



# Let's Grow Grapes!

## 4-H Viticulture: New York Adaptation Guide

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### **We created this document to:**

1. **Provide New York-specific background and reference materials that strengthen MSU's curriculum.** This guide adds key NY resources so educators can teach vineyard science in a way that reflects New York's unique grape-growing regions.
2. **Help educators connect lessons to real-world opportunities in New York.** The guide helps educators link activities to the state's grape industry and workforce pathways, making the learning more relevant and meaningful for youth.

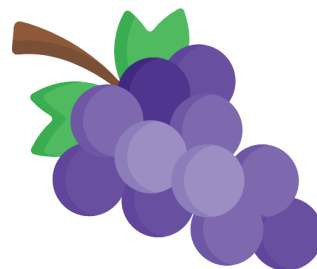
### **The New York Adaptation Guide includes:**

- History of Grapes in New York
- New York State Grapes Fact Sheet
- Grape-related Careers
- An Adaptation for Lesson 1
- New York County Map
- New York State AVA (American Viticultural Areas) Map



**Beyond  
Ready**

# Introduction



## Why Grow Grapes?

- Grapes are grown in all 50 states.
- In New York, the grape and wine industry supports nearly **92,731 jobs** as of 2022. New York is among the **top three U.S. states in grape production**, and its wine industry is the nation's third largest.
- Grapes are one of the fastest growing agricultural commodities in New York State.

## What Makes New York Grapes Unique?

New York grows an unusually wide range of grape varieties. Native American varieties such as Concord and Catawba, French-American hybrids, and classic European *vinifera* varieties like Riesling, Chardonnay, and Cabernet Franc are all found here. More than 80 percent of the grapes grown in New York are native varieties—mainly Concord—used primarily for juice and jelly, while Riesling is the flagship *vinifera* wine grape.

Each 4-H club and program should partner with a vineyard, winery, or viticultural professional to explore grape growing, understand careers in the industry, and participate in hands-on viticulture practices. Find a viticulture specialist near you at:



### CCE Lake Erie Regional Grape Program

<https://lergp.cce.cornell.edu/>

### Finger Lakes Grape Program

<https://flgp.cce.cornell.edu/>

### Cornell CALS Viticulture & Enology

[https://cals.cornell.edu/viticulture-enology\\_](https://cals.cornell.edu/viticulture-enology_)

### Eastern NY Horticulture Team

<https://enych.cce.cornell.edu/>

### Long Island (Suffolk CCE) Grape Program

<https://ccesuffolk.org/agriculture/grape-program>

# History of Grapes in New York



## History 1: The New York Tradition of Viticulture

New York's tradition of grape growing spans over three centuries, beginning with Dutch and French settlers in the 17th century who were challenged by disease and cold winters that killed European vines.

Settlers in the Hudson Valley adapted by cultivating hardy native American grape species, establishing New York as one of the nation's earliest wine regions. In the early 19th century, the first commercial vineyard was planted at Croton Point by Richard Underhill using native varieties like Catawba and Isabella, while Reverend William Bostwick started the Finger Lakes' first vineyard in Hammondsport in 1829. Brotherhood Winery, founded in 1839, remains America's oldest continuously operating winery.

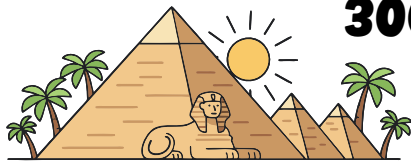
By 1880, New York was producing over 2 million gallons of wine annually, serving fast-growing urban markets. To overcome climate and disease challenges, growers embraced hardy native and hybrid grapes—most notably with French-American hybrids introduced in 1936, blending European flavor with resilience.

Today, more than 33,000 acres of vineyards thrive statewide, with key regions including the Finger Lakes, Lake Erie, Hudson Valley, and Long Island. New York is now the nation's third-largest producer of grapes and wine, celebrated for its innovative viticulture.



Vitis vinifera grape (common grape vine) varieties are first cultivated near northern Iran between the Black and Caspian seas.

**6000 BC**



**3000 BC**

Cultivation reaches Egypt and Phoenicia.

Viticulture reaches Greece.

**2000 BC**

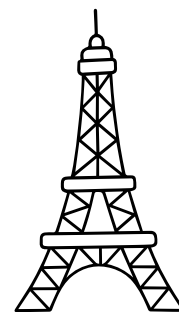


**1000 BC**

Viticulture reaches Italy, Sicily, and North Africa.

