NYWGF RESEARCH PROGRAM 2025–2026

Final Report Draft

SECTION 1

Project Title	Preparing the New York Grape Industry for a Future Without Broad-Spectrum Fungicides
Principal Investigator with contact info	Kaitlin Gold, Assistant Professor of Grape Pathology, Susan Eckert Lynch Faculty Fellow, Plant Pathology and Plant-Microbe Biology (PPPMB), Cornell AgriTech, 315-787-2447, kg557@cornell.edu
Co-PI / Collaborator with contact info	Hans Walter-Peterson, Senior Extension Associate, Cornell Cooperative Extension, Finger Lakes Regional Grape Program
Project type	New Research
Reporting period	April 1, 2025 – March 31, 2026

SECTION 2

Summary Impact Statement:

This project was designed to help New York grape growers prepare for the loss of key broad-spectrum fungicides by generating applied data on how biological and conventional fungicides perform in rotation and tank mix, while also building grower-ready educational materials for spray program design in a post-mancozeb era. In 2025, NYWGF support enabled a focused Chancellor field trial evaluating biological–conventional tank-mix compatibility and advanced the ongoing Traminette timing/rotation work. Across both the new tank-mix study and the broader multi-year efficacy dataset, results continued to support the practical value of rotating biofungicides with conventional fungicides, but did not show a consistent benefit from adding biologicals into conventional tank mixes. The project also produced a draft, scenario-based extension module to help growers reason through early-season disease management without relying on broad-spectrum backbone materials.

Objectives:

1) Continue field efficacy work in the Traminette pathology vineyard to evaluate how biofungicide timing and rotation order affect disease control.
2) Establish a replicated Chancellor field trial to test compatibility of biofungicides and conventional fungicides in tank mix.
3) Develop grower-facing workshop curriculum for in-person and virtual training on building spray programs without broad-spectrum fungicides.

Activities/Methods:

Applied trials were conducted in Cornell Pathology Vineyards in Geneva, NY using replicated field designs. The 2025 Chancellor tank-mix study compared season-long programs of key conventional downy mildew materials (Ranman, Zampro) and powdery mildew materials (Miravis Prime, Gatten), each applied alone or tank-mixed with representative biological products spanning different modes of action (Lifegard, Howler Evo, and Warhammer). Treatments were applied from approximately 3–6 inch shoot growth through mid-August on an approximately 10-day schedule (8 total applications), with the adjuvant Induce included across treatments. Disease outcomes were assessed on foliage and clusters using incidence × severity

damage metrics. In parallel, the Traminette timing/rotation study compared different bio-first vs. conventional-first rotation styles and programs that emphasized one modality during the critical pre-bloom through early post-bloom period. Project results were used to develop a draft interactive extension workshop module focused on Mancozeb-free early-season disease management, including grower case studies, participant worksheets, a product matrix, and a facilitated spray-program design exercise.

Results/Progress/Next steps:

Results from the 2025 Chancellor tank-mix trial showed a clear treatment effect relative to the untreated control, especially in clusters, but no consistent advantage to including a biological product in tank mix with a conventional partner. Across foliar and cluster assessments, most tank-mix programs were numerically similar to the corresponding conventional-only programs, and some combinations suggested modest negative interactions without a clear repeatable benefit. The season was also characterized by relatively low downy mildew pressure and minimal black rot, which limits confidence in claims of synergy.

The broader efficacy context remained encouraging for biological integration. Aggregated Cornell Pathology Vineyard data from 50+ programs across the past five seasons continued to show that programs rotating biofungicides with conventional fungicides provide disease control numerically comparable to conventional-only programs. Preliminary Traminette timing/rotation results likewise suggested that timing and coverage matter more than stacking products, with no consistent differences among rotation styles observed to date. The strongest current extension message is therefore practical rather than promotional: biofungicides appear to be viable tools in well-timed programs, but growers should not assume that adding a biological to a conventional tank mix will automatically improve control. The project also advanced a draft East Coast workshop module on Mancozeb-free early-season disease management centered on Phomopsis, powdery mildew, downy mildew, and black rot, with a 45-minute presentation plus a 30-minute table-based spray program exercise.

