



### IN THIS ISSUE:

- [1] In the Vineyard
- [2] NYWGF Vineyard Survey
- [3] Adjuvants
- [4] Mapping Phenology in NY
- [5] Events
- [6] GDDs

# FINGER LAKES VINEYARD UPDATE

May 2025 - Issue, [004]

*Photo Credit: Chris Kitchen (UREL)*

# IN THE VINEYARD

---



*Riesling shoots in a Seneca Lake vineyard. Note the scarring on the canes from powdery mildew infections last year.*

What a strange start it's been to the growing season. Cool and dry, then warm and wet, then cold and dry, and now cold and wet...Mother Nature can't seem to make up her mind. The lower temps have slowed down shoot growth somewhat, but with the soil full of moisture and temperatures warming back up next week,

I suspect we will see some pretty significant growth in the coming days.

Fortunately, the temperatures on Tuesday morning did not get cold enough to present a significant risk of frost damage. The NEWA weather stations located at vineyards all recorded low temperatures in the upper 30s that morning. It is possible that a few buds in cold pockets were injured, especially near the ground, but that is likely the extent of the damage. If anybody is seeing anything more than that, please let me know.

The cool and rainy conditions these past few days are the perfect conditions for Phomopsis infections to get established if adequate protective measures haven't been taken before now. It hasn't been easy to find adequate windows for fungicide applications lately, between wet soils, blustery winds and now rain.

The most used materials for Phomopsis management, mancozeb and captan, are only protective materials that must be applied before the time of infection. They have no ability (or very limited) to "reach back" and stop existing infections from spreading. If nothing got applied to the vines just prior these recent days of cold and rain, and there is still inoculum in the canopy, then it is likely that signs of Phomopsis infections will start showing up on leaves and stems over the next several days.



Phomopsis infection symptoms on leaves (left) and shoots (right).

# NYWGF VINEYARD SURVEY NEEDS FLX GROWERS!

---

The 2025 Vineyard Survey, sponsored by the NY Wine & Grape Foundation, is still in need of data from growers, especially from the Finger Lakes region. As of the initial closing date of May 15, only about 5,000 acres of the region's vineyards were accounted for in the survey, which means about half of the acreage (and farms) have not been included so far. Is yours one of them?

Even if you entered your data in last year's version of the survey, the NYWGF is asking for growers to input their vineyard data this year. This information helps to provide better understanding of where different varieties are planted, and how much of them, which is an important part of this survey.

The survey will remain open until next Tuesday, May 27. Growers can access the survey online at <https://survey.clarityaccess.com/survey/selfserve/32cc/250226?list=3#?>

If you completed this year's survey already, thank you for responding



*As a follow-up to his talk at the Spring IPM meeting, I am reproducing an article that Christophe Duplais wrote last year about spray adjuvants.*

## **Everything you need to know about buffering and conditioning adjuvants**

Christophe Duplais, Cornell AgriTech

Email: [c.duplais@cornell.edu](mailto:c.duplais@cornell.edu)

There are many adjuvants available that are suggested to be combined with pesticides, but not enough information about their role and efficacy. This article focuses on adjuvants that control water pH and water hardness to make sure pesticides perform at their best. **The bottom line is the quality of the spray water is just as important as the pesticide itself.**

Spray water quality is very important in pesticide applications. Remember that spray water quality concerns pH, hardness, and alkalinity, and is different from the microbial concerns we test for in water quality for food safety. This article deals with water quality only in terms of its impact on pesticide efficacy.

### **General information of water pH and hardness**

- pH measures the acidity of water, from acidic to alkaline

0 < pH < 6	pH = 7	7 < pH < 14
Acid	Neutral	Alkaline

- Hardness measures the concentration of dissolved minerals (calcium and magnesium) in water in grains per gallon (gpg) or in part per million (ppm), equivalent to mg/L. These minerals come from calcium carbonate and magnesium carbonate.

0-3 gpg	3.5-7 gpg	7-25 gpg
0-60 ppm	60-120 ppm	120-425 ppm
Soft to slightly hard	Moderately hard	