Viticulture reaches Spain, Portugal, and France, then spreads across Europe to the British Isles.

**500 BC**



Richard Underhill starts New York's first commercial winery at Croton Point, growing native Catawba and Isabella grapes.

**1827**



**1829**

The Finger Lakes' wine history begins with its first vineyard planted in Hammondsport on Lake Keuka.

Brotherhood Winery in Hudson Valley produces its first vintage, becoming America's oldest continuously operating winery.

**1839**



**1860**

Pleasant Valley Wine Company is established in the Finger Lakes as the nation's first bonded winery.

Prohibition ends; New York's wine industry survives by selling table grapes, juice, and sacramental wine.

**1933**



Dr. Konstantin Frank demonstrates European vinifera grapes can grow in the Finger Lakes, revolutionizing East Coast viticulture.

**1950s**



**1976**

The Farm Winery Act allows small wineries direct sales, sparking a rapid expansion and modern renaissance of New York wine.

## History 2: Four Seasons in New York State

New York's grape regions follow distinct cycles influenced by local climates, with harvest mostly from late August to October. The Finger Lakes' lakes extend the season so varieties like Riesling ripen late. Hudson Valley vineyards harvest mainly in September and October, favoring hardy hybrids.

Lake Erie's grape belt, dominated by Concord grapes, benefits from the warm lake effect for full ripening, harvesting from early September into late October. Long Island's maritime climate gives New York's longest season—early whites and late reds ripen from August into November. Growers use frost protection and disease management to safeguard crops.

## History 3: The Life Cycle in the Vineyards

### Winter – Dormancy and Pruning

During winter, grapevines enter dormancy, halting growth to survive freezing temperatures. Growers protect vines by mounding soil over the graft union or using cold-hardy rootstocks. This season is dedicated to pruning, removing excess canes and shaping the vine for the coming year. Conducted from January to March, pruning determines the number of buds that will produce shoots and fruit, directly influencing yield and grape quality.



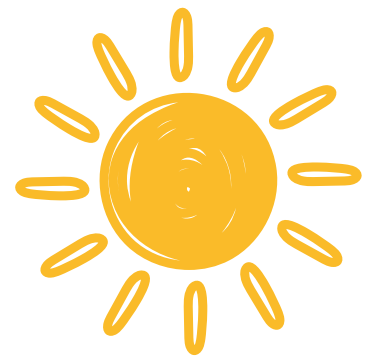
### Spring – Bud Break and Growth



In early spring, buds swell and burst into green shoots in a process called bud break, typically in April. Growth starts slowly and is vulnerable to frost but accelerates through May and June. By late spring, vines flower and self-pollinate, leading to fruit set as tiny berries replace the blooms. Ample sunlight and warmth support rapid vine growth, preparing the clusters for summer ripening.

### Summer – Veraison and Ripening

By late July or August, veraison begins — grapes soften, change color, and accumulate sugars while acids decline. White varieties turn golden, while red ones deepen to purple. From this point to harvest, which may take several weeks, vines channel energy from leaves into fruit ripening. Because grapes do not ripen after harvest, timing is critical to achieve the ideal balance of sugars, acids, and flavors. Depending on the variety and location, harvest can occur from early September into October.



### Fall – Harvest and Postharvest Handling

Harvest timing blends science and experience. Growers measure sugar (°Brix), acidity, and flavor maturity to determine the perfect moment. Grapes are field-packed to preserve their delicate skins and swiftly transported to wineries to prevent oxidation. Immediately after picking, grapes are cooled and stored under controlled temperatures to maintain freshness and prevent decay until they reach markets, processors, or wineries.



# NYS Grapes Fact Sheet

## Production

New York's grape production follows a seasonal cycle adapted to its cool climate. In winter, vineyards lie dormant and farmers prune vines to prepare for spring growth. Spring brings bud break in April or May, with flowers blooming and self-pollinating; growers must guard against late frosts. Through the summer, grapes develop sugars and flavor during warm days and cool nights. Farmers manage canopy growth for sunlight and air, and combat humidity-driven pests and diseases. In fall, harvest runs from late August to October: Niagara grapes ripen early, while Concord grapes peak in September–October. Juice grapes are often machine-harvested, while premium wine grapes are hand-picked. Some grapes are left for ice wine, harvested during winter freezes for intensely sweet juice. After harvest, vines store nutrients and enter dormancy.