Next steps are to continue multi-year replication in both the Chancellor tank-mix and Traminette timing studies, expand the range of pairings evaluated, refine evidence-based rules of thumb for compatibility and placement, pilot the extension curriculum with grower audiences, and translate those results into grower-ready guidance for spray program design and future NY/PA Grape Pest Management Guideline updates.

Technology Transfer Plan

Date	Activity / publication	Status	Description
2025–2026	Project presentation materials	Completed	Results were synthesized into >1500 contact hours of extension activities including grower/stakeholder presentations, podcast presentations, and written articles/blog posts on biological and conventional fungicide tank-mix interactions (Combs & Gold). Applied trial findings and practical implications for post-broad-spectrum spray program disseminated through NYWGF, regional CCE, and related grower education channels.
2025–2026	Workshop curriculum development	Ongoing	Developed a draft East Coast in-person module on Mancozeb-free early-season disease management, including learning objectives, case studies, activity design, and supporting materials.

2025-2026	Pathology vineyard field day and inaugural Winter Fruit School	Completed	Field Day: >50 attendees, centered pathology vineyard and trial summaries with discussion of compatibility, timing, and placement of biological products in New York disease management programs. Winter Fruit School: >75 attendees total in Geneva and satellite hubs across NY state regions.

Person	Date	Engagement Method	Presentation/ Article Title/What	Venue	Host	Contact hours	Notes
Combs, Gold	05/28/2025	Article/Briefing	Are We Standing Out in The Field, Or Are We Outstanding in The Field? Biologicals for grape disease control		Appellation Cornell, also distributed via CCE newsletters	0	https://cals.cornell.edu/news/2025/05/are-we-standing-out-field-or-are-we-outstanding-field
Combs	06/30/2025	Article/Briefing	Biofungicide article NGRA June 2025 Research Focus		NGRA monthly newsletter	0	https://files.slack.com/files-pri/T0152RU5SNB-F0942ETPA0H/screenshot_2025-06-30_at_10.18.40___am.png
Combs, Gold	08/29/2025	Article/Briefing	Prescient Research on conventional fungicides upends conventional wisdom, but challenges remain	Trade magazine	NYWGF Great Grapes & Regional Spotlight, Robin Shreeves & Kathleen Wilcox	0	https://newyorkwines.org/prescient-research-on-conventional-fungicides-upends-conventional-wisdom-but-challenges-remain/
Gold, Combs, Regnier, RomeroGalvan, Kanaley, Trivedi, Baruah	09/04/2025	Events, Field Tours (Campus), Tech Demo, professional development	Cornell Grape Pathology Field Day	Cornell Grape Pathology Field Day	CGP	175	
Gold	05/13/2025	podcast	How Research Influences Our Spray Program Decisions with Dr. Katie Gold		Vineyard Underground Podcast	0	https://www.vineyardundergroundpodcast.com/vu072/
Gold, Combs, Regnier	04/01/2025	Presentation - In person	The Changing Dynamic of Vineyard Disease Control	Gallo / Cdga Winery Spring Grower Meeting	Gallo / CDGA Winery	82	Mike Colizzi - "thank you for doing this survey, this is exactly what our industry needs"
Combs	01/08/2025	Presentation - In person , Site Visits	Incorporating biologicals	Long Island Ag. Forum	Suffolk County Extension	50	

