northern and eastern areas of Dutchess, Columbia and Rensselaer are underlain with hard metamorphic quartzite and gneiss. The topography of this province varies widely, starting as a valley in southern Orange County and progressing to rolling hills and valleys in the western portions of those counties on the east side of the Hudson, finally culminating in the rugged highlands of the Berkshire Mountains in the easternmost section of the province. Given the wide variety of parent material and topography in this province, soil types and suitability to viticulture are extremely varied. Soils in the western portion of this province generally tend to have moisture problems and be low in fertility, although many good sites of limited acreage are under cultivation as orchards and vineyards. Soil conditions improve on the western side of the Hudson, with eastern Dutchess and Columbia Counties possessing the finest sites and consequently the greatest acreage of vineyards. Deep, well-drained soils with adequate

moisture holding capacity and low to moderate fertility are present and available in large tracts of land, and offer the opportunity for the expansion of viticulture in the Hudson Valley.

Two other physiographic provinces can be included in the Hudson River Region: the Catskill Mountains Province which borders the Taconic Mountains Province along the dramatic Shawangunk Ridge; and the Hudson-Mohawk Lowlands Province which enters the region north of Albany. Neither area has significant acreage in grapes, and discussion of the soils of these areas is not relevant to this subject.

Finger Lakes

The Finger Lakes viticultural region is encompassed in the Allegheny Plateau. This plateau, which has hilltops in the range of 1500 to 2000 feet, has been eroded and cut by streams and rivers over thousands of years and now resembles mountainous country with valleys and stream beds often 1000 to 1200 feet below the hilltops. The bedrock underlying the southern end of the Finger Lakes region is composed of alternating layers of sandstone and shale. In the northern end of the region the parent material is predominantly calcareous shale, which, being softer than the sandstone / shale combination, resulted in different soils and a slightly lower elevation. The agricultural suitability of the soils in this region follows this boundary precisely. Soils north of it, formed from calcareous shale, are deep, well drained, moist,

fertile and are among the finest agricultural soils in the state. Soils south of the boundary are normally wet, poorly drained, highly acid and characterized by an impervious subsurface layer that impedes movement of water and root development. Thus agricultural lands bordering Lakes Seneca, Cayuga, Owasco and the northern end of Canandaigua Lake are generally better suited to viticulture than soils to the south such as those surrounding Keuka Lake.





One of the Finger Lakes' most beautiful waterfalls displays the shale found in the soil and demonstrates the steep hillsides found in this region.

Lake Erie Region and Niagara Escarpment

While grape growing in western New York is conducted in all three western-most counties (Chautaugua, Erie and Niagara), fine wine production historically took place largely in Chautaugua County, but significant growth has been seen in the Niagara Escarpment and the overall Niagara region. Located in the Erie and Ontario Lowlands physiographic province, this series of loamy, deep, well-drained soils are also some of the best agricultural soils in New York State. The Niagara Escarpment is located within the Erie and Ontario Lowlands. According to http://www.ereferencedesk.

com, "These are the plains which border the Great Lakes. They abut the Glaciated Allegheny Plateau to the south, and to their greatest extent, Tug Hill on the east. The Ontario lowlands are an area of generally subdued topography, except for the Niagara escarpment and the swarms of drumlins south of Lake Ontario. The Erie portion slopes rather uniformly from the Portage escarpment northwestward to the shore of Lake Erie. The generally low relief is provided by a series of proglacial lake beach ridges."



The time and watereroded hillside of the Niagara River valley illustrates the sedimentary foundation of the Erie and Ontario Lowlands. This slope illustrates as well the rise of the Escarpment itself. Just north of here the land flattens out into the lowland area.



Champlain Valley of

New York

The Champlain Valley of New York AVA is located within the St. Lawrence - Champlain Lowlands Province.

The smooth plain that runs along the St. Lawrence River and over to the Champlain Valley is largely composed of sedimentary rock. This low plain was formed by "proglacial lake or marine waters. Local relief rarely exceeds 75 feet. In a few places, rock ridges occur. Numerous drumlins or drumlin like hills furnish much of the local relief" according to http://www. ereferencedesk.com.

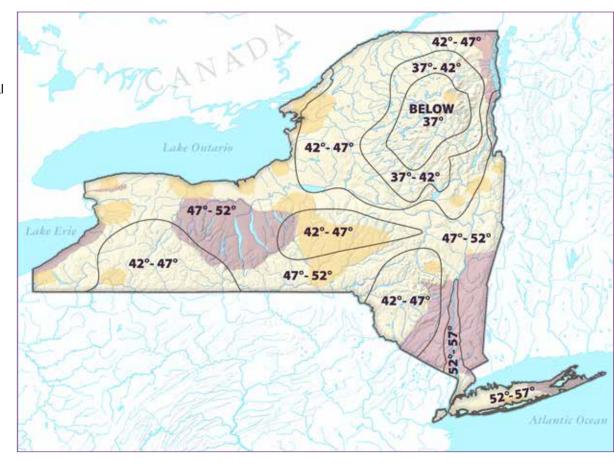


Soils of New York State

GREAT LINKS

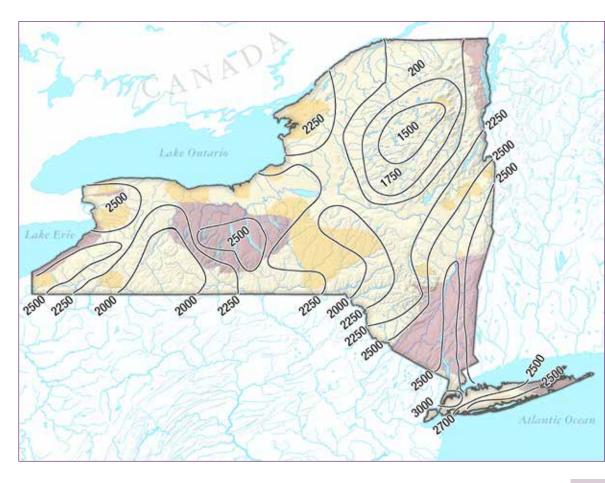
New York State Mean Annual Temperature Map

In all of New York's viticultural areas, the presence of large bodies of water are crucial elements in creating the ideal "meso-climates" for growing premium grapes.



