FINGER LAKES GRAPE PROGRAM

RESEARCH·RELATIONSHIPS·RELEVANCE

IN THIS ISSUE:

FINGER LAKES VINEYARD UPDATE

June 2025 - Issue, [008]

Photo Credit: Chris Kitchen (UREL)

Cornell Cooperative Extension
Finger Lakes Grape Program

TAILGATE MEETING SUMMARY – JUNE 26, 2025

Managing Leafroll, Downy Mildew, and Shifting Pesticide Rules

The June 26 Tailgate meeting was held at Sheldrake Point Winery. Much thanks to Dave Wiemann for hosting us and helping to lead some of the discussion. The meeting mostly centered around the impacts of grapevine leafroll virus, downy mildew, and pesticide regulation changes, and the challenges in navigating "new norms" in grape growing in the Finger Lakes.

Grapevine Leafroll Virus:

Much of the discussion centered on the widespread and often frustrating impacts of leafroll virus. The disease can reduce vine vigor and yield, delay fruit ripening, and in red grapes can result in a loss of color. Last year, Sheldrake Point used underripe fruit from an infected block of Gamay to make a "Gamay blanc", which Dave generously provided a couple of bottles of for the group to sample (and was quite tasty). Growers shared some of their experiences with leafroll virus in their vineyards, including the observation that, in more vigorous sites, leafroll virus might amplify problems like large berries, high pH, and poor color.

We discussed the pros and cons of rogueing vines and/or replant entire blocks when 25% or more of a block is infected, which is the suggested threshold based on an economic analysis from Cornell (based on several economic assumptions). Even though pulling productive-looking vines is painful, letting virus-laden blocks limp along can cost more in the long run. New York's clean vine certification program is producing higher-quality, virus-tested vines than in the past, improving grower confidence in replanting decisions. We discussed the need for leaving a block fallow when replanting for leafroll virus, and while letting a block sit fallow doesn't hurt anything, it isn't really necessary with leafroll (and red blotch for that matter) because they are not vectored by nematodes, like ringspot and other plant viruses are. It is important, however, to completely remove old trunks and rootstock when doing this, as the old wood may can harbor both the virus itself and mealybugs—the virus vector.

Downy Mildew: A Season of High Pressure

Downy mildew has become a common site in vineyards over the past week, driven by prolonged wet weather and high humidity. Even under tight spray programs, disease was showing up on clusters and new shoot growth—particularly in low-lying or wetter portions of vineyards. We spent some time discussing the importance of proper intervals and product selection during the critical window from bloom through the end of fruit set and early berry growth. For DM, this is probably the best time to consider using materials that are highly effective but prone to rapid resistance development, such as Ridomil. Because of its high potential for resistance development, it would be best to limit its use to once per year, if possible (but no more than twice), and this would be that time, in my opinion. Because it is so vulnerable to resistance development, it should not be used as a "rescue" treatment if infection levels are high. It has anti-sporulant activity like phos acid does, but neither of these acts as an "eradicant", i.e., they don't kill existing infections but rather prevent current infections from producing spores for further spread.

TAILGATE MEETING SUMMARY – JUNE 26, 2025

The Role of Biologicals and Resistance Management

Growers discussed their experiences with biological fungicides, many of which are now being tested in both Concord and vinifera vineyards. While promising in low or moderate pressure conditions, these products can often fall short when disease pressure spikes—as it has at times this year. There is still a lot of work to be done on how to best integrate these materials into a "conventional" IPM program, but one suggestion is to use them when a) disease pressure is not high (or use them in combination with another material), and/or b) outside of the critical window between pre-bloom and the end of fruit set.

Pesticide Regulation: What's Coming and What to Watch

Kyle Bekelja, Cornell's new statewide grape IPM specialist, updated the group on changes in pesticide regulation—especially under the Endangered Species Act. Growers were reminded that "the label is the law", so as new requirements or restrictions emerge, growers must follow whatever language is on the container of pesticide that they are using. If an older container of a pesticide has one set of requirements, and a newer container of the same material has different requirements, the grower needs to follow the instructions on the label of the product they are putting into the tank. The new requirements on the newer container would not apply until the old material is used up.

