

## NYWGF RESEARCH - FINAL REPORT

Funding for fiscal year: 2025

### SECTION 1:

**Project title: Evaluation of Hybrid Winegrape Varieties on Long Island**

**Principal Investigator with contact info:** Alice Wise, Sr. Issue Educator/Viticulturist  
Cornell Cooperative Extension of Suffolk County  
423 Griffing Ave., Suite 100, Riverhead, NY, 11901  
Ph. 631.727.3595; fax 631.727.3611; [avw1@cornell.edu](mailto:avw1@cornell.edu)

**Co-PI Collaborators with contact info:** none

**New Research**  **Continued Research**

**Amount Funded** \$ 11,923

### SECTION 2:

**Project Summary Impact Statement:** In 2025, 12 hybrid winegrape varieties were evaluated at the Long Island Horticultural Research and Extension Center in Riverhead. This information provides an overview of the potential for hybrid varieties in a maritime climate with sandy soils. Viticultural suitability is critical because of the high cost of both planting and management on Long Island. In order to assess wine quality, fruit from several selections was provided to local winemakers for small lot winemaking. Vineyard data was presented to industry via several formats.

#### **Objectives:**

Twelve bearing hybrid winegrapes were screened for their suitability to a northeastern, maritime climate. Evaluation of hybrids reflects the NYWGF goal of encouraging grape varieties that can thrive in changing climatic conditions. It also addresses the desire of many growers to reduce pesticide use.

#### **Activities/Methods:**

In 2025, this vineyard consisted of 12 disease resistant winegrape hybrids, a total of 0.5 acres. The vineyard is planted on a well-drained, sandy loam soil. Vines are spaced 8x6 with VSP training and drip irrigation. Canopy management practices include shoot thinning to 4-5 shoots/ft. row, cluster zone leaf removal, crop adjustment and canopy hedging. The area under vines was maintained with a combination of herbicide, hand weeding and under vine mowing. Each bearing vine was harvested individually to determine cluster number, crop weight per vine and average cluster weight. From each variety/clone, 100 berries were randomly sampled to obtain average berry weight, Brix, titratable acidity, pH.

**Varieties:**

Variety	Planting year	Original source	Background
Aravelle (NY81)	2010	Cornell	Cayuga White x Riesling
Itasca	2018	Minnesota	Frontenac gris x MN1234 [MN1095 x Seyval]
Fleurtaï	2019	Rauscedo, Italy	Tocai Friulano x Kozma 20-3 <sup>1</sup>
Soreli	“	“	“
Regent	2017	German breeding program	Chambourcin , Silvaner and Müller-Thurgau in parentage
Sauvignon Kretos	2022	Rauscedo	Sauvignon Blanc x Bianca <sup>2</sup>
Sauvignon Rytos	“	“	Sauvignon Blanc x 20-3
Merlot Kanthus	“	Rauscedo	Merlot x 20-3
Cabernet Volos	“	“	Cabernet Sauvignon x 20-3
Helios	2023	Germany; white	Complex cross, includes Müller-Thurgau
Muscaris	“	“	Solaris x Muskateller
Monarch	“	Germany; red	Complex cross, includes Muscat Ottonel + Dornfelder

1 – The variety Kozma 20-3 is used in breeding due to its good mildew resistance.

2 – Bianca is a white Hungarian hybrid known for its robust disease resistance.

In addition to the winegrapes, we have planted a half-row of table varieties. Varieties include Jupiter, Marquis, Romulus, Golden Muscat and Suffolk Red. There are two table grape growers on Long Island. They both have farmstands to market their tree fruit, small fruit, selected vegetables and value added products.

**Pest management:**

The pest management season started with biological pesticides alternating with conventional products. By early June, it was apparent that this program was not successful as Phomopsis shoot infections became problematic. In the early varieties (Itasca, Fleurtaï, Soreli), this reduced crop by about 90%. Later varieties also had PH infections but at much lower levels. Samples were sent to Cornell Agri-Tech grape pathology for scrutiny where *Alternaria* was identified. *Alternaria* is known to colonize damaged, dying tissue. Nothing in the literature mentions it as a primary invader. Consequently, the 2026 season will begin with conventional products as the vineyard now has a tremendous amount of inoculum. Rainfall in May and June, 2025 were 7.34” and 1.66”, respectively.

