NYWGF RESEARCH – FINAL REPORT

Funding for fiscal year: 2025-2026

SECTION 1:

Project title: Development of resilient and high-quality wine grape cultivars

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**Find attached bios for PI and Collaborators*

New Research ☐ Continued Research ☒

Amount Funded $37,257

SECTION 2:

Summary Impact Statement:

This project supported work to develop new and improved wine grape cultivars with high winemaking quality that survive and thrive in New York. Activities in the 2025 season included making 33 new crosses, evaluating over 1,000 new seedlings, in-vineyard evaluations of ~1,300 seedling vines and 189 selections, winemaking and chemical analysis for 59 wine lots from the 2025 harvest, sensory analysis of 2024 vintage wines through a trained panel and two industry tasting events, virus testing of 10 advanced selections, and distribution of top selections to cooperating nurseries to initiate commercial trials. These efforts will ultimately support the long-term sustainability of the wine and grape industry in New York through the development and commercialization of new high-value cultivars that are disease resistant, cold hardy, productive, and well-adapted to our climate region.

Objectives:

The aim of this project is to breed new grapevine cultivars that are cold hardy, disease resistant, and produce high-quality wine. To do this, the objectives of this work are to:

1. Make new crosses and evaluate seedlings and selections for vine traits, cold hardiness, and disease resistance in the lab and in the vineyard, using both traditional and high-throughput methods.
2. Evaluate juice and wine quality for early and advanced selections.
3. Integrate robust sensory feedback early in the selection process by utilizing a trained sensory panel and volunteer industry tasting events to evaluate wine characteristics and quality.

Activities/Methods:

Grapevines evaluated included progeny from 2024 crosses, mature single-vine seedlings, and 6-vine plantings of early and advanced stage selections at the Geneva-based Cornell Grape Breeding Program vineyards. Program seedlings from 2024 crosses were pre-screened using molecular markers for previously identified disease resistance genes with support from the USDA VitisGen3 project, and those with high disease resistance potential were planted outside in a no-spray nursery and rated for vigor and disease incidence. Mature seedling vines in the first-test seedling vineyard were evaluated for vigor, fruit set, balance, and disease resistance; and new selections were propagated for further investigation. All selections were evaluated for vine traits and disease resistance.

Top selections were evaluated for cold hardiness by collecting buds in mid-winter (January 2026) and using freezing experiments following standard Differential Thermal Analysis (DTA) protocols to detect the low temperature exotherm peak (Mills et al. 2006). Selections were evaluated based on their LT50 (predicted temperature lethal for 50% of buds), with Concord, Cayuga White, and Chambourcin included as controls. Cane pruning weights were measured in the winter 2026 for top selections. Disease progress, including powdery mildew (PM), downy mildew (DM), black rot, and bunch rots, was visually assessed and rated throughout the season using a 1–5 scale (1 = 1–3% incidence, 2 = 3–12%, 3 = 12–25%, 4 = 25–50%, 5 = >50%) and as percent incidence across the panel. PM and DM progression were also assessed using the PhytoPatholoBot (PPB) robotic imaging system throughout the season.

Newly mature and top selections were harvested, and data were collected on a per-vine basis for cluster number, cluster weight, and berry weight. These selections were evaluated for juice chemistry (pH, soluble sugars, and acidity) then vinified using standard protocols at the Cornell Vinification and Brewing Lab. Wine chemistry, including pH, titratable acidity, fermentable sugar, malic acid, lactic acid, volatile acidity, and alcohol, was measured using the OenoFoss (FTIR) and HPLC at the Cornell Craft Beverage Analytical Lab.

Sensory analyses were performed using a two-tiered approach with (1) an in-house trained sensory panel and (2) volunteer industry tasting events. The trained sensory panel was composed of 16 panelists who underwent comprehensive training on standardized evaluation techniques and benchmarking against key varietal and hybrid standards. Wines were evaluated using randomized and coded samples, and data were collected on intensity rankings for specific descriptors. Two industry tasting events were held at (1) a “Vines and Wines” field day at

Cornell AgriTech in September 2025 and (2) a tasting at the BEV-NY conference in March 2026.