New York grows grapes in seven main regions, called American Viticultural Areas: Finger Lakes, Lake Erie, Niagara Escarpment, Long Island, Hudson River Region, Upper Hudson, and Champlain Valley. Each region has a different climate. The lakes in the Finger Lakes and Niagara Escarpment help keep vineyards warmer in winter and cooler in summer. Lake Erie has longer warm seasons, which is great for Concord grapes. Long Island is the warmest area, so it can grow European grapes like Merlot and Chardonnay. Farmers also plant grapes on hillsides and near water to protect them from frost. Because of these conditions, New York can grow grapes for wine, juice, jelly, and fresh eating.



## History

New York's grape-growing history dates back over 300 years, beginning with 17th-century European settlers in the Hudson Valley who experimented with native wild grapes and imported vines. The industry grew in prominence during the 1800s, marked by the opening of Brotherhood Winery (1839), America's oldest continuously operating winery, and Pleasant Valley Wine Company (1860), the nation's first bonded winery. The Concord grape, developed in the 1840s, thrived in New York's climate and spurred the grape juice industry when Dr. Thomas Welch produced the first pasteurized grape juice in 1869. The Concord Grape Belt along Lake Erie flourished for both wine and juice production.

Prohibition (1920–1933) hurt the wine industry, but growers adapted by selling grapes for juice. Recovery started slowly, relying on hardy American and French-American hybrids. In the 1950s, Dr. Konstantin Frank introduced successful vinifera grape plantings in the Finger Lakes, making European-style wines possible in New York. The Farm Winery Act of 1976 transformed the landscape by facilitating small farm wineries, accelerating growth from under 20 to over 400 wineries today. New York now stands as a top grape-producing state, renowned for its diversity in wine styles and ongoing innovation.

### 1849 – Concord Grape

Ephraim W. Bull developed the Concord grape in Concord, Massachusetts. Hardy and flavorful, it thrived where European grapes failed.



### 1868 – Niagara Grape

Hoag and Clark crossbred Concord and Cassady grapes in Niagara County, New York. Their sweet, aromatic hybrid became America's leading green grape.



### 1869 – Concord Grape Juice

Dr. Thomas B. Welch pasteurized Concord grape juice to prevent fermentation. Vineyards in western New York still supply Welch's juice today.



# NYS Grapes Fact Sheet

## Varieties

New York's grape industry is diverse, with varieties grouped into American, European vinifera, and French-American hybrid grapes. American grapes like Concord and Niagara are known for their cold-hardiness and distinctive, sweet flavors. Concord is most famous for juice, jams, and sweet wines, and is the state's leading grape. Niagara, a white grape, is popular in juice and sweet wine production. Catawba and Delaware are also grown mainly for juice and wine, though seedless table grape varieties like Canadice and Himrod are produced locally.

European vinifera varieties, including Riesling, Chardonnay, Pinot Noir, Cabernet Franc, Merlot, and Gewürztraminer, are grown across several of New York's American Viticultural Areas, where site selection and vineyard management allow these grapes to produce high-quality wines despite their sensitivity to cold. Although vinifera grapes account for less than 10% of the state's total grape tonnage, they represent a major share of New York's premium wine production. Riesling, in particular, has earned national and international recognition for its quality.

French-American hybrids, such as Seyval Blanc, Vidal Blanc, Cayuga White, Traminette, Baco Noir, and Marechal Foch, mix hardiness and wine quality and are planted widely in cooler regions like the Hudson Valley and northern areas. Hybrids are valued for resistance to cold and pests, and ongoing innovation includes seedless Concord-type grapes bred at Cornell University.

## Commodity Value

New York has about 35,000 acres yielding 136,000 tons annually and a farm gate value near \$63 million. Grapes are the state's second-largest fruit crop and, counting wine, juice, and tourism, generate hundreds of millions in economic impact yearly, supporting over 450 wineries, juice processors, and thousands of jobs.



## Top Producer

Chautauqua County, in the far western part of the state along Lake Erie, is the giant of New York grape growing. With roughly 17,000 acres of vineyards, Chautauqua County alone accounts for about half of all grape acreage in New York. It's often noted as the largest grape-growing county outside of California.