**Harvest:** After a rainy May, the summer was relatively dry on Long Island, with June-Sept each having <3” total rainfall. Itasca, Fleurtaï, and Soreli, usually the first to be picked, had little crop. The remaining whites were harvest between Sept. 9 and 23. Muscaris and Helios were both in 3<sup>rd</sup> leaf, thus were lightly cropped. Harvest was pushed ahead for all varieties due to the uncontrollable yellow jacket infestations. Yellow jackets devastated entire sections of fruit in both white and red varieties (see attached photo). An early harvest was necessary in order to have sufficient fruit for winemaking. In a more perfect setting, many of these varieties would have benefitted from another 1-2 weeks of ripening.

### **Results/Progress/Next Steps:**

Yield component results and brief descriptions of performance are included in attached files. These results, along with a more descriptive PowerPoint presentation, will be posted to the CCE-SC grape program website in spring, 2026.

Regent vines were removed from the vineyard late fall, 2025. These vines are closest to an adjacent farm and are repeatedly overhead watered. This has impacted fruit set and fruit quality. Because the data is compromised, the vines were removed. Grower acceptance of this variety has been tepid due to mediocre wine quality. It is possible that the wine quality has suffered due to constant overhead irrigation. Interestingly, disease resistance has been good under these conditions.

Currently one local business has a few small hybrid plantings, primarily Vidal. However, several growers indicate that they will be experimenting with hybrids. Hybrids may well represent the future of viticulture in the eastern US due to their resistance to downy and powdery mildew and, in a few cases, black rot. New selections will soon be available from breeding programs worldwide. This continual push toward varietal improvement will make hybrids more attractive to eastern US growers and will help growers deal with the loss of plant protectant products.

Compared to vinifera, hybrids can be managed with fewer fungicides. They are earlier ripening and are consequently at lower risk of crop loss due to tropical weather in the fall. The major concern among stakeholders is wine quality potential and market acceptance. Hybrids are slowly being embraced by many European winegrowers with a goal of producing quality fruit while reducing pesticide use. It is therefore incumbent upon eastern US winegrape industries to understand the viticultural and enological potential of these varieties.

### **Technology Transfer Plan:**

Data and were repeatedly referenced in the statewide Veraison to Harvest newsletters (<https://grapesandwine.cals.cornell.edu/newsletters/veraison-harvest>) and the weekly local technical newsletter, the Long Island Fruit & Vegetable Update (circ. ~200). Research reports and yield component results are posted annually on our website - <http://ccesuffolk.org/grape-program> (1200 hits in 2025). A PowerPoint presentation on the 2025 season results will be posted by spring, 2026. The 2024 version is currently posted. Twenty growers attended the annual LIHREC Plant Science Day for a vineyard tour/discussion on held July 17, 2025. Twelve vineyard managers attended a hybrid trial discussion group in December, 2025. Presentations have been given at the 2023 and 2025 Long Island Agricultural Forum Viticulture Sessions (28 and 40 attendees, respectively). A presentation was given at the Maryland Grape Growers Association meeting, Jan. 30, 2026 and at BEV on March 4, 2026, with 50 and 64 attendees, respectively. Wines were also included with the BEV presentation. Dr. Maddy Oravec will be visiting Long Island in April for a hybrid variety focus group discussion and tasting.

**Attachments:** The 2025 yield components chart and 3 harvest photos: Muscaris, Cabernet Volos and Merlot Kanthus yellow jacket damage.

## **SECTION 3:**

### **Project objectives:**

In 2025, 12 hybrid winegrape varieties were evaluated at the Long Island Horticultural Research and Extension Center in Riverhead. Data was collected on all aspects of vineyard performance including growth habit, pest management, yield and fruit quality characteristics. This information assists growers in the selection of varieties, an important decision given the expense of planting and the long-term nature of a vineyard. Planting varieties that perform poorly in an eastern maritime climate or are not suited to the winemaking or marketing goals of a business can be a costly mistake. This work also gives reluctant vinifera growers a preview of hybrids – their vineyard performance as well as fruit and wine quality potential.