There was more discussion about the current state of the EPA's review of mancozeb, based on Katie Gold's recent visit with EPA and USDA personnel in Washington. The bottom line is, based on her discussions, EPA is not likely to completely ban mancozeb from use in grapes, but more stringent restrictions on its use are likely, such as longer re-entry intervals and additional PPE requirements. We will know more when the new proposed decision comes out, likely later this year.

Spotted Lanternfly: Not Widespread Yet, But Watch Closely

While Spotted Lanternfly (SLF) hasn't exploded in the Finger Lakes—yet—it's already been confirmed at multiple sites in the region. Growers were encouraged to train their vineyard crews to identify SLF nymphs and egg masses and report sightings immediately. Early detection and rapid response are key to slowing the spread. The IPM program can provide materials to growers that help to identify SLF and what to do if it is found. Many of these are available in both English and Spanish.

WHAT'S BREWING AT EPA? PESTICIDE LABELS, ESA RULES, AND MORE

Last week, I sat in on a meeting of the Federal Pesticide Program Dialogue Committee (PPDC)—and if you're wondering what that is, I was too! It's a federal advisory group that gives the EPA science-based recommendations, helping shape policies like Endangered Species Act (ESA) compliance (think Bulletins Live! Two, the Mitigation Menu, and spray drift rules). They're also working on pesticide label reform and gathering feedback from across the ag world to help guide EPA's priorities.

The meeting offered a peek behind the curtain of federal pesticide decision-making. Here are some key takeaways that may matter to you:

New Products in the Pipeline

The PPDC provided general updates, including listing the registrations, or proposed registrations, of new active ingredients that have been completed in the last year. That list is provided in Figure 1.

Figure 1. Screenshot from PPDC meeting on 6/17/2025 showing new active ingredients (Ais) proposed and finalized

Pesticide Label Reform: Simplifying Chaos

A working group of 50+ members is working to digitize and standardize pesticide labels. Printed labels aren't going away, but they're aiming for uniform layouts across products—so no more deciphering wildly different label formats in a hot shed while you're trying to spray before the rain.

Labels will have a table of contents and consistent formatting across all pesticide types (fungicides, herbicides, insecticides). This could be a big win for usability. I'll keep you posted as it rolls out. I suspect this one will take some time!

WHAT'S BREWING AT EPA? PESTICIDE LABELS, ESA RULES, AND MORE

ESA Compliance: What's Changing, What to Watch

Some very important, farmer-focused questions came up:

- Q: Do I have to print the Bulletins?
  A: By now, you've probably heard me say, "yes, they need to be printed." Turns out the reality is more complex than that. Technically, you're not legally obligated to print Bulletins, however it's still strongly recommended. If you don't print/save a bulletin and the rules change, you may not be able to prove compliance retroactively. It's safer to have a copy on hand.
- Is there a list of products with ESA requirements?

Sort of. There's new a searchable database for products linked to Pesticide Use Limitation Areas (PULAs): you can find it here: https://www.epa.gov/endangered-species/data-download

Finally, some committee members raised real concerns I think are worth sharing:

- How will EPA measure if these new mitigation strategies actually work?

No clear metrics = risk of endless new restrictions. And without established metrics of success, or even a way to link the mitigation practice to an effect observed on the landscape, it's feasible that a scenario could arise where blame could fall on farmers if species don't "recover." While this sounds scary in writing, I was actually relieved to observe this being brought up as a sticking point by several members of the committee, and I promise I will keep an eye on this going forward.

- What about financial impacts?

Good news: EPA leadership said there will be legal ways for growers to seek compensation if new rules cause economic harm. I'll track this as more details come out.

I was encouraged to see folks on the committee voicing real-world concerns on behalf of farmers. I'll keep a eye on this stuff and keep you all in the loop as I learn more!
If you have questions about any of the topics discussed here, feel free to reach out to me at the contact information below, or catch me at the next Tailgate meeting!

Cheers,

Kyle M. Bekelja
Grape IPM Specialist
IPM House, Cornell AgriTech
607 W North St Geneva, NY
P: 315-787-2205
kmb399@cornell.edu

Cornell IPM
New York State Integrated Pest Management

WHY ARE MY AIRBLAST NOZZLES PLUGGING?