## Nutritional Value

Grapes are a nutrient-dense, hydrating food. A typical serving (about 1 cup) provides 60-100 calories, with no fat or cholesterol and very little sodium. Grapes supply vitamin C and potassium and contain naturally occurring antioxidants and polyphenols that research links to heart health. Eating grapes of different colors is one way to add variety to fruit and vegetable intake. They can be enjoyed fresh, added to meals like salads or yogurt, blended into smoothies, or frozen for a refreshing snack.



# Careers in the Grape Industry

## Wider Grape Careers:

### Sustainability Manager

As climate shifts bring more frequent drought, heat stress, frost, and disease pressures, the grape industry needs experts who can guide adaptation and resilience. Sustainability Managers develop strategies that help vineyards cope with changing environments, such as shade structures, water efficiency, soil health, and forecasting tools. Their work helps secure the future of grape production under increasingly uncertain conditions.

- Full-time, year-round role.
- Bachelor's or Master's in Environmental Science, Agronomy, or Sustainability Management
- Model and forecast climate impacts on grape production and water use
- Recommend vineyard practices that reduce stress (shade nets, rootstock selection, soil health)
- Coordinate on-farm trials and help growers access climate-resilience funding
- Monitor and report on carbon footprints and sustainable input use



### Outreach Specialist

Outreach Specialists serve as a bridge between research institutions and the farming community, helping translate scientific discoveries into practical use. In the grape or specialty fruit sector, these educators run field days, workshops, demonstration plots, and advisory services that encourage growers to adopt new practices, varieties, or technologies. Their work amplifies impact across regions and supports sustainable, profitable farming.

- Full-time or academic-year position; busiest during spring-fall field seasons
- Bachelor's or higher in Agricultural Education, Plant Science, or Communication
- Organize grower workshops, field days, and demonstration vineyard projects
- Produce extension bulletins and online guides on grape management practices
- Support growers through technical assistance and advisory services
- Build grower-researcher networks and evaluate outreach effectiveness

## Food Researcher

Researchers in agriculture and food systems examine market dynamics, policy influences, supply chain efficiencies, and consumer behavior. In the grape sector, these analysts evaluate demand for table grapes, export trends, value-added product potential, or cost-benefit of new vineyard technologies. Their insights inform growers, cooperatives, processors, and policymakers to make decisions.

- Full-time, research-based position, often within universities, think tanks, or industry groups
- Master's or Ph.D. in Agricultural Economics, Food Science, or Data Analytics
- Collect and analyze data on grape production, pricing, and trade flows
- Model market or policy impacts on grape growers and processors
- Publish reports and advise cooperatives on strategic decisions
- Track consumer trends in grape products and present findings to stakeholders



## Business Developer

Business Developers in the specialty crop sector focus on expanding market reach for fresh or value-added agricultural products (such as table grapes, dried fruit, or grape concentrates). They identify growth opportunities, build strategic relationships, and guide partnerships or sales channels to help growers and processors increase sales and enter new markets. Their role is both outward-facing (finding customers and partners) and inward (aligning product offerings, pricing, and capacity with market needs).

- Full-time, year-round corporate or cooperative role
- Usually require a bachelor's degree in Marketing, or Business
- Identify and cultivate new markets and distribution partners for grape products
- Negotiate contracts and build relationships with retailers, wholesalers, and exporters
- Collaborate with operations teams to match product specifications to market needs
- Monitor competitor activity and adjust pricing and strategy accordingly

## Marketing Managers

Marketing Managers for fruit or specialty crop brands are responsible for developing the brand identity, messaging, and promotional strategies that drive demand. They tell the “story” of the product, its quality, origin, sustainability, or health appeal, and design campaigns that persuade buyers and consumers. In the grape industry, these professionals help differentiate brand lines (e.g., “organic grapes,” “locally grown grapes,” “premium raisin blends”) and coordinate marketing across digital, retail, and trade channels.

- Full-time, permanent position, with peak workload before harvest and marketing seasons
- Bachelor’s in Marketing, Communications, or Agricultural Business
- Develop brand strategy, messaging, and promotional content for grape product lines
- Coordinate campaigns across social media, trade shows, and retail promotions
- Analyze consumer feedback and adjust branding strategies for market resonance
- Align marketing materials with sales and product development goals



## Food Processors

Food Processors in the grape and specialty crop industry are vital links between farm and market. They take freshly harvested grapes and turn them into stable, consumable products like juices, dried fruit, purees, concentrates, or packaged fruit snacks. Their work involves both manual and automated operations, quality checks, and strict food safety protocols. By ensuring that grape products maintain quality through cleaning, sorting, dewatering, and packaging, they help growers expand into more diverse markets and reduce losses due to spoilage.