### **Importance of research to the NY wine industry:**

According to the NY Wine & Grape Foundation, the NY grape and wine industries generate >\$6.5 billion in direct economic activity and \$2.4 billion in total taxes. Clearly the industry is a critical part of the NY economy. Modest investment in research programs helps to ensure its continued success. The cost of establishing a vineyard on Long Island represents a major investment in time and money (est \$40,000/acre). Information generated from other regions is helpful but inadequately addresses the challenges of grape growing in a northeastern maritime climate. In keeping with the environmental stewardship goals of local growers, hybrids can be managed with fewer fungicides compared to vinifera. However, local winemakers are concerned about wine quality and marketability. By generating local data on yield, fruit quality, vine management, susceptibility to pests and nutritional requirements, growers can gauge both vineyard suitability, fruit and wine quality and potential market acceptance.

### **Project Results/next steps:**

In years past, disease resistant hybrids have been successfully managed with a substantial reduction in pesticide use. This was not the case in 2025 due to an early season disease outbreak. This project reflects the goals of environmental stewardship. However, continued evaluation is necessary to assess the degree of resistance in order to fine tune disease management strategies under varying climatic conditions. It also is essential that these varieties demonstrate they are capable of producing high-quality fruit on an annual basis.

### **Supporting attachments:**

1. Yield components chart - 2025
2. Three harvest photos: Muscaris, Cabernet Volos and Merlot Kanthus yellow jacket damage. Additional photos available upon request.

## Harvest Data – LIHREC Research Vineyard, 2025

### White Hybrids

Variety-clone/ rootstock	Harvest Date	°Brix	pH	TA (g./L)	Cluster #/vine	Crop Weight (lbs./vine)	Cluster Weight (lbs.)	Berry # /Cluster	Berry Weight (g.)	Tons/acre equivalent	Pruning Weight (lbs./vine)	Pruning Weight (lbs./ft. of row)	Crop: Pruning Weight
Aravelle/3309	9/23	20.0	2.99	6.3	20.8	4.3	0.21	87.3	1.51	2.0	Coming Soon	Coming Soon	Coming Soon
Helios/3309	9/19	17.2	3.01	7.2	12.0	2.2	0.19	99.5	1.54	1.0	Coming Soon	Coming Soon	Coming Soon
Muscaris/3309	9/9	24.6	2.90	5.7	15.1	3.5	0.23	84.3	1.61	1.6	Coming Soon	Coming Soon	Coming Soon
Sauvignon Kretos/101-1414	9/12	20.7	3.06	7.5	22.8	5.2	0.23	118.5	1.21	2.3	Coming Soon	Coming Soon	Coming Soon
Sauvignon Rytos/101-14	9/16	19.7	2.85	8.1	30.2	6.6	0.22	88.4	1.57	3.0	Coming Soon	Coming Soon	Coming Soon

### Red Hybrids

Variety-clone/ rootstock	Harvest Date	°Brix	pH	TA (g./L)	Cluster #/vine	Crop Weight (lbs./vine)	Cluster Weight (lbs.)	Berry # /Cluster	Berry Weight (g.)	Tons/acre equivalent	Pruning Weight (lbs./vine)	Pruning Weight (lbs./ft. of row)	Crop: Pruning Weight
Cabernet Volos/101-14	9/30	21.2	3.45	4.5	24.8	5.4	0.22	100.8	1.30	2.5	Coming Soon	Coming Soon	Coming Soon
Merlot Kanthus/101-14	9/30	19.7	3.94	4.2	20.7	4.9	0.24	76.1	2.25	2.2	Coming Soon	Coming Soon	Coming Soon
Monarch/3309	10/7	19.1	2.86	6.3	12.3	5.2	0.43	130.0	2.10	2.4	Coming Soon	Coming Soon	Coming Soon
Regent/101-14	10/7	19.2	3.55	6.0	24.9	4.4	0.18	76.6	2.11	2.0	Coming Soon	Coming Soon	Coming Soon

### 2025 Season Notes

Vines are trained to VSP; spacing is 8' x 6'.

No data for Fleurtaï, Itasca and Soreli due to disease + unfavorable bloom weather.

First harvest/third leaf: Helios, Muscaris, Monarch.

Many varieties harvested early due to heavy yellow jacket pressure.

Cornell Cooperative Extension of Suffolk County

Long Island Horticultural Research and Extension Center

3059 Sound Avenue

Riverhead, NY 11901-1098

Ph. (631) 727-3595; Fax (631) 727-3611

E-mail: [avw1@cornell.edu](mailto:avw1@cornell.edu)

A. Wise, Sr. Issue Educator/Viticulturist

A. Gardner, Grape Research Program Assistant



**Cabernet**

**Volos**





Merlot  
Kanthus