Written by Jason Deveau, OMAFA Application Technology Specialist Reproduced with permission of the author

This article was inspired by the following email:

"I'm an organic apple grower with constant nozzle-clogging problems. These problems occur when we use wettable powders such as micronized sulfur and Surround WP. We always premix before adding to the tank through its strainer. Our airblast sprayers have towers and employ mechanical agitation. The nozzle/filter combo is TeeJet TXR8001K Ceramic Conejet Visiflow Hollow Cone spray tips with TeeJet 4514NY10 50-mesh nylon slotted strainers. The nozzle strainers rarely make it through a full tank without having problems. Do I need to add an additional level of filtration or is there something that I'm missing?"

A clogged slotted strainer inside the nozzle body. Note that the inners of the check valve seem clear (a good thing).

A clogged slotted strainer.

You can almost feel the frustration. When I receive grower enquiries, I first turn to the library of articles on Sprayers101 as well as the Airblast101 textbook. I was surprised to discover that we didn't have anything that addressed this issue directly. So, I checked through university extension and industrial resources. Ultimately, I couldn't find what I was looking for, so let's correct this oversight.

Possible causes

There may not be a single reason for why nozzles plug. It might be a combination of the following factors:

1. Product choice

While any tank mix can create clogs if they prove to be physically incompatible, there are two formulations that have a reputation for clogging nozzles.

- Wettable powder (WP) formulations such as micronized sulfur and diatomaceous earth are notorious for clogging nozzles. WPs consist of a finely ground solid active ingredient often combined with wetting and bulking agents to help hold them in a dilute suspension. They tend to be dry products rather than liquids.

- In a similar vein, suspension concentrate (SC) formulations also consist of a finely ground solid active ingredient, but this time they are suspended in a liquid and kept dispersed in the sprayer tank by wetting agents, dispersants, and thickeners. These formulations are known as "flowables" or "suspensions".

WHY ARE MY AIRBLAST NOZZLES PLUGGING?

Written by Jason Deveau, OMAFA Application Technology Specialist Reproduced with permission of the author

By the way, for those thinking he should change products, he already uses Kumulus DF (or Microthiol Disperse), which are reputedly the least troublesome formulations… and smell better than other sulfurs.

2. Mixing practices

Pre-slurries are sometimes prescribed for SCs. I personally feel that pre-slurries create exposure risks and more things to clean, but this opinion is moot in the case of WPs: Micronized sulfur and diatomaceous earth are not soluble. They're particles that are held in suspension by fluid flow or agitation, so there's no point in a pre-slurry.

For those readers that cook, consider the corn starch metaphor. You're making a sauce, and you choose to thicken it with a pre-slurry of corn starch and water. The particles disperse, but do not dissolve, so if you fail to use it immediately they settle to the bottom of the container. They must be forcibly scraped up and resuspended.

3. Agitation

Best practice is to fill the tank at least ½ full of water and engage agitation before you add anything. To extend the cooking metaphor, you want a simmer but not a rolling boil. Once filled, **never stop agitating** or WPs and SCs will settle and may not resuspend uniformly, if at all.

Your sprayer design may affect matters. Some hydraulic agitation systems flag if they have undersized pumps. If your pump is busy sending flow to the nozzles, it may not have sufficient capacity to run the agitation. When your sprayer is "empty", is there a thick accumulation at the bottom? You may have insufficient hydraulic agitation. Mechanical (paddle) agitation does not suffer this issue because it is direct-driven off the PTO. Read more here.

4. Clean-out practices

Perhaps plugs are occurring because of the previous tank, not the current tank. WPs can leave a buildup of settled pesticide in the tank, suction strainer and nozzle strainers. If you aren't diligent about rinsing at the end of each day, products will settle and harden. Micro sulfur particles, for example, are less than 10 µm in diameter and harden into a flakey shell that can break loose and cause plugs.

5. Flow restriction

Several things can restrict flow. Elbows, bends and fittings can increase friction, reducing flow. The greater the distance a fluid needs to travel, the more flow is reduced. The greater the head (a pump's head is the maximum height that the pump can achieve pumping against gravity), the more flow is reduced. There is an excellent description of this relationship here.