Ten top advanced selections were virus-tested to prepare for distribution to cooperating nurseries. The 10 top selections identified through multi-year evaluation of vineyard traits, cold hardiness, disease resistance, and wine quality and sensory scores were distributed to cooperating nurseries to initiate commercial trials.

Results/Progress/Next Steps:

Breeding Cycle Progress

In 2025, we made 33 new crosses for both wine and table grape markets. 8,272 seeds from 2025 crosses were stratified and planted in the greenhouse in preparation for 2026 evaluations. We planted and evaluated 1,091 seedlings in our no-spray nursery. We planted 218 new vines into our seedling vineyard for their first vineyard evaluations and 26 new selections into our second-test vineyards for further evaluation and future harvest. Approximately 1,300 mature individual seedling vines were assessed in the seedling vineyards for viticultural potential, and 189 selections were evaluated in second-test vineyards. A total of 59 wine lots from 2025 harvest (31 white, 28 red) were harvested, vinified, and underwent juice and wine chemistry analysis. Sixty-two wines from 2024 harvest underwent sensory analysis by our trained sensory panel. Twelve selections and 2 controls were evaluated at the Cornell AgriTech Vines and Wines field day tasting event (approximately 30 attendees), and 4 selections were evaluated at the BEV-NY conference tasting (over 80 attendees). Virus testing was completed for 10 advanced selections, and new selections were distributed to cooperating nurseries to initiate commercial trialing.

Breeding families and individuals in the nursery and single-vine individuals in the seedling vineyards were observed, evaluated, and then considered for discard, slated for continued monitoring, or advanced for further evaluation. Based on seedling observations, 36 new disease resistant wine selections were selected for propagation into second-test vineyards for further evaluation.

Viticultural Trait Evaluation

Disease ratings were collected for selections in our low-spray second-test vineyards. The season presented low disease pressure compared to previous years, though black rot was present on susceptible material. Powdery mildew and downy mildew resistance was strong in our disease-resistant selections with molecularly confirmed resistance alleles, with little to no breakthrough on most selections. Susceptible control vines planted throughout the vineyards reached disease rating levels of 4-5 for foliar powdery mildew, downy mildew, and black rot, confirming adequate disease pressure to distinguish resistant from susceptible material.

Mid-winter cold hardiness was assessed in January 2026. 78 selections were evaluated, with LT50 values ranging from -23.3°C to -33.5°C. The Concord control had an LT50 of -29.9°C, and several breeding selections were comparable or exceeded Concord in cold hardiness. The most cold-hardy selections in January 2026 included NY14.0324.01 (-33.5°C), NY15.0403.05 (-31.7°C), NY13.0207.02 (-31.7°C), NY14.0308.02 (-31.5°C), and NY15.0406.03 (-31.4°C). Annual cold hardiness data are used to track performance over time and identify consistently hardy selections.

Cane pruning weights were measured in winter/spring 2025 for 46 selections, with mean pruning weights ranging from 0.36 to 3.38 kg/vine. Pruning weights were collected in winter/spring 2026 for only top selections. 51 selections were harvested in 2025, with harvest dates ranging from September 2 to October 21, 2025. For all harvested selections in 2025, cluster number, cluster weight, and berry weight were recorded on a per-vine basis.

Wine Quality Analysis

Fifty-nine wine lots (selections and controls) from 2025 harvest were produced at the Cornell Vinification and Brewing Lab and underwent juice and wine chemistry analysis at the Cornell Craft Beverage Analytical Lab. Chemistry metrics including pH, titratable acidity, ethanol, and organic acid profiles will be used alongside sensory evaluations to inform selection advancement decisions.

Sixty-two wines from 2024 harvest were evaluated by our trained sensory panel. Panelists scored each wine on nose (orthonasal aroma), palate (retronasal aroma, taste, and mouthfeel), and body/balance, and indicated the presence of specific varietal characteristics including muscat and labrusca character. Panelists also selected their top picks across wines. Notable top selections from the trained panel included NY14.0307.05 and NY13.0206.04 for whites with interesting aromatic profiles, and NY14.0307.06, NY10.0925.02, and NY06.0514.06 for reds with positive structure and flavor.