New York State Growing Degree Days Map

According to the Cornell Cooperative Extension: "Growing degree days are an average of maximum and minimum temperatures for each day, minus a 'base temperature'. We use 50 degrees F for the 'base' (10 degrees C). The base temperature is based on the idea that growth, photosynthesis and respiration are temperature-dependent, and below the base temperature there is little physiological activity. These daily degree-days are then summed over the growing season to come up with cumulative growing degree days. Phenological (developmental) stages of growth then are tied to growing degreedays, rather than calendar date. This compensates for temperaturerelated differences in growth. For grapes in New York State, we measure the growing degree days between April 1 through October 30."



Soil map: Lake Erie and **Niagara Escarpment**

Soil Map Legend

- Areas where more than 60% of the soils are suitable for agriculture with no more than moderate limiting factors.
- Areas where more than 60% of the soils are suitable for agriculture but most have severe problems of wetness, droughtiness, stoniness, depth or slope.
- Most soils in these areas have severe problems of depth, slope, wetness, stoniness or droughtiness that greatly limit or prevent conventional agriculture.

For a closer look at a particular area, visit the new web site developed by Cornell University and the Institute for the Application of Geospatial Technologies IAGT: http://arcserver2.iagt.org/vll/data.aspx



Soil Map Legend

- Areas where more than 60% of the soils are suitable for agriculture with no more than moderate limiting factors.
- Areas where more than 60% of the soils are suitable for agriculture but most have severe problems of wetness, droughtiness, stoniness, depth or slope.
- Most soils in these areas have severe problems of depth, slope, wetness, stoniness or droughtiness that greatly limit or prevent conventional agriculture.

For a closer look at a particular area, visit the new web site developed by Cornell University and the Institute for the Application of Geospatial Technologies IAGT: http://arcserver2.iagt.org/vll/ data.aspx



Soils of New York State Go To Contents P

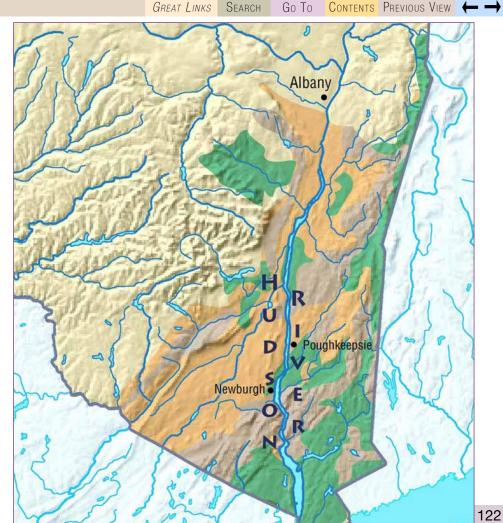
Soil map: Hudson River Region

Soil Map Legend

- Areas where more than 60% of the soils are suitable for agriculture with no more than moderate limiting factors.
- Areas where more than 60% of the soils are suitable for agriculture but most have severe problems of wetness, droughtiness, stoniness, depth or slope.
- Most soils in these areas have severe problems of depth, slope, wetness, stoniness or droughtiness that greatly limit or prevent conventional agriculture.

For a closer look at a particular area, visit the new web site developed by Cornell University and the Institute for the Application of Geospatial Technologies IAGT:

http://arcserver2.iagt.org/vll/data.aspx



Soil map: Long Island

Soil Map Legend

- Areas where more than 60% of the soils are suitable for agriculture with no more than moderate limiting factors.
- Most soils in these areas have severe problems of depth, slope, wetness, stoniness or droughtiness that greatly limit or prevent conventional agriculture.

For a closer look at a particular area, visit the new web site developed by Cornell University and the Institute for the Application of Geospatial Technologies IAGT: http://arcserver2. iagt.org/vll/data.aspx



Montauk Point State Park



Soil map: Champlain Valley of New York

Soil Map Legend

- Areas where more than 60% of the soils are suitable for agriculture with no more than moderate limiting factors.
- Areas where more than 60% of the soils are suitable for agriculture but most have severe problems of wetness, droughtiness, stoniness, depth or slope.
- Most soils in these areas have severe problems of depth, slope, wetness, stoniness or droughtiness that greatly limit or prevent conventional agriculture.

For a closer look at a particular area, visit the new web site developed by Cornell University and the Institute for the Application of Geospatial Technologies IAGT: http://arcserver2.iagt.org/vll/data.aspx





Winemaking In New York State

The wine-growing regions of New York State have climates similar to those in northern Europe, with seasonal heat summation (expressed in growing degree-days) of 2000 to 2700. These values compare favor-



Grapes ready to be crushed.

ably with Burgundy (Beune, Fr. At 2300) and Bordeaux (at 2390) as well as some cooler regions in California (Gonzales, Monterey County). These cooler regions are ideal for most

native and hybrid varieties as well as some of the best vinifera varieties. Chardonnay, Riesling, Pinot Noir, Merlot and Cabernet Franc



Winemaker tests for Brix with a refractometer.

are suited to nearly every region; and even Sauvignon Blanc and Cabernet Sauvignon,





Fresh grapes are started on the path to becoming wine by being removed from their stems. The machinery is so

specialized that it removes the berries without breaking down the stem.

both requiring long, warm growing seasons, ripen successfully on Long Island. The cool moist New York climate produces grapes with moderate sugar levels and moderate

to high acid levels. Other than in exceptionally warm years or in grapes used in making late harvest wines, sugar levels in hybrid and vinifera varieties are harvested in a range of 16 to 23 Brix. Acid levels generally fall in the range of .6 grams to 1.2 grams per 100 milliliters. Native varieties generally have lower sugar levels, but a similar range of acidity at harvest.