So, if an operator is using nozzles with a particularly small orifice, plus nozzle strainers, on a vertical boom, liquid flow will be reduced. This allows particles to fall out of suspension and settle, forming further restriction to flow and eventually, plugs

Possible solutions

Now, armed with these potential causes, let's return to the grower. After some back-and-forth, he clarified that the clogs were a problem, but restricted flow was worse. An operator will stop to clean or replace a plugged nozzle, but may not notice reduced flow. This has the potential to affect several rows as well as leave unsprayed product in the tank.

WHY ARE MY AIRBLAST NOZZLES PLUGGING?

Written by Jason Deveau, OMAFA Application Technology Specialist Reproduced with permission of the author

My first proposal was to increase nozzle size. An '01 tip is very, very small and even with slotted strainers (as opposed to mesh), that's a lot of restriction. I suggested recalibrating for larger tip orifices. This is a rather involved process, but options included using every second nozzle (as long as there were no gaps in coverage), and/or dropping pressure, and/or increasing travel speed (as long as the spray still reached the tree top and canopy centre). I shared this Excel output calculator to help with the process.

New filter plumbed and secured. Note the anti-rub wrap on the line – always a good idea.

Failing that, we discussed a plumbing project. Section 5.2.1 of Airblast101 describes a way to create a self-cleaning line filter that replaces nozzle strainers. That means instead of climbing a ladder to pull tips off a tower to reach the strainers, all filtration is conveniently located at ground level for easier (and more frequent) cleaning.

A 50-mesh inline filter assembly with a 1/4 turn ball valve for quick flushes.

The outcome

The grower felt the numbers worked best running orange 02 TXR's in every second position. He ordered new 50 mesh slotted nozzle strainers. His new operating parameters would be 5 nozzles/side, at 8.2 bar (120 psi) and 5.1 km/h (3.2 mph) for a total 51.5 L/ha (55 gpa). He noted some incompatibility issues running Braglia nozzle bodies (spec on his Rears sprayer), TeeJet TXR's, TeeJet slotted strainers and TeeJet CP20230 caps. That was an important observation, and you can learn more about it here.

We felt good about this, but while there was an improvement, it didn't solve the problem. There was still strainer clogging after the first tankload. So, he added inline filters and removed the tip strainers. The result:

"Yesterday I sprayed over 350 pounds (over 1,000 gal) of Surround WP and had no issues. I'm really excited about this new setup – it looks very promising. I've attached more pics if you're interested (I don't spend a lot of time scrubbing sprayers until after Surround season). Thanks again for all your help in this matter. – Joe Fahey, Peck & Bushel Fruit Company"

Fantastic. Thanks to Joe for letting me share this story. Hopefully his experience will help you diagnose and solve any flow or nozzle plugging issues in your own operation.
Happy Spraying.

WHY ARE MY AIRBLAST NOZZLES PLUGGING?

Written by Jason Deveau, OMAFA Application Technology Specialist Reproduced with permission of the author

The new loadout. 02's in every second position, with no tip strainers, and a new inline filter on each side of the sprayer.

Epilogue

This article elicited some interesting comments. I'll share two:

1. One grower proposed switching from a low profile axial sprayer to an air-shear system (there are a few examples here). In this case, the grower had a European make with hydraulic agitation. The grower re-plumbed theirs by installing a bigger pump and swapping the sparge system with a 3/4" pipe oriented toward the bottom to sweep it out. When mixing, the agitation valve is left wide open. He says he doesn't even bother with a tank basket; he dumps the Surround (as much as 2 x 50 pound bags in 1,000 litres) and has no plugging issues.
2. Another grower with considerable boom-sprayer experience was genuinely surprised this was even an issue. Self-cleaning filters have been commercially available for more than 30 years and most boom sprayers have them. This is a comment on the stagnation of the North American low-profile radial airblast design. Perhaps the long life of these sprayers (sometimes 40 years of service) makes iterative change slow, or perhaps most operators aren't aware of new features, or perhaps change is a risky proposition in such high-value crops. This is a shame given that the first optic sensors were installed on airblast, not broad acre field sprayers. That comes as a surprise to many. But it seems to have been the exception and not the rule.

AG WORKFORCE CENTRAL: VIRTUAL OFFICE HOUR SCHEDULED FOR JULY 9.