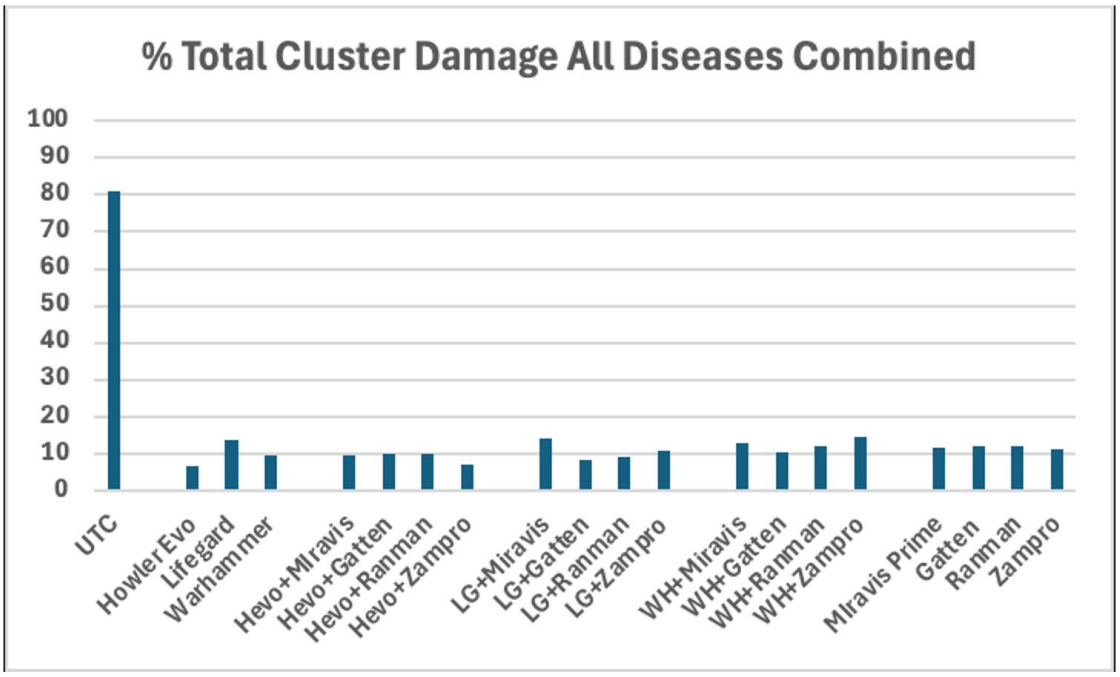
Gold	08/19/2025	Presentation - In person , Workshop - In Person	Biological rotations for disease management	Sustainability and Cabernet Franc production in the east	PSU, cain hickey, Galen Glen Winery	23.5	
Gold	03/11/2025	Workshop - Virtual	Vineyard disease management expert forum discussion	PSU EVF Cain Hickey	PSU	247.5	one of 10 grape pathologists on an expert panel
Combs	12/03/2025	Presentation - Virtual	Fungicide Efficacy 2025: Results from Powdery Mildew, Downy Mildew and Black Rot Trials	2026 Pest Management Spray Schedule – What's Your Plan?	LEGRP CCE	35	
Gold, Combs, Regnier, Carvajal, Trivedi	01/22/2026	Events, Workshop - In Person , Presentation - In person	3 presentations from CGP, 1 Cosseboom, 1 duplais	Cornell Grape Pathology Fruit School	CGP	222	
Combs	02/03/2026	Presentation - Virtual, Workshop - Virtual	Fungicide Efficacy 2025: Results from Powdery Mildew, Downy Mildew and Black Rot Trials		PSU Cain Hickey	498	https://extension.psu.edu/the-future-of-grapevine-disease-management
Gold	02/05/2026	media mention	https://virginiavineyardsassociation.org/fall-2025-vintage-report/	Viriginia Vineyard Assoc. 2025 vintage report	Gonzalo Ortiz,, Rustic Vintage and Virginia Vineyard Assoc.	0	
Combs	03/03/2026	Presentation - In person	Compatibility Quest	BEV-NY	CCE, Hans-WP	37.5	Cdga

Combs	03/16/2026	Presentation - In person	Compatibility Quest	Nutrien growers Meeting	Nutrien Ag	80	
Combs	12/03/2025	Presentation - Virtual	Fungicide Efficacy 2025: Results from Powdery Mildew, Downy Mildew and Black Rot Trials	2026 Pest Management Spray Schedule – What's Your Plan?	LEGRP CCE	35	
Combs	02/28/2026	Workshop - In Person	Hot Topics in Cool Climite Grape Growing	New Mexico Wine Conference	New Mexico State University	25	Las Cruces, NM

Figures

Figure 1. Combined foliar and cluster damage results from the 2025 Chancellor tank-mix study.