- Full-time or seasonal position, depending on harvest cycles and processing demand
- High school diploma or vocational training; experience in food production preferred
- Operate and maintain grape-processing equipment safely and efficiently
- Inspect, clean, and package products to meet food-quality standards
- Record production data and assist with quality assurance checks
- Follow strict sanitation and food safety protocols throughout operations

# Viticulture Careers:

## Irrigation Specialist: Vineyard Water Systems

Irrigation Specialists play a critical role in maintaining the health and productivity of grapevines by designing, installing, and managing precise watering systems. Because grapes are sensitive to water stress. This role is essential for optimizing grape yield and ensuring sustainable water use throughout the growing season. Specialists often work in collaboration with vineyard managers and environmental consultants.

- Full-time or contract-based, seasonal demand may increase
- Experience with irrigation installation, plumbing, and pump maintenance
- Install and maintain drip irrigation systems, timers, and moisture sensors
- Monitor soil conditions and adjust water schedules based on climate and vine growth stage
- Collaborate with vineyard managers to reduce water waste and runoff
- Troubleshoot and repair irrigation line blockages, leaks, or pressure issues
- Understand regional water use regulations and sustainability practices



## Vineyard Scout/Pest Monitor

Scouts are the vineyard's first line of defense against pests, diseases, and invasive species that can damage crops. These professionals walk the rows regularly, checking leaves, shoots, and soil for early signs of problems. Their careful observations help vineyard managers respond quickly and avoid large-scale crop loss, making their role essential for successful grape production.

- Full-time during growing season; part-time options available
- No degree required, but agricultural training or certification is helpful
- Walk vineyard blocks to monitor for pests, mildew, rot, and other threats
- Record environmental conditions and plant health indicators
- Use hand lenses, sticky traps, and mobile apps to document findings
- Report weekly to vineyard manager and suggest intervention strategies
- Stay current with integrated pest management (IPM) best practices

## **Grapevine Propagation Technician**

Before vineyards can produce fruit, they need healthy vines. Propagation technicians specialize in producing high-quality grapevine plants from cuttings, working in nurseries or greenhouse settings. They focus on grafting, disease resistance, and early root development, supporting long-term vineyard health and regional planting needs.

- Full-time or seasonal, greenhouse or nursery-based
- Experience or coursework in horticulture or plant biology preferred
- Propagate grapevines through cuttings and grafting
- Monitor rootstock health, disease resistance, and growth rate
- Label and sort plants by variety and vineyard destination
- Manage inventory and prepare shipments to vineyard clients
- Ensure cleanliness and sanitation in propagation spaces

## **Vineyard Equipment Technician**

Equipment technicians keep vineyards running by maintaining and repairing the machinery that powers modern grape growing. From tractors to harvesters to sprayers, this role ensures all systems operate efficiently and safely during critical periods like pruning, spraying, and harvest. This role is ideal for mechanically inclined individuals who enjoy hands-on work in the field.

- Full-time, year-round with peak activity during spring and harvest
- Experience with diesel engines, hydraulics, and ag equipment required
- Inspect, maintain, and repair vineyard machinery
- Calibrate sprayers, harvesters, and trimming tools to ensure precision
- Fabricate or source replacement parts as needed
- Train field crews on proper equipment use and safety protocols
- Track service schedules and maintain parts inventory



## Harvest Logistics Coordinator

During grape harvest season, logistics coordinators manage the complex scheduling, transportation, and documentation needed to move fruit quickly and efficiently from vineyard to buyer. This role is time-sensitive and requires coordination between field crews, trucking companies, packhouses, and buyers. A successful harvest logistics coordinator ensures that fresh grapes retain their quality through every handoff in the supply chain.

- Seasonal (harvest season), with potential for year-round planning roles
- Experience in logistics, operations, or agricultural production helpful
- Create and manage daily harvest schedules and load tickets
- Coordinate pickup and delivery of bins, pallets, and cold storage
- Communicate with buyers, processors, and truck drivers
- Track harvest weights and field yields
- Respond quickly to weather changes, road delays, or labor shortages



## Grape Sales Representative

Sales representatives connect vineyard producers with wholesale buyers, retailers, and distributors. They help position fresh table grapes in competitive markets, negotiate pricing, and ensure that product arrives in excellent condition. This role blends knowledge of grape varieties and post-harvest handling with relationship-building and market insight.