A field day and tasting event was held at Cornell AgriTech in September 2025 with approximately 30 attendees, including growers, winemakers, and industry stakeholders. Attendees evaluated 12 wines (6 white selections, 6 red selections) plus Cayuga White and Chambourcin as controls, rating appearance, nose, palate, and overall impression on a 1- 9 hedonic scale. Average overall scores ranged from 4.56 to 6.76 for the experimental wines. Among white wines, NY12.0112.01 (mean overall: 6.69) and NY14.0304.03 (6.66) received the highest overall scores. Among red wines, NY06.0514.06 (6.76) and NY15.0406.05 (6.58) received the strongest ratings. Results from this tasting are summarized in Table 1. Feedback from attendees was very positive. Several growers expressed strong interest in the the top selections. A second tasting event was held at the BEV-NY conference with over 80 attendees who evaluated 4 selections. This event provided valuable industry feedback on a broader scale and generated significant interest in the breeding program’s progress.

Commercial Trial Initiation

A major milestone achieved this year was the initiation of new commercial trials. Ten top selections were identified based on multi-year evaluations of viticultural performance, cold hardiness, disease resistance, and wine quality and sensory scores. These selections underwent virus testing and were distributed to cooperating nurseries to begin propagation and commercial trialing. Establishing commercial trials is a critical step before new cultivar release, and this marks a significant advancement for the program’s most promising candidates.

Next Steps

We will continue the breeding cycle by evaluating the 8,272 seedlings from 2025 crosses in the greenhouse and through marker assisted selection (MAS). We will be planting those selected in the no-spray nursery for in-field evaluation in 2026. In the vineyard, we will continue evaluations of all seedling vines and selections for viticultural traits, disease resistance, and cold hardiness. We are producing wines from the 2025 vintage for sensory evaluation by our trained

panel, and top-performing selections will be presented at industry tasting events in 2026. We will continue to expand and support our commercial trial network by working with nursery partners to propagate and distribute selections. We will continue to integrate historical and current evaluations to identify the most consistently high-performing selections for advancement and potential release. Commercial release of NY06.0514.06 is expected next year, and we have begun collecting ideas and feedback in the naming of this new cultivar.

Technology Transfer Plan:

The ultimate goal of this work is the release of new high-value cultivars for production in New York and the greater growing region. Our technology transfer efforts in 2025 included:

- Cornell AgriTech Vines and Wines Field Day and Tasting Event (September 2025): ~30 growers, winemakers, and industry stakeholders attended, walked the breeding vineyards, and evaluated 12 wine selections. This event generated strong engagement and direct feedback on selection priorities.
- BEV-NY Conference Tasting (2025): Over 80 industry attendees evaluated 4 selections from the program. This broader forum allowed us to capture diverse industry and consumer perspectives on our rising selections.
- Commercial Trial Initiation: Virus testing was completed and 10 top selections were distributed to cooperating nurseries to begin propagation for commercial trials. This is the critical final stage before new variety release.
- Program Website and Digital Communications: We are in the process of developing a new website focused on disease resistance in grapevine to share relevant information and data - stay tuned!

Attachments:

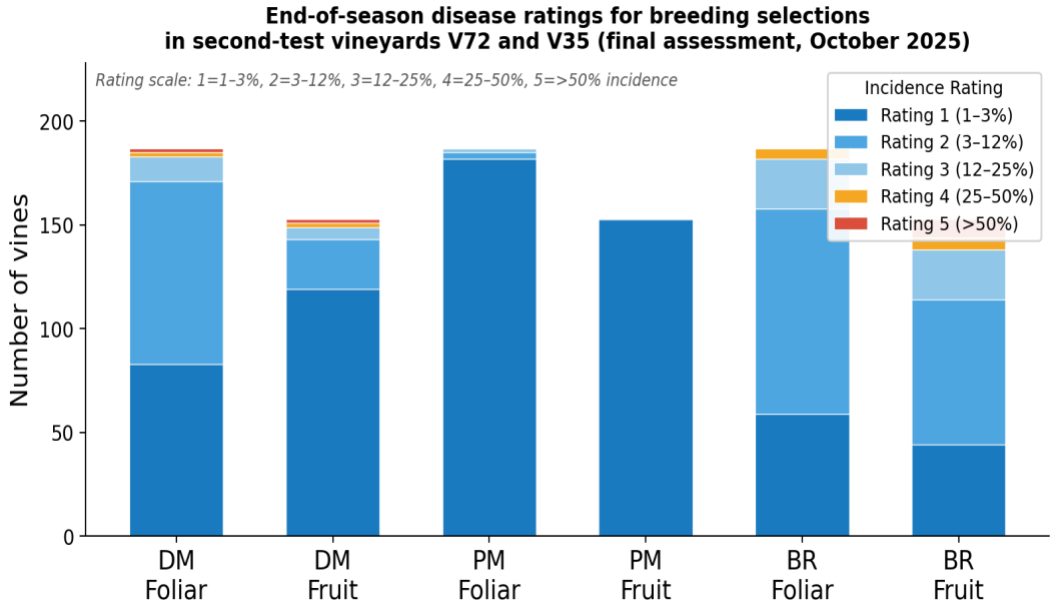

Figure 1. End-of-season disease ratings for breeding selections in second-test vineyards (final assessment, October 2025). Rating scale: 1 = 1–3%, 2 = 3–12%, 3 = 12–25%, 4 = 25–50%, 5 = >50% incidence. PM = Powdery mildew; DM = Downy mildew; BR = Black rot.

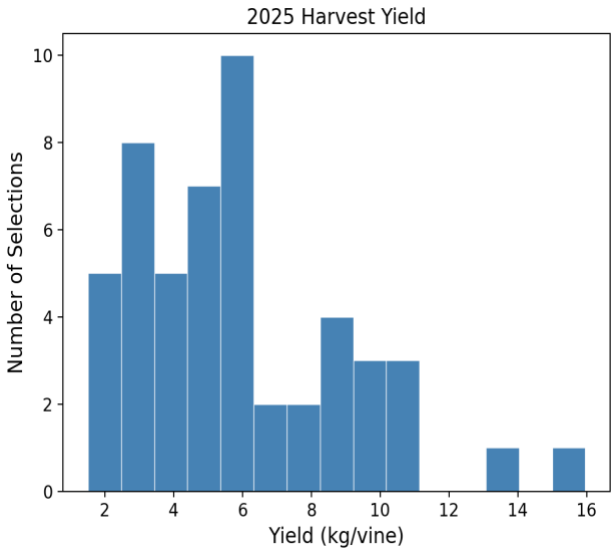

Figure 2. Distribution fruit yield (kg/vine) for 49 breeding selections harvested in 2025.