Making Wine from Native Grapes

Native varieties are used to make a wide array of wines. Dessert wines, sherries, ports, sparkling wines, and some table wines are made from native grapes. Often characterized by a tough skin and dense pulp, these varieties are often treated with pectic enzymes to release juice held in the pulp and to facilitate pressing. Red native varieties used in



Grape press.

producing red table or dessert wines are often "hotpressed" to extract pigments from the grape skins. Crushed grapes are heated to a temperature of about 160° F and held at that temperature

for a period of 30 minutes to an hour prior to pressing. Must is then transferred to batch or continuous presses to extract the juice.

Continuous pressing is an extremely efficient manner of juice extraction, enabling almost all the juice and moisture of the must to be extracted. Must enters one end of the press,



Extracted juices captured in the pan under the press.

and all free-run juice is extracted. A bladder inside the press gently pushes against the must until almost all of the moisture is extracted. Generally the free-run and juice extracted by light pressure is superior to the rest of the press juice and

is used to make finer wines and champagne.

Catawba and Delaware, both pink grapes used mostly for sparkling wine, are not usually hot-pressed unless a pink color is desired for the wine. Concord grapes used in dessert wines and table wines are almost always hot-pressed to extract color.

Fermentation of the juice of native varieties is nearly always done in temperature-controlled stainless steel tanks. Cool fermentations are desired to retain the fruity aroma and flavors of these grapes. Hot-pressing



A sample of Catawba juice ferments in a glass carboy. The fermentation lock allows carbon dioxide to escape without letting oxvgen into the container.

eliminates the need to ferment on the skins to obtain color. and since most of these wines are finished with substantial residual sugar, tannin levels are purposely kept low. Aging in oak barrels, therefore, is rarely if ever employed when making table wine with these varieties. The exception occurs when making dessert wines. Extensive oak aging is used by producers of New York sherries and ports; one producer actually employs an outdoor solera to age these wines.

Production of Wine from Hybrid Varieties

Most hybrid varieties are used in the production of table wines, varying in sweetness from very sweet to bone dry. Most of the hybrid acreage in New York is in white wine varieties, primarily Cayuga White and Seyval Blanc. The dominant red varieties are DeChaunac and Baco Noir. None of the hybrids are made in what can be considered a consistent style; the styles for all range from full or mediumbodied dry wines, to light-bodied sweet ones. Some general rules apply, however: Cayuga is almost always finished in an off-dry to sweet style, Seyval Blanc tends to be dry to off-dry, Vignoles (Ravat 51) is usually produced in a slightly sweet to very sweet style. Vidal may have the widest range with it being finished dry, semi-dry or all the way to a luscious late harvest style. Most of the reds are finished with little or no residual sweetness when labeled as a varietal, but can be very sweet when bottled as a proprietary blend.



White hybrid varieties are nearly always given a cool fermentation in stainless steel tanks, the notable exception being Seyval Blanc, which responds very well to barrel fer-



pH of the wine is critical.

mentation, producing a complex, medium-bodied wine. This is one of the few instances where a hybrid white wine is permitted to undergo a malolactic fermentation. This bacterial fermentation converts the malic acid component of the wine to lactic acid and carbon dioxide, lowering the acidity of the must. White hybrid varieties tend to be bottled as varietals, although many wineries produce premium wines from blends. While some vintners have specific ideas about which white hybrids are the most compatible in blends, there is little

consensus on the subject. Seyval, with a small percentage of Vidal, seems to be the most widely used of the white hybrid blends.

Aging hybrid whites in oak barrels is rarely done. Again, the exception is Seyval Blanc that appears to be the only variety that benefits from aging in oak barrels. Normally this is only done with Seyval Blanc that is dry.

Fermentation of red hybrids follows a more traditional path than the whites. Although many larger wineries hot-press hybrids, most ferment in contact with the skins to extract color.

Prolonged skin contact with most varieties is not necessary to obtain the proper color intensity; fermentation on the skins for several days is the standard procedure. The must is then pressed in a batch press and fermentation is completed in stainless steel tanks. In most cases, hybrid reds are encouraged to complete a malolactic fermentation, which may happen spontaneously but can also be initiated through the use of commercial culture. Many red hybrids receive oak barrel aging after fermentation, which adds complexity to the flavor and aroma of these wines

Many New York wineries also ferment a portion of their reds in a manner developed in the Beaujolais region of France. The popular "Nouveau Beaujolais" of France has an American counterpart in the new, red wines of New York. The carbonic maceration method used in Beaujolais calls for loading a tank with whole clusters of grapes, then purging the tank with carbon dioxide. These "smothered" grapes begin to undergo an intracellular enzymatic fermentation, and 10 days or two weeks later when the grapes are removed from the tank and pressed, they are well on their way to completing a yeast and malolactic fermentation. The resulting wines rival the French; fruity and light with hints of raspberries and strawberries, these quaffable wines are worthy of much more attention then they are currently receiving.

Unlike the white hybrids, blending the red varieties is more the rule than the exception. While many of the varieties have charming qualities, they represent a synergy when blended together. Two combinations—Baco Noir and Chelois, and Marechal Foch and Leon Millot—have been used by a number of vintners in the state to create excellent wines. Other combinations involving 3 and 4 varieties have also been successful. Like the white hybrids, many of the multiple blends are used to create high quality wines.

Making Vinifera Wines in New York State



Yeast converts the sugar in the juice to alcohol and carbon dioxide.

White vinifera varieties, notably Chardonnay and Riesling, have been successfully grown in most of the wine-growing regions. And while the quantity of production is somewhat low compared to that of California, the quality is high and continues to improve. Both New York Chardonnay and Riesling have their own styles. New York Chardonnay lacks the weight and alcohol of its typical Californian counterpart, and tends to be less smoky and complex than most White Burgundy, but most New York wines exhibit finesse - a good balance of fruit, oak and acid.