- Full-time, year-round or seasonal with harvest focus
- Background in agriculture marketing or produce sales preferred
- Represent vineyards or grower cooperatives to retailers and distributors
- Negotiate pricing based on market trends, quality, and volume
- Ensure grapes meet buyer specifications for color, size, and sweetness
- Travel to trade shows, farm visits, or retailer distribution centers
- Collaborate with cold storage, shipping, and QA teams to ensure freshness



# New York Viticulture: How Did Winemaking Evolve in NY?

## Lesson 1

**Overview:** Participants will explore how New York’s grape and wine industry developed over time. Youth will create a timeline of major milestones, beginning with the first vineyards planted in the Hudson Valley in the 1600s, the rise of Concord grapes along Lake Erie, the expansion of the Finger Lakes and Long Island wine regions, and today’s innovation in cold-hardy and hybrid grape varieties. Participants will learn how grapes in New York are used for juice, jam, fresh eating, and wine, and how the grape industry supports local communities and careers across the state.

American Viticultural Areas (AVA) will also be introduced as federally designated regions that reflect New York’s diverse climates, soils, and growing conditions.

**Age Level:** 12–19 years

**Season:** Any

**Time:** 2 hours or less, based on level of participant interest and time researching

**Objectives:**

Participants will be able to:

- Name at least three major milestones in the history of New York grape growing (for example, early Hudson Valley vineyards, the development of Concord grapes, and the Finger Lakes wine renaissance).
- Identify at least three New York grape-growing regions (such as the Lake Erie Concord Grape Belt, Finger Lakes, Hudson River Region, and Long Island) and describe one unique feature of each.
- Explain how native, hybrid, and vinifera grape varieties each play a role in New York’s grape and wine industry.
- List at least two New York careers connected to grapes (for example, grower, juice plant technician, viticulture researcher, agritourism manager, or cellar worker).

**Materials:**

- New York American Viticultural Areas (AVA) map (New York Wine & Grape Foundation or WineAmerica)
- Blank county map of New York State (two per participant)
- Colored pencils, markers, or crayons



Figure 1-1. Brotherhood, America's Oldest Winery in Washingtonville, NY



Figure 1-2. New York grapes crate label printed in the 1920s

**Background:**

To become familiar with the topic, the facilitator should review New York Wine & Grape Foundation articles on the history of New York’s grape and wine industry, including materials on Concord grape development, Finger Lakes wine history, Long Island viticulture, and modern cold-hardy grape breeding.

1. This is a great book from New York wines organization to an overview of New York wine and grape industry. <https://newyorkwines.org/wp-content/uploads/2021/07/NYWCR-JUNE-2018.pdf>
2. This is a shorter content including the major events of NYS wine history. <https://mileaestatevineyard.com/a-history-of-ny-wine/>
3. Cornell Library archive for reference. With some detailed topics if students are interested: <https://rmc.library.cornell.edu/ewga/resources.html>



### Procedure:

#### Before the meeting:

Read the articles mentioned in the Background section.

#### During the meeting:

- Brainstorm with participants by asking the following questions to encourage discussion:
  - How do you think grape growing first began in New York?
  - Why do you think rivers, lakes, and climate were important in the expansion of grape growing across New York?
- Timeline Activity – “The Story of New York Grapes”  
In pairs or small groups, ask participants to use paper strips or index cards to create a timeline describing the establishment and growth of New York’s grape and wine industry. Provide each group with event cards that include dates and descriptions such as:
  - **1600s–1700s:** Early vineyards planted by European settlers in the Hudson Valley.
  - **1829:** Reverend William Bostwick’s Washingtonville winery produces its first commercial vintage, now known as America’s oldest continuously operating winery.
  - **Late 1800s–early 1900s:** Expansion of Concord grapes and juice production around Lake Erie and the Chautauqua–Lake Erie region.
  - **1960s–1970s:** Dr. Konstantin Frank and others successfully grow vinifera grapes in cold New York climates, sparking a quality wine revolution.
  - **1976:** The New York Farm Winery Act helps small wineries grow and encourages agritourism.

Groups will place the cards in chronological order and decorate their timeline with drawings or printed photos of vineyards, grapes, wineries, or maps.

- Afterward, ask participants:
  - Which event surprised you the most, and why?
  - Which event do you think had the biggest impact on New York’s grape industry?
  - How did science, laws, or geography help New York’s grape industry grow?
- Brainstorm with participants:  
  
Where in New York do you think grapes are grown today?  
  