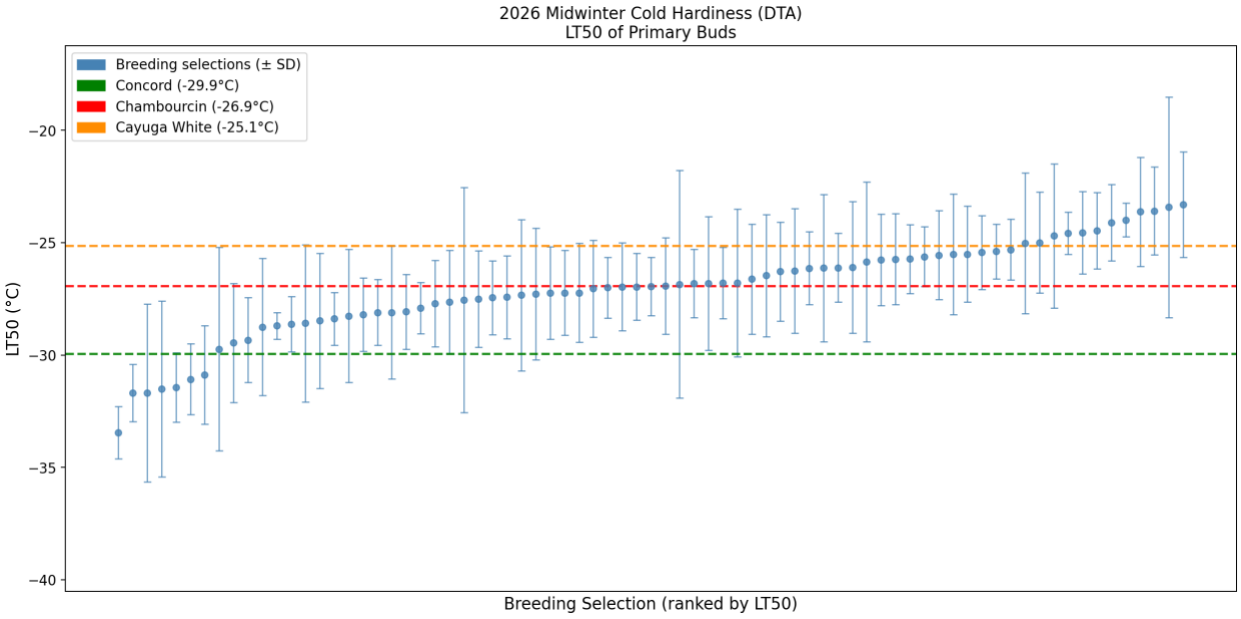

Figure 3. Mid-winter cold hardiness (LT50, °C) for 75 breeding selections and 3 controls assessed January 2026, sorted from most cold-hardy (left) to least cold-hardy (right). Points represent mean LT50 and error bars represent ±1 SD. Dashed green line = Concord mean LT50 (−29.9°C); dashed red line = Chambourcin (−26.9°C), and dashed orange line = Cayuga White (−25.1°C).

Table 1. Average scores from the 2025 Cornell AgriTech Vines and Wines Field Day tasting (n = 27–31) and the 2026 BEV-NY conference tasting (BEV-NY 2026; n = 67-70). Wines rated on a 1-9 hedonic scale (1 = dislike very much, 5 = neutral, 9 = like very much). W = white, R = red.

		Field Day 2025					BEV-NY 2026					
Selection	**Color**	**App.**	**Nose**	**Palate**	**Overall**	**n**	**App.**	**Nose**	**Palate**	**Overall**	**n**	**Field Day Notes**
White Selections												
NY10.0927.01	W	6.60	6.77	5.60	6.25	30	7.02	5.72	5.74	6.01	69	Strong muscat character, very aromatic
NY11.0010.01	W	6.42	4.42	4.50	4.49	30	—	—	—	—	—	Floral nose, strong character, mixed
NY12.0112.01	W	6.44	6.95	6.30	6.74	31	6.79	5.57	5.08	5.50	70	Clean, fruity, Sauvignon blanc character
NY13.0205.02	W	6.69	5.42	5.27	5.30	30	—	—	—	—	—	Neutral white, mixed reception
NY14.0304.03	W	6.85	6.71	6.34	6.63	30	—	—	—	—	—	Cotton candy, strawberry aromas
NY15.0406.03	W	6.66	5.86	5.80	5.98	30	—	—	—	—	—	Neutral, clean finish
Cayuga White	W	6.55	6.37	6.34	6.52	31	—	—	—	—	—	Control
Red Selections												
NY06.0514.06	R	6.87	6.58	6.64	6.72	29	7.34	6.50	6.09	6.56	68	Neutral, clean red fruit, well-balanced
NY10.0925.02	R	7.43	6.16	6.05	6.23	29	7.91	6.03	5.24	5.89	67	Deep color, good structure
NY14.0307.04	R	7.43	5.77	5.72	5.72	27	—	—	—	—	—	Dark, muscat aromas, mixed palate
NY14.0307.06	R	7.35	6.17	6.00	6.26	29	—	—	—	—	—	Dark color, fruit-forward
NY15.0406.05	R	6.53	6.07	6.38	6.45	29	—	—	—	—	—	Lighter red, positive reception
NY15.0406.06	R	6.71	5.19	5.57	5.77	28	—	—	—	—	—	Nice red color, slightly acidic
Chambourcin	R	6.17	5.60	5.48	5.64	28	—	—	—	—	—	Control

Table 2. Wine chemistry summary for 2025 wines. W = white, R = red. Harvest TA and Wine TA in g/L tartaric acid equivalent. YAN = yeast assimilable nitrogen (mg N/L). EtOH = ethanol percentage by volume.