A lees filter helps the winery capture every luscious drop of juice

Rieslings from New York may be some of the finest produced in the country. These off-dry to sweet wines are probably closest to German in style, although the combination of floral, citrus and apricot aromas found in many New York Rieslings are unique unto themselves.

Most New York Rieslings are made in a manner standard throughout the world. Harvested grapes are de-stemmed, crushed, and pressed, with the free-run juice separated from the press juice. Juice is inoculated with a slow fermenting, cold-sensitive yeast culture and is slowly fermented in stainless steel tanks at very cool temperatures. The fermentation is halted to retain some amount of residual sugar by chilling the must below 40° F. These wines do not require extensive aging, and are normally bottled the spring or summer after harvest.

Production methods of Chardonnay vary more than Riesling, and range from cool fermentation in stainless steel without malolactic fermentation or oak barrel aging, to barrel fermentation at ambient temperatures with a full malolactic fermentation and extensive aging in oak barrels. Thus the Chardonnays of New York can vary in style from light-bodied, simple fruity wines to rich, full-bodied, complex wines with ample amounts of oak and fruit with toasty and buttery overtones. The majority of



them fall somewhere in the middle and represent excellent values to wine consumers.

Other white vinifera varieties are also produced. Gewürztraminer, Pinot Blanc and Sauvignon Blanc are grown primarily on Long Island but have only been grown by a handful of producers. The resulting wines thus far have been excellent, indicating a bright future for those varieties.

Red vinifera varieties are grown primarily on Long Island with the exception of Pinot Noir and Cabernet Franc, whose acreage is divided among Long Island, the Hudson Valley and the Finger Lakes. The other varieties, Cabernet Sauvignon and Merlot are grown predominantly on Long Island and are the basis for the Bordeaux-style reds that have attracted so much attention for this relatively new wine





(Left) "Pushing down the cap": Grape skins are periodically mixed with the juice to enhance color and increase complexity.

(Right) A hydrometer is used to check the progress of fermentation.

region. All the vinifera reds are fermented at ambient temperature in contact with the skins, often in open wooden fermenters. Extended skin contact is used with the Bordeaux style varieties, often extended beyond the end of fermentation. A full malolactic fermentation is normally the rule here, and all of these wines receive some time in small oak barrels, often more than a year. One of the main differences is that Pinot Noir, being somewhat weak



in tannin, often has stems added to the fermenting must to increase the tannin levels. Whole clusters of Pinot Noir fruit are sometimes added to the fermenting must to increase the complexity and fruitiness of the wine.

Tools of Winemaking

Winemaking is often said to be the blending of art and science.



For making sparkling wines: The crown cap (the gold cap) and bidule (little white piece) protect the sparkling wine while it is developing in tirage (bottles stored for aging) Once the winemaker feels that the sparkling wine is ready to release, the crown cap and bidule

are replaced with a cork. A very large cork is used to withstand the pressure created by the bubbles of the sparkling wine.



Commonly called a "thief" because it allows the removal of wine from a barrel. this tool lets the winemaker check on the

development of the wine as it ages.

The modern winemaker has many interesting little "tools" to help make the science side of the process



Bungs are used to seal oak barrels as wine ferments and ages. The cream colored bung is a fermentation bung - it allows for carbon dioxide to escape as the wine ferments.



Clamps and O rings seal stainless steel tanks, attach hoses to pumps, and generally ensure safe delivery and storage of the wine through its various stages of development.

work easier, giving him freedom to experiment with the artful side a bit more.



The fermentation process results in the creation of carbon dioxide. This fermentation lock lets that carbon dioxide escape from a carboy of experimental wine without letting oxygen in to spoil the product. See the picture on page 136 for an illustration of how this works.



The refractometer measures the sugar level in the grapes. See the images on page 135

that illustrate the winemaker using this device to check grapes before crushing and what the display looks like.

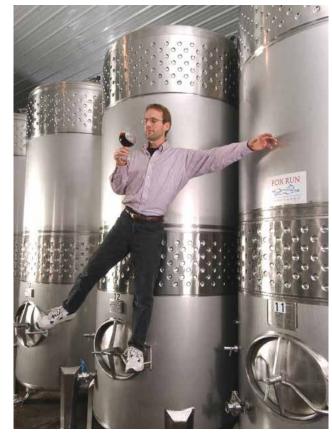
Tools of Winemaking (continued)





The inner workings of the stemmercrusher. They can look a bit bizarre, but they do a great job at separating the grapes from the stems without crushing the stems and seeds (which could give an unpleasant characteristic to the wine). See page 135

for the view of the full machine and a comparison of a bunch before and after going through the process.



The winemaker continually strives for balance in the wine. This will help the wine taste delicious and extend its life.

Special Steps for Sparkling Wine



(Left) Sparkling wines in tirage. The wines rest here for several months and sometimes years while the yeast works its magic, taking the wine through a second fermentation and thereby creating the bubbles which make sparkling wines so special.



After tirage, the sparkling wine bottles are moved into riddling racks (or a mechanized system). The goal is to progressively increase the angle on the bottle over an extended period of time, allowing the sediment that results from the yeast creating the second fermentation to settle in the neck of the bottle. Then the wine moves on to disgorgement and then dosage.











The addition of special corks and a wire hood to maintain pressure in the bottle.

Three steps in disgorging:

1. The bottle neck is frozen. 2. The frozen plug. 3. Disgorged yeast plug.

Final Steps







Filtering.

Bottling.

Enjoy!

Marketing of the Wine

New York State wines are available in restaurants. winery tasting rooms and liquor stores.

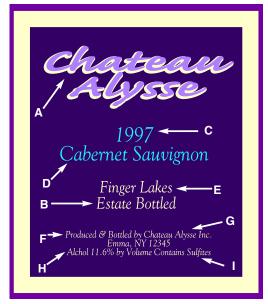








Reading The New York Wine Label



- A. Brand Name of the Wine - this may or may not be the name of the producer of the wine.
- B. "Estate Bottled" - wine producer must be in the same county as the grapes and they must be grown under the vintner's control.
- C. Year of the Vintage - must be at least 95% of the

wine of that year.