Please join us for our next Ag Workforce Central Office Hour, our guests will be Mary Slattery (Director of the Division of Compliance and Education) and Reyna Morena (Deputy Director of the Division of Compliance and Education) from the NY State Department of Labor's Division of Compliance and Education (DOCE). Mary and Reyna will share information about Common Employment Law Violations Found in New York Farms. Participants will have an opportunity to engage in a question and answer session with the panelists.

Event Details:

- Date: Wednesday, July 9, 2025
- Time: 12:00 – 1:00 PM EDT
- Format: Online platform – Zoom Webinar

Registration: Advance registration is required. Register now:
https://cornell.zoom.us/webinar/register/WN_LbzGbq9qTrGr3zdv7rsuvg#/registration

There is an opportunity to submit your questions for the panel in advance during registration. We highly encourage that you take advantage of this feature.

About Cornell Agricultural Workforce Development:
Cornell Agricultural Workforce Development is dedicated to empowering farmers and agribusiness professionals with essential knowledge and tools. Our initiatives enhance workforce productivity and foster a culture of learning and growth within New York's agricultural sector. For more information, visit agworkforce.cals.cornell.edu.

Cornell Cooperative Extension
AGRICULTURAL WORKFORCE DEVELOPMENT

UPCOMING EVENTS

Don't forget to check out the calendar on our website (https://blogs.cornell.edu/flxgrapes/events/) for more information about these and other events relevant to the Finger Lakes grape industry.

Tailgate Meeting
Tuesday, July 8, 2025 4:30 – 6:00 PM
Boom Point Vineyards
7483 Salmon Creek Rd., Williamson NY 14589

Our next Tailgate Meeting will be on Tuesday, July 8th at Boom Point Vineyards, 7483 Salmon Creek Rd., Williamson NY 14589. These meetings are a time for growers and the FLGP staff to discuss what's going on in the vineyards, ask questions, and learn from each other. There is no set agenda for the most part, so bring questions, observations, thoughts, etc. and let's talk about them. Bring a chair if you want to. Each meeting has been approved for 1.5 pesticide recertification credits by DEC.

Here is the remaining schedule for Tailgate Meetings this year:

- August 5 - Anthony Road Wine Company, 1020 Anthony Rd., Penn Yan NY 14527
- August 19 - 680 Cellars, 3050 Swick Rd., Ovid NY 14521

Ryan Young (UREL)

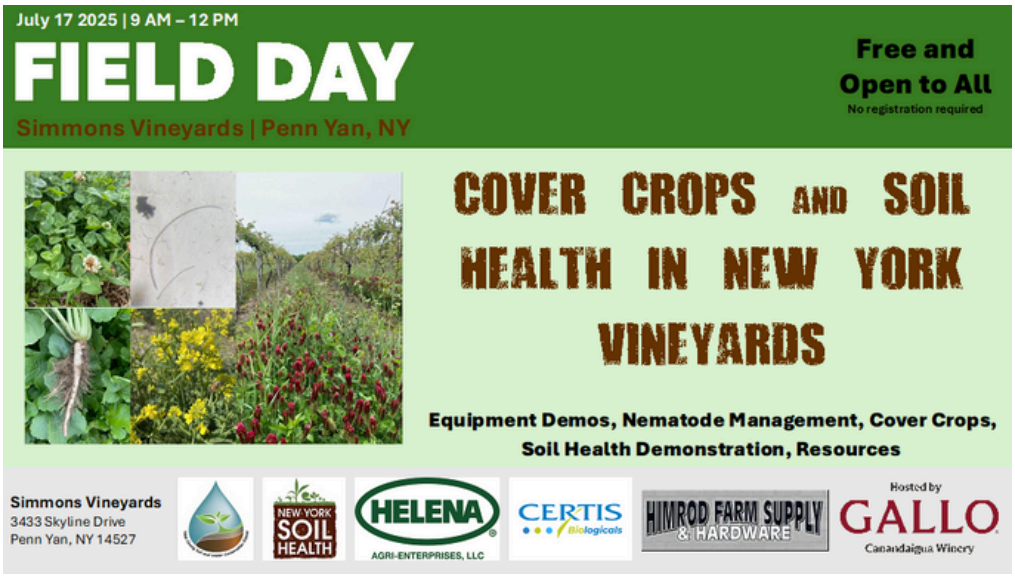
Cover Crops and Soil Health in New York Vineyards
Thursday, July 17, 2025 9:00 AM – 12:00 PM
Simmons Vineyards
3433 Skyline Drive, Penn Yan, NY

The field staff from Gallo are organizing a field meeting focused on soil health in vineyards. The meeting is being held in collaboration with Yates County Soil and Water Conservation District, New York Soil Health, Helena Agri-Enterprises, Certis Biologicals and Himrod Farm Supply. There will be in-field discussions and briefs, equipment displays and soil health trailer demonstrations.