Selection	**Color**	**Harvest Date**	**Brix**	**Harvest pH**	**Harvest TA (g/L)**	**YAN (mg N/L)**	**Wine pH**	**Wine TA (g/L)**	**EtOH (%)**
10.0927.01	W	10/6	20.6	2.96	11.83	203	3.04	12.58	11.3
12.0112.01	W	9/23	18.2	3.01	7.00	114	3.09	9.22	11.7
13.0204.02	W	9/15	21.4	2.74	14.50	34	2.81	16.67	11.9
13.0205.02	W	9/15	20.9	2.82	14.44	121	2.86	15.87	11.8

13.0206.03	W	9/16	20.4	2.90	9.03	77	2.98	11.56	11.9
13.0206.04	W	9/22	20.7	2.89	7.78	86	2.99	11.63	12.9
13.0206.05	W	9/30	10.0	2.88	9.52	49	2.90	12.13	13.5
14.0301.01	W	9/22	21.3	2.92	15.19	112	2.99	15.96	12.0
14.0304.01	W	10/14	22.3	2.84	12.86	101	2.95	14.29	13.0
14.0304.03	W	10/7	19.1	3.12	5.51	219	3.21	7.57	12.6
14.0306.01	W	9/15	20.2	2.84	10.94	82	2.92	12.86	11.6
14.0306.03	W	10/14	20.9	2.88	10.50	139	2.95	11.91	11.7
14.0307.05	W	9/30	19.3	2.94	8.82	194	3.02	11.09	11.2
14.0324.01	W	9/2	21.7	2.87	17.00	120	2.88	16.10	12.1
15.0402.04	W	9/23	20.0	3.06	8.90	95	3.16	7.51	12.0
15.0406.03	W	10/6	20.5	3.00	12.60	218	3.11	13.08	12.3
15.0406.07	W	9/29	22.8	3.00	10.60	291	3.10	11.23	13.2
15.0410.02	W	9/30	21.0	3.02	10.18	88	3.10	11.21	12.2
15.0411.01	W	9/8	19.1	2.87	18.00	229	2.98	18.40	10.4
15.0414.04	W	9/29	22.6	3.00	7.71	132	***	***	***
15.0417.01	W	9/29	20.0	3.07	6.04	209	2.99	11.13	11.5
15.0417.02	W	10/14	18.0	2.91	7.69	137	—	—	—
15.0420.02	W	9/15	22.0	2.84	15.28	295	2.88	16.19	12.3
15.0420.04	W	9/30	22.5	2.95	10.57	155	3.07	12.56	12.7
16.0507.01	W	9/3	17.8	2.93	7.50	88	2.99	10.52	11.9
16.0507.02	W	9/23	20.8	3.09	8.53	125	3.18	10.70	12.0
16.0512.01	W	10/14	20.8	2.78	13.61	150	2.93	14.65	11.8
16.0512.02	W	9/16	21.4	2.87	11.23	71	2.99	13.82	12.4
16.0513.02	W	9/8	20.7	2.83	14.80	93	2.95	15.93	11.4
16.0513.06	W	9/2	22.2	2.83	13.20	132	2.92	14.60	12.6
06.0514.06 Alch. IV	R	10/8	20.8	3.06	6.56	74	3.29	8.85	11.3
06.0514.06 GRE	R	10/8	20.2	3.07	6.29	73	3.29	8.88	11.3
06.0516.02	R	9/30	21.1	2.83	16.85	98	2.98	13.85	10.6
10.0925.02	R	10/15	18.6	2.98	8.40	79	3.17	12.13	10.5
12.0107.04	R	10/21	19.8	2.94	13.80	215	3.29	11.55	10.5
12.0108.01	R	10/8	19.7	3.16	11.13	109	3.66	8.29	10.4
13.0214.03	R	10/15	20.1	2.91	14.88	101	3.32	11.18	11.1
14.0303.02	R	9/3	20.3	3.14	7.90	80	***	***	***
14.0305.01	R	9/8	18.4	2.72	22.50	126	2.98	18.90	<9.0
14.0307.04	R	10/15	19.1	2.91	14.36	85	3.26	10.31	11.3
14.0307.06	R	10/6	21.7	2.91	10.74	206	3.16	11.00	12.2
14.0308.02	R	9/15	21.8	2.87	15.73	233	3.10	13.60	11.0
15.0401.02	R	10/8	17.0	3.23	3.02	114	3.11	9.31	9.5
15.0403.05	R	9/9	18.3	2.94	7.60	173	3.06	11.01	9.6
15.0405.01	R	10/21	18.2	3.07	5.32	301	3.19	9.92	10.1
15.0406.05	R	10/15	17.0	2.82	9.60	78	3.16	8.90	11.5
15.0406.06	R	10/7	20.3	2.97	6.74	133	3.16	9.24	11.2