- **D.** Varietal wine must have at least 75% of this grape in the wine. Wine must have the flavor and taste characteristics of the varietal.
- **E.** Viticultural Area must be a federally recognized wine region for the

name to appear on the label. At least 85% of grapes used to make the wine must come from vineyards within this designated area.

- **F.** "Grown, Produced, and Bottled by..." indicates that the designated party exercised 100% control from vineyard to bottling.
- "Produced and Bottled by..." may be used if named bottler fermented at least 75% of the wine.
- "Made and Bottled by..." can be used if bottler has fermented a minimum of 10% of the wine.
- "Cellared and Bottled by..." has done work, blending, aging, or other treatment to change or improve the character of the wine.
- **G.** Name and address of the bottler mandatory on all wine labels, this may or may not be the same as the winery where the wine was fermented.
- **H.** "Table Wine" Indicates alcohol level is between 7% and 14% by volume. If alcohol level is printed on the label, the actual level must be within 1.5%.
- L. "Contains Sulfites" As of December, 1987, any wine produced or sold in the U.S. must contain these words on the label, whether or not sulfites were actually added during production. Wine contains sulfites as a natural by-product of fermentation.

Curriculum of the New York State Wine Short Course

Section A: History of the New York Wine Industry Past Success and Future Trends

Notes for the Instructor:

The purpose of this section is to give the student:

- An historical perspective of the New York wine industry,
- an overview of New York's six official wine growing regions, and
- an understanding of the three distinct types of wine grape varieties grown in New York.
- 1) Subject matter to cover:
 - a) Review the location and geography of New York's six official wine regions
 - b) Provide an overview of the origins of winegrowing in each region and highlights of their history to the present
 - c) Discuss the nature of native, hybrid and vinifera grape varieties

2) Tasting for Section 1:

Note for those conducting this course in markets: New York wines have limited distribution, feel free to contact the Foundation and we will see what we can do to advise you on access to New York wines. The best thing might be to send an e-mail to info@newyorkwines.org being sure to indicate that you are planning to give the New York Wine Course, the number of students, and the date of the course and we'll see what we can do to help you locate an adequate supply of wine.

Purpose of the Tasting:

To familiarize students with wines produced from the three main types of grape varieties grown in New York.

Wines to be tasted:

- a) A dry, native variety based sparkling wine Some sparkling wines from the larger New York wineries are made from native varieties
- b) A dry or off-dry French-American hybrid, varietal wine, red or white.

Recommended Varieties:

White: Seyval Blanc, Vidal Blanc, Cayuga, **Traminette**

Red: Marechal Foch, Baco Noir, DeChaunac

c) A dry, vinifera wine, red or white.

Recommended Varieties:

White: Chardonnay, Riesling, Gewürztraminer Red: Cabernet Sauvignon, Merlot, Pinot Noir

Section B: Introduction to Winegrowing In New York State

Notes for the Instructor:

The purpose of this section is two-fold:

- To give the students an introduction to viticulture and winemaking as it is practiced in New York and
- show how a region's climate and soil conditions affect the flavor of a wine, to the point of distinguishing it from a wine of the same variety from a different region
- 1) The Tasting:

Wines to be tasted in this section:

- a) A Chardonnay or Riesling from the Lake Erie Region and the Hudson River Region of New York
- b) A Chardonnay and Riesling from the Finger Lakes Region of New York
- c) A Chardonnay and Riesling from Long Island and the

Niagara Escarpment.

Both Chardonnay and Riesling are widely planted in all six of New York's official wine regions, and have wider availability in most markets than other varietal wines

Section C: Evaluating Wine and Reading the Wine Label

1) Notes to the Instructor:

The purpose of this section is to familiarize the student with the organoleptic evaluation of wine based on a twenty-point score sheet. Emphasis should be placed on distinguishing wines that are flawed from wines that the student merely may not like.

Students will be instructed on deciphering the important information found on the New York Wine Label, Terms to be reviewed:

- a) Vintage Dating
- b) Generic, Varietal and Proprietary Wines
- c) The words "Estate Bottled". "Produced and Bottled by", "Cellared by", "Made by"
- d) New York Viticultural Areas
- e) New York vs. American designation
- f) Alcohol levels

2) The Tasting:

Students will be asked to taste and evaluate three wines and record their results on a 20 point scorecard Recommended wines for this section:

- a) An off-dry vinifera wine such as a Riesling or Gewürztraminer
- b) An off-dry, white hybrid wine such as Vidal, Cayuga or Traminette
- c) An off-dry to sweet native grape wine, either white or rosé, such as Catawba, Delaware or Niagara



Curriculum of the New York State Comprehensive Wine Course

This course consists of 3, two-hour classes designed to give students an in-depth appreciation for and knowledge of New York Wines

1. Class One:

The History of the New York Wine Industry, Past Success and Future Trends

Notes to the Instructor:

The purpose of this class is to provide the student with an overview of the New York Wine Industry with a historical perspective. Subject matter to cover will include:

A) Review of the location and geography of New York's six official wine regions and 10 appellations:

1) Long Island

- a. The Hamptons
- b. The North Fork
- 2) Hudson River Region
- 3) Finger Lakes
 - a. Seneca Lake
 - b. Cayuga Lake



- 4) Lake Erie
- 5) Niagara Escarpment
- 6) Champlain Valley of New York

An overview of the origins of winegrowing in each region and highlights of their history to the present

B) The Tasting:

The tasting should consist of 5-6 wines as you are able to collect, one from each wine region. We recommend:

- 1) A dry white or red hybrid from the Hudson Valley
- 2) A Chardonnay or Riesling from the Finger Lakes
- 3) A Cabernet Sauvignon or Merlot from Long Island
- 4) A medium dry or medium sweet hybrid or native wine from Lake Erie
- 5) A Pinot Noir or Riesling from the Niagara Escarpment.
- 5) A Minnesota Variety from the Champlain Valley of New York.