This meeting is open to all growers, not just those who have contracts with Gallo, and there is no need to register ahead of time.

UPCOMING EVENTS

Don't forget to check out the calendar on our website (https://blogs.cornell.edu/flxgrapes/events/) for more information about these and other events relevant to the Finger Lakes grape industry.



Ryan Young (UREL)

Equipment Rodeo 2025
Wednesday, August 13 11:00 AM – 4:00 PM
Wagner Vineyards
9322 Route 414, Lodi NY

Sponsored by the NY State Wine Grape Growers, the Equipment Rodeo is the largest vineyard equipment show on the East Coast. The event will feature equipment from more than 20 dealers, including numerous harvesters and sprayers. Mark your calendars now!

2025 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	**Hi Temp (F)**	**Lo Temp (F)**	**Rain (inches)**	**Daily GDDs**	**Total GDDs**
6/19/25	84.4	64.4	0.17	24.4	684.4
6/20/25	79.7	62.1	0.00	20.9	705.3
6/21/25	88.0	63.0	0.00	25.5	730.8
6/22/25	92.1	74.8	0.00	33.5	764.2
6/23/25	95.9	75.6	0.00	35.8	800.0
6/24/25	95.0	74.5	0.00	34.8	834.7
6/25/25	84.9	72.9	0.00	28.9	863.6
Weekly Total			**0.17”**	**203.7**	
Season Total			**13.88”**	**863.6**	

GDDs as of June 25, 2024: 1018.7

Rainfall as of June 25, 2024: 10.59”

Seasonal Comparisons (at Geneva)

Growing Degree Days

	2025 GDD [1]	Long-term Avg GDD [2]	Cumulative days ahead (+)/behind (-) [3]
April	86.3	63.9	+5
May	216.9	257.2	-2
June	484.2	486.3	+4
July		648.5	
August		596.7	
September		362.5	
October		114.3	
TOTAL	787.4	2529.4	

1 Accumulated GDDs for each month.
2 The long-term average (1973-2024) GDD accumulation for that month.
3 Numbers at the end of each month represent where this year’s GDD accumulation stands relative to the long-term average. The most recent number represents the current status.

2025 GDD & Precipitation

Precipitation

	2025 Rain [4]	Long-term Avg Rain [5]	Monthly deviation from avg [6]
April	2.81”	2.86”	-0.05”
May	5.23”	3.04”	2.19”
June	1.39”	3.58”	
July		3.48”	
August		3.19”	
September		3.43”	
October		3.39”	
TOTAL	9.43”	22.97”	

4 Monthly rainfall totals up to current date
5 Long-term average rainfall for the month (total)
6 Monthly deviation from average (calculated at the end of the month)

FINGER LAKES GRAPE PROGRAM

RESEARCH·RELATIONSHIPS·RELEVANCE

FOLLOW FLGP:

@CCEFLGP

FINGER LAKES GRAPE PROGRAM

@CCEFLGP

BLOG

BLOGS.CORNELL.EDU/FLXGRAPES/

WEBSITE

FLGP.CCE.CORNELL.EDU/

Got some grapes to sell? Looking to buy some equipment or bulk wine? List your ad on the **NY Grape & Wine Classifieds** website today!

flgclassifieds.cce.cornell.edu/

TEAM

Hans Walter-Peterson
Team Leader

Ellen Coyne
Project Field Technician

Brittany Griffin
Team Coordinator

Cornell Cooperative Extension
Finger Lakes Grape Program

The Finger Lakes Grape Program is a partnership between Cornell University and the Cornell Cooperative Extension Associations in Ontario, Seneca, Schuyler, Steuben, Wayne and Yates Counties.