15.0406.08	R	10/15	18.8	2.91	9.59	86	3.13	10.47	11.2
15.0414.01	R	10/8	21.1	3.32	4.51	137	3.60	7.71	11.0
15.0416.01	R	9/8	18.5	2.96	8.40	188	***	***	***
16.0507.03	R	10/7	20.6	3.07	9.25	87	3.42	9.91	11.2
16.0509.02	R	9/2	22.5	2.89	10.30	101	2.98	12.13	11.7

SECTION 3:

Project objectives:

The goal of this project is to develop new and improved wine grape cultivars that produce exceptional wine and flourish in New York and the greater grape-growing area. These cultivars must be able to survive and produce high-quality fruit despite cold winters, early spring cold snaps, and heavy disease pressure associated with our climate region. The objectives of this work are to develop new grapevine varieties for our growing region and collect data on disease resistance, cold hardiness, productivity, fruit characteristics, and wine quality to evaluate their potential for commercialization. This requires a long-term iterative process of crossing, evaluation, and selection to characterize, evaluate, and identify the top candidates for release.

Importance of research to the NY wine industry:

This project supports the long-term sustainability of the grape and wine industry in New York through the development and eventual release of new high-value cultivars that are well-adapted to our region. Disease resistance is a key target of these breeding efforts, which supports economic and environmental sustainability by reducing pesticide use. Identifying candidate cultivars with climate resilience traits will also support productive and profitable grape production despite variable weather patterns in our changing climate. Finally, through this work we carefully evaluate wine quality to ensure that the winemaking potential of new cultivars aligns with industry and consumer preferences.

Project Results/next steps:

In 2025, we made 33 new crosses and evaluated over 1,000 new seedlings, 1,300 mature seedling vines in our seedling vineyards, and nearly 200 selections in the second test vineyards. Fifty-nine wine lots from the 2025 harvest were produced. Wines from 62 selections from the 2024 harvest were evaluated by our trained sensory panel, and 12 wines were tasted and scored by approximately 30 growers and winemakers at a Cornell AgriTech field day. Of those, 4 wines were presented to over 80 attendees at the BEV-NY conference. Grower and winemaker feedback was enthusiastic, with several selections receiving strong scores and generating commercial interest.

A major achievement this year was virus-testing and distribution of the 10 top selections to cooperating nurseries to begin propagation for commercial trials. This is the critical final step before new variety release. Disease resistance ratings demonstrate strong resistance to powdery mildew and downy mildew in new disease-resistant selections. Moving forward, we will continue vineyard evaluations of new and existing selections, evaluate 2025 vintage wines, and begin to curate a commercial trial network.

Supporting attachments:

Table 1. Average scores from the 2025 Cornell AgriTech Vines and Wines Field Day tasting (n = 27–31) and the 2026 BEV-NY conference tasting (BEV-NY 2026; n = 67-70). Wines rated on a 1–9 hedonic scale (1 = dislike very much, 5 = neutral, 9 = like very much). W = white, R = red.