2. Class Two:

A Study of the Climate, Soils and Grape Varieties of New York, plus a review of Grape Growing and Winemaking Practices.

A) Discussion of the Native, Hybrid and Vinifera varieties used in New York wines

This section will serve to introduce the student to the wine varieties of New York, how and when they were developed and introduced to each region, as well as defining their flavor and aroma characteristics.

B) Climate, Soil, Viticulture and Winemaking -The Four Factors Influencing the Transition from **Grape to Wine**

In this section the student will be introduced to factors influencing the flavor and aroma of wine. Consult the sections of the Wine Reference on viticulture and winemaking in preparation for this part of the course. The following points should be discussed.

1) How soil, meso-climate and vineyard management can influence the flavor and aroma of wine

- 2) How weather conditions influence a wine's acid and sugar levels, as well as flavor in grapes and the resulting wine
- 3) How temperature of fermentation, skin contact, barrelaging and malolactic fermentation influence the flavor and bouquet of wine

The Tasting:

This tasting will illustrate how each of the above factors contribute to differences in wines.

- 1) Taste two 100% Seyvals of the same variety and vintage, 1 from the Hudson Valley and 1 from the Finger Lakes, to illustrate how soil / climatic differences influence the flavor of the wine
- 2) Taste two wines of the same varietal and of identical viticultural areas (ideally these wines should be from the same vineyard), but of different vintages to illustrate how changes in seasonal weather patterns influence wine quality
- 3) Taste two Chardonnays from identical vintages and regions. One should have undergone barrel fermentation and/or barrel aging and have undergone a malolactic fermentation. The other wine should have

been fermented in stainless steel and have received little or no barrel aging and no malolactic fermentation.

3. Class Three: Organoleptic Analysis of **New York Wines, Reading the New York Wine** Label

A) Organoleptic Analysis of Wine Discussed in the section will be:

- 1) Description of standard terminology to describe wine flavor and aroma characteristics. Discuss varietal characteristics of New York wines and mention how they may differ from wines of other regions
- 2) Use of the 20 point scorecard to analyze wine quality
- 3) Identifying wine flaws, discuss the distinction between a flawed wine and one that is simply unappealing to individual consumers

B) Reading the New York Wine Label

Consult the section in the Reference on reading the New York State wine label in preparation for this class. Discussion should include:

- 1) Wine label terminology
- 2) Importance of vintage dates

3) Making a decision based on label information

The Tasting:

Taste 6-8 varietal wines from the six official regions of New York. Rate each on the 20-point scorecard and discuss the results. Discuss the varietal characteristics of varietal wines produced in New York State versus those produced in other regions, for example California or Burgundy. If desired, include a varietal wine from another region and taste it blind with the New York wine of the same variety.







New York Viticulture

Introduction

Viticulture in New York State has been blessed by a series of circumstances and natural phenomena. Its unique glacier-altered topography with strategic bodies of water and deep, well-drained soils give New York a predisposition for viticulture that few other eastern states can claim. Its northern position, moderate rainfall and generally low humidity create a very favorable environment for grapevines. In spite of the frequent low winter temperatures that at times threaten the survival of



New graft in the nursery leafing out

cold-sensitive varieties, the climate of New York is generally more favorable to vine growth than the warmer, more humid states to the south. Likewise, it is the northernmost eastern state capable of growing and ripening grape crops on a wide range of varieties. The following discussion of viticultural methods is by no means unique to New York; many eastern states and cool-climate wine regions can and do employ some, and perhaps all, of these methods.

All vineyards in New York are established in a manner that



Field graft on Long Island

has become a standard worldwide. Grafted or ungrafted one-year rooted cuttings are used to establish new vinevards. Native varieties, and New York and French hybrids, are generally grown on their own roots. Vinifera varieties are almost always grafted to hardy, pest-resistant rootstocks. Soil borne pests, primarily phylloxera, a root louse, and nematodes, a destructive microscopic root worm, quickly debilitate the root systems of vinifera vines grown on their own roots. Native varieties with a natural resistance to these pests, and hybrid varieties.

bred to repel these invaders, do not require the costly grafting procedure.

Rootstocks that the vinifera varieties are grafted to were not only developed to resist these pests but also to be compatible with budwood, to provide an appropriate level of vigor to the mature vine, and to be compatible with specific or a wide range of soil characteristics.

New York Viticulture Go To Contents P

Vineyard Establishment

Vineyards in New York State are planted in the spring of the year, either with a grape-vine planter on level, smooth ground or with an auger on hilly ground. One-year rooted vines are planted in parallel rows across slopes to limit the effects of water erosion. Traditionally, vineyards in New York have been laid out in a 9' X 8' pattern: 8' spacing between vines and 9' between rows. This pattern was established when native varieties were grown exclusively in New York; wide spacing allowed ease of movement between rows with horses and equipment, as well as allowing air circulation to control the onset of disease. The vigorous nature of many of the native varieties also dictated this wide spacing. As hybrid and vinifera varieties gradually replace native varieties, traditional

spacing has come under scrutiny. In Europe where vinifera is grown almost exclusively, much narrower spacing has been used. In fact, 2 to 3 times the number of vines may be planted in a European vineyard in the same amount of space. With more and more acreage of vinifera vines being planted in New York, narrower spacing is being attempted, although row width is constrained by the need to move equipment through the vineyard, spacing within rows in new plantings is commonly 6' and as close as 4' between vines. The advent of more effective chemicals to control disease and equipment designated for use in narrow rows has allowed close spacing, sometimes as close as 3' X 5'.



Laser equipment is now used for optimum alignment in the planting of rows.



The same vineyard – one year after planting.



The same vineyard – four years after planting.

Pruning and Training Vines in New York State

Pruning is the removal of most of last year's growth and sometimes portions of the older vine wood, in order to regulate the annual growth of the vine to produce the optimum amount of crop without compromising the vigor of the vine. Removing too much of the previous year's growth or "budwood" results in excessive cane growth and too small a crop. Light pruning often results in too much fruit set, which the vine either may not be able to ripen, or which may deplete its reserves, reducing the vine's vigor and resulting in poor yields in subsequent years.