A. Total cluster damage, all diseases combined



B. Total foliar damage, all diseases combined

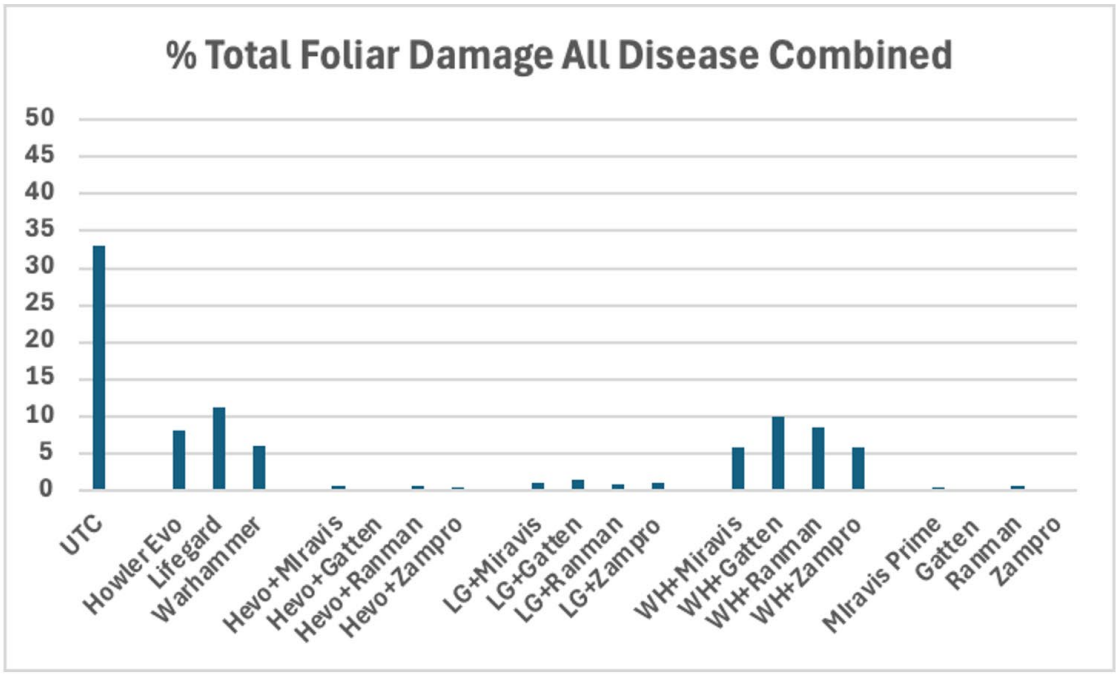


Figure 1. Combined results from the 2025 Chancellor tank-mix study. All treated programs reduced damage relative to the untreated control, but adding a biofungicide to a conventional program did not provide a consistent performance advantage.

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SECTION 3

Project objectives: We wanted to help New York growers prepare for disease management without the broad-spectrum fungicides many programs have long relied on. To do that, we studied two practical questions: whether biologicals work best when rotated with conventional fungicides or added directly into the tank, and how to turn those results into training materials growers can use when building real spray programs.

Importance of research to the NY wine industry: New York growers face pressure to keep fruit clean in a humid climate while also adapting to upcoming restrictions on broad-spectrum fungicides. Because disease control failures can quickly affect yield, fruit quality, and production costs, growers need replacement strategies that are practical, defensible, and tested under New York conditions. This project addresses that need by generating local field data and translating it into grower-ready guidance.

Project Results/next steps: The main take-home so far is that biologicals can fit into New York grape disease programs, but they should not automatically be assumed to improve control when simply added to a conventional tank mix. In the 2025 Chancellor trial, treated programs clearly outperformed the untreated control, especially for cluster protection, but tank mixes did not consistently beat the conventional-only standards. Looking across the larger Cornell efficacy dataset, rotations between biological and conventional products continue to look promising, which supports the current recommendation to rotate rather than tank mix. Next, we will continue these trials across more seasons and disease-pressure scenarios, test additional pairings, and use those results to refine workshops and grower recommendations.