		Field Day 2025					BEV-NY 2026					
Selection	**Color**	**App.**	**Nose**	**Palate**	**Overall**	**n**	**App.**	**Nose**	**Palate**	**Overall**	**n**	**Field Day Notes**
White Selections												
NY10.0927.01	W	6.60	6.77	5.60	6.25	30	7.02	5.72	5.74	6.01	69	Strong muscat character, very aromatic
NY11.0010.01	W	6.42	4.42	4.50	4.49	30	—	—	—	—	—	Floral nose, strong character, mixed
NY12.0112.01	W	6.44	6.95	6.30	6.74	31	6.79	5.57	5.08	5.50	70	Clean, fruity, Sauvignon blanc character
NY13.0205.02	W	6.69	5.42	5.27	5.30	30	—	—	—	—	—	Neutral white, mixed reception
NY14.0304.03	W	6.85	6.71	6.34	6.63	30	—	—	—	—	—	Cotton candy, strawberry aromas
NY15.0406.03	W	6.66	5.86	5.80	5.98	30	—	—	—	—	—	Neutral, clean finish
Cayuga White	W	6.55	6.37	6.34	6.52	31	—	—	—	—	—	Control
Red Selections												
NY06.0514.06	R	6.87	6.58	6.64	6.72	29	7.34	6.50	6.09	6.56	68	Neutral, clean red fruit, well-balanced
NY10.0925.02	R	7.43	6.16	6.05	6.23	29	7.91	6.03	5.24	5.89	67	Deep color, good structure
NY14.0307.04	R	7.43	5.77	5.72	5.72	27	—	—	—	—	—	Dark, muscat aromas, mixed palate
NY14.0307.06	R	7.35	6.17	6.00	6.26	29	—	—	—	—	—	Dark color, fruit-forward
NY15.0406.05	R	6.53	6.07	6.38	6.45	29	—	—	—	—	—	Lighter red, positive reception
NY15.0406.06	R	6.71	5.19	5.57	5.77	28	—	—	—	—	—	Nice red color, slightly acidic
Chambourcin	R	6.17	5.60	5.48	5.64	28	—	—	—	—	—	Control

NYWGF RESEARCH – FINAL REPORT

PI and Collaborator Bios

Funding for fiscal year: 2025-2026

Project title: Development of resilient and high-quality wine grape cultivars

Principal Investigator:

Madeline Oravec
Assistant Professor
Horticulture Section, School of Integrative Plant Sciences
Cornell AgriTech, Cornell University

Bio: Madeline Oravec (Maddy) is an Assistant Professor of Grapevine Breeding, Genetics, and Genomics in the Horticulture Section of the School of Integrative Plant Science at Cornell University. She leads the Cornell Grapevine Breeding Program based at the Cornell AgriTech campus in Geneva, N.Y. Her research program focuses on the genetic understanding and improvement of grapes, with an emphasis on fruit quality, environmental resilience, and biotic resistance. The program's breeding objectives include developing and releasing novel, resilient, and high-quality wine and table grape varieties and integrating modern phenotyping, genotyping, and selection technologies to improve breeding efficiency. Before coming to Cornell, Maddy earned an M.S. in Horticulture at Purdue University and Ph.D. in Plant Breeding and Plant Genetics at University of Wisconsin – Madison. She then held two postdoctoral positions, one at the University of Minnesota in a circadian biology lab and the other at UW-Madison in a root vegetable breeding and genetics lab.

Collaborator:

Anna Katharine Mansfield
Associate Professor, Food Science
Associate Director, Cornell AgriTech

Bio: Anna Katharine Mansfield is an Associate Professor of enology and Associate Director at Cornell AgriTech in Geneva, NY. She first worked in the wine industry in North Carolina's Yadkin Valley, received graduate degrees at Virginia Tech and the University of Minnesota, and served as the first Enology Project leader at the University of Minnesota from 2001-2008. Mansfield returned to the east coast in 2009 and currently focuses her efforts in aiding small regional wineries through enology extension, wine sensory evaluation, and research on hybrid wine phenolics and fermentation nutrition.