There are several main pruning systems: cane pruning, spur pruning and mixed pruning. Cane pruning is very useful when varieties have unfruitful basal buds or experience low winter minimum temperatures, which are more apt to damage spurs than longer canes. Cane pruning also allows the vine to be spread over a greater area of trellis, increasing sunlight interception and fruit exposure. For this reason, cane pruning is normally used in New York State in most areas for most varieties. Spur pruning (leaving short 2 or 3 bud segments) is generally used to supply the vine with renewal canes. It can be said that mixed pruning is the operative





method in New York. In recent years, mechanical pruning or "hedging" with or without hand follow has been used extensively in some varieties.

Grapevines in New York State are trained on trellis, post and wire systems that support the vine, improve its sunlight interception, and increase fruit exposure. Common to most systems are two or three parallel wires to which the vine is secured. Wires are supported by wooden or steel posts, with 3 or 4 vines between posts. Several training systems, all cane pruned with renewal spurs, have been developed for each varietal type of grapevine. Commonly used with native varieties is the Umbrella Kniffen system where the head of the vine is positioned between the top and middle wires of the trellis and two long canes are draped over the top wire and secured on the middle or lower wire. Also commonly found with native varieties is a top-wire cordon training system in which a permanent cordon is established on the top-wire and vines are spur-pruned. This system saves labor and increases production. The Four-Cane Kniffen system positions the head of the vine's single trunk just below the top wire; two canes on opposite sides of the vine extend along the top and middle wires. A variation on this system (and one often employed in areas where winter damage is often a problem) is the Two Trunk Kniffen or Double Kniffen. Each vine possesses two trunks, and each trunk has two canes, extending along the top and middle wires in opposite directions. The advantage with this system is that it allows

nearly normal production even if one trunk is destroyed or damaged by winter injury.

Vinifera vines, being somewhat more sensitive to low winter temperatures, are frequently trained in a multi-trunk fan system in colder regions and sites, particularly in the Finger Lakes. The system has numerous advantages in cold climates. The head of the vine is very low, often only inches from the ground, permitting the sensitive graft union to be buried and protected during the vine's dormant period. The multiple trunks (canes) provide adequate budwood



when severe winters result in high bud mortality. In warmer areas such as Long Island, a High Renewal Training system is often employed using 3 or 4 wires. The head of the vine is positioned just below the bottom wire, and 1 or 2 canes are trained along this wire. The upright shoots of vinifera vines are then either threaded between the middle and top wires, or two wires are placed in tandem position on either side of the post. Shoots are placed between these two wires and either secured with ties or left to be secured by the vines tendrils.

Leaf pulling – usually performed manually – this is a mechanical option being tested.

Growers of vinifera grapes are increasingly using summer canopy management to improve wine quality and improve bunch rot. Summer shoot tipping (pruning) removal of leaves around the fruiting zone, and vertical shoot positioning with moveable trellis 'catch wires' are all practices with one goal: to increase the exposure of leaves and fruit to sunlight. Many growers have found that these practices enhance production of flavor-producing compounds not found in fruit grown in excessively shaded vineyards. The additional air circulation also dramatically reduces the incidence of botrytis bunch rot.



Vineyard hedging.

Care of Grafted Vines

Grafted grapevines require extra care to protect the somewhat fragile union between the rootstock and budwood. Especially sensitive to low winter temperatures that can freeze it and kill the vine, the graft is normally covered with soil from late fall to spring. Soil is hilled up over the graft once the vine has become dormant by means of a hydraulic grape hoe. In the spring the soil is taken away from the graft with the same implement, but usually some soil remains on the graft that must be removed with a hand hoe. Removal of the soil is essential, along with any shoots from the root-



Viticulturlists on Long Island experiment with the benefits of composting.

stock. Should the soil not be removed, there is a good possibility that the rootstock will push its own shoots, depriving the vine above the graft of nutrients. Continued growth of rootstock shoots will result in the decline and eventual death of the vine above the graft.

Soil Management and Disease Control

Grapevines are particularly hearty plants requiring a limited diet of nutrients and water. In most New York soils well suited to agriculture, vineyards require only about 30 pounds of added nitrogen per year, and rare applications of potassium and phosphate. Soil fertility or plant-available nutrients are best measured by petiole analysis, sampling which is done in late August or early September. Analysis of this plant tissue yields a far better estimate of a vineyard's nutrient needs than a simple soil test. Grapevines are particularly conservative in their use of water; on deep, well-drained soils they can withstand several seasons of below average rainfall without a significant decrease in yield.

Soil management practices in New York State vineyards vary



The application of nutrients after harvest helps to protect the the vines.

depending on the soil types (texture, fertility), slopes, rainfall and drainage. Although nearly all vineyards in the state use pre-emergent herbicides to control weeds under the trellis, methods vary in soil in the interrow. Steep sloped vineyards as found in the Hudson Valley and the Finger Lakes are often terraced with a permanent sod in the row middles. In sloping vineyards where drainage problems or skeletal soils restrict the establishment of sod, cover crops are sometimes planted. In other areas where erosion is not a problem, clean cultivation is sometimes practiced, although its use is declining due to the availability of effective "burn-down" herbicides and concerns about soil compaction.

Disease control practices in New York State vineyards are similar to those in other moist, cool climates throughout the world. Black rot, downy mildew, powdery mildew, botrytis cinera, and brown rot all threaten the vine and its grapes depending on the time of the year and weather conditions. Modern agricultural chemicals can control all these ailments except under weather conditions that prevent the effective spray applications. Low-volume air blast sprayers are most commonly used for spray applications that deliver small amounts of spray materials delivered by a high velocity air blast that insures total coverage of the grape canopy. The number of times that spraying is required depends primarily on the moisture, the grape variety, the time of the year, and to some extent the temperature. Warm weather with frequent rainfall can mean a weekly spray schedule. Insect pests can

pose problems but are normally controlled with one or two insecticide applications when they represent an economic risk. Pest monitoring prior to spraying has allowed grape farmers in New York State to greatly reduce the cost of pest control.

Bird damage of grapes is a problem that plagues many New York vineyards not only because of their proximity to

hedgerows and forests that provide nesting areas and cover, but also because of their location near migratory bird routes. Since there is no approved chemical means of preventing bird depredation, and since most migratory birds are federally protected, grape growers must resort to netting and/or alarms to prevent birds from consuming their crop. Although labor intensive, netting vineyards is the only sure way of protecting a grape crop. Bird "cannons" and electric alarms have only limited effectiveness in keeping birds out of vineyards.



Growers use many types of devices to protect their crop from predators.



The luscious smell of ripe grapes can prove to be too tempting to wildlife and birds, so grape growers need to protect their crop with nets.

Harvesting Winegrapes in New York

Much of the harvest in New York is now accomplished by mechanical harvesters. Rising labor costs and a shrinking labor pool, coupled with improved harvester technology, have made it far more cost effective to harvest mechanically. These self-propelled machines straddle the vineyard row and remove the grapes from the vine by either vibrating the vine trunks and posts or by beating the vine with light plastic arms or paddles. The grapes are literally torn from the rachis and caught on spring loaded catch plates which guide them on to conveyor belts and eventually to one-ton bins drawn by tractors in an adjoining vineyard row. Because the skins of the grapes are sometimes broken during harvest, most bins are treated with a solution of sulfur dioxide or are

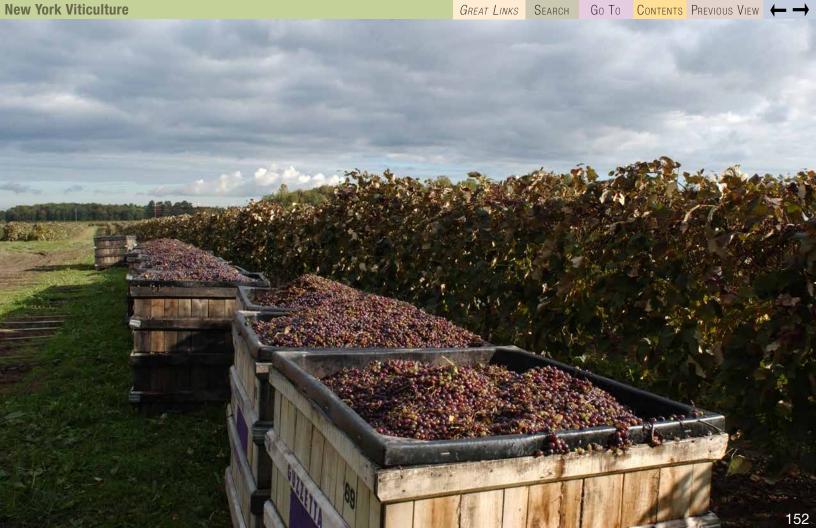


quickly removed from the vineyard and processed immediately. Results have shown that wine resulting from promptly processed mechanically harvested grapes in no way suffers in comparison to wine made from hand-harvested grapes.

Hand harvesting is still essential in vineyards too steep or otherwise incompatible with mechanical harvesters. Select bunch harvesting, whether to make a late harvest wine or to insure the quality of the variety that is subject to uneven ripening, still must be done by hand. Here the higher bottle price more than makes up for the added labor costs of hand picking.



For a few small wineries, picking by hand remains the method of choice for a number of reasons. Some wineries do not have access to harvesting machines and may not have the ability to handle one-ton bins of grapes. Others find that in hiring a mechanical harvester, the grower is committed to harvesting his grapes no matter what the conditions. It is also possible, although unlikely, that a grower may have a trellis or training system that is incompatible with machine harvesting, resulting in damage to the trellis or vines. These conditions make it unlikely that hand harvesting of grapes will be completely abandoned but, at this point in time, approximately 95% of the crop is machine picked.



Bibliography

Adams, Leon D., The Wines of America, New York, McGraw Hill Book Company, 1978.

Amerine, Maynard A., Wine Production Technology in the United States, American Chemical Society, Washington DC 1981

Cline, M.G. and Marshall, R.L., Soils of New York Landscapes, Information Bulletin 119, New York State College of Agriculture, 1977

Dethier, B.E. and Vittum, M.T., Growing Degree Days in New York State, Bulletin 1017, New York State College of Agriculture, Ithaca November 1967

Dial, Tom, The Wines of New York State, Utica, NY, North Country Books, 1986

Galet, Pierre and Lucy Morton, A Practical Ampelography, Ithaca, NY Cornell University Press, 1979

Hedrick, U.P., Grapes and Wine from Home Vineyards, New York Oxford University Press, 1945

Morton, Lucy, Winegrowing in Eastern America, Ithaca, NY Cornell University Press, 1985

Munson, T.V., Investigation and Improvement of American Grapes, 1909

Pool, R.M., et al., Vineyard and Cellar Notes, 1958-1973, Special Report No. 22, New York State College of Agriculture, Ithaca, NY, 1976

Reisch, B.I. et al, New York's Food and Life Sciences Bulletin, Cornell University, NYSAES, Geneva, NY Number 132, 1990, Chardonnel Grape

Reisch, B.I. et al, New York's Food and Life Sciences Bulletin, Cornell University, NYSAES, Geneva, NY Number 149, 1996, Traminette Grape

Robinson, Jancis, Vines, Grapes and Wines, New York, Alfred A. Knopf, 1986

Wagner, Philip A., A Winegrower's Guide, Revised Edition, New York, Alfred A. Knopf, 1965

Weaver, Robert J., Grape Growing, New York, John Wiley and Sons. 1976

Our thanks to the Cornell Cooperative Extension and the New York State Agricultural Experiment Station for many contributions to the information in this book. Check out their websites at: http://www.cce.cornell.edu/ and http://www.nysaes.cornell.edu/