Record responses on the board.
- Read New York’s American Viticultural Areas (AVAs).  
Using the New York county map (Figure 1-3), use AVA information to color-code the New York AVA sites (Figure 1-4) and label the counties designated for grape growing. Provide these maps to participants.



# New York Counties Map

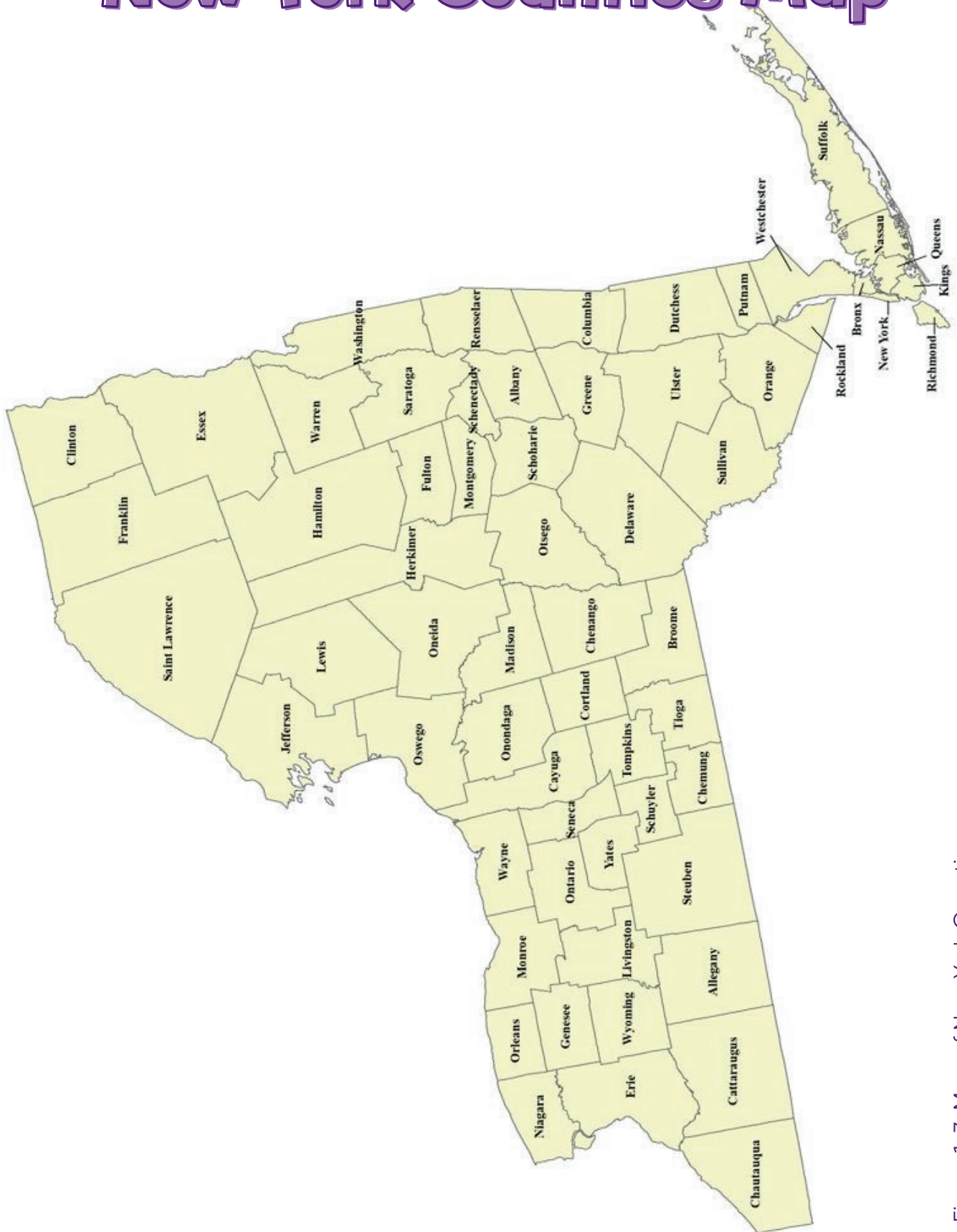


Figure 1-3. Map of New York Counties

# New York AVA Map

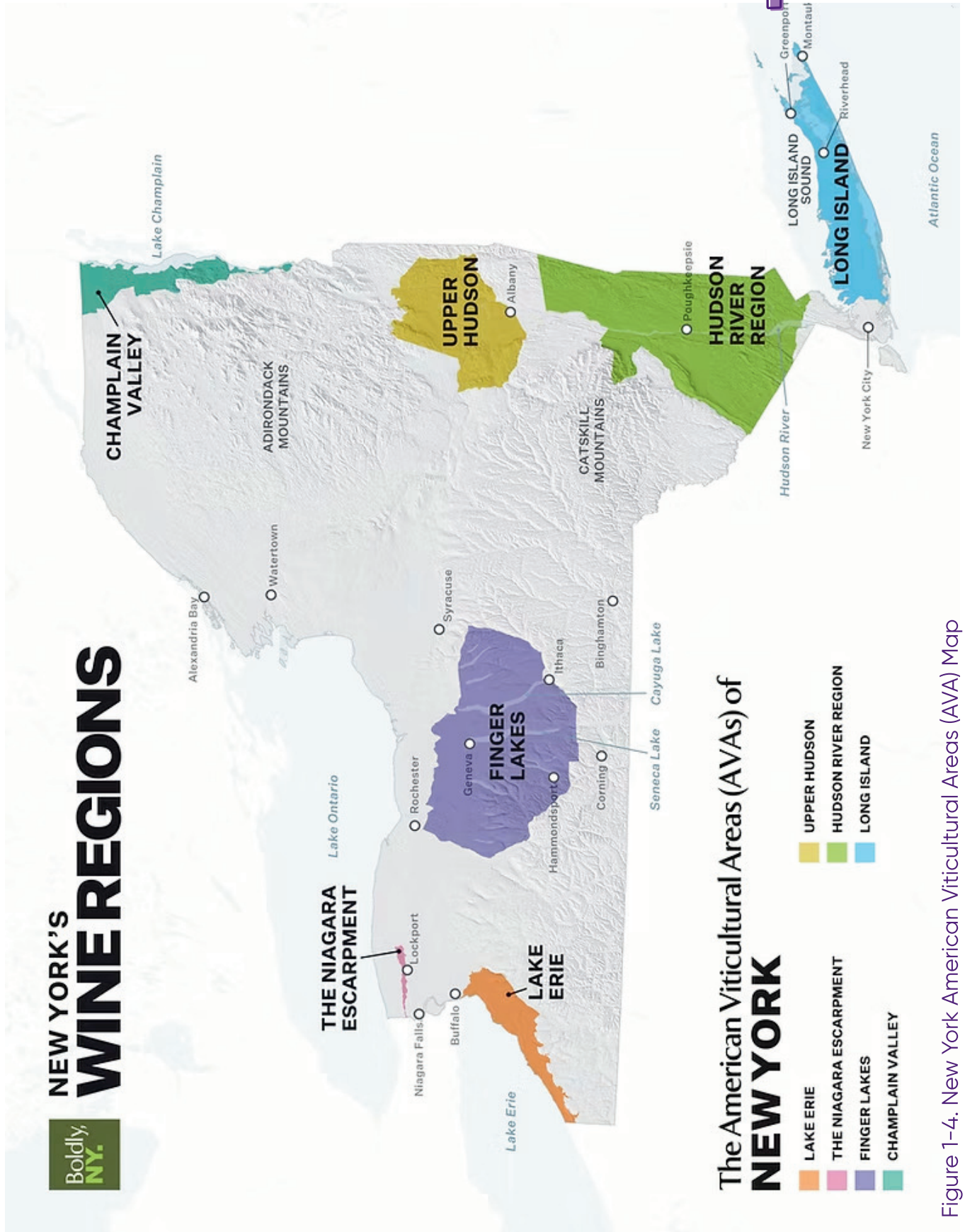


Figure 1-4. New York American Viticultural Areas (AVA) Map



# How Did Winemaking Evolve in New York?

## GENERAL QUESTIONS

Date: \_\_\_\_\_

1. When were grapes first widely cultivated in New York?

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2. Name one person who helped develop vineyards or winemaking in New York..

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3. How did waterways such as the Hudson River or Erie Canal help the wine industry grow in New York?

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4. Explain what AVAs are.

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5. What government agency regulates AVAs?

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6. Why are many vineyards located near large lakes such as the Finger Lakes or Lake Erie in New York?

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7. List at least one career related to growing grapes or agritourism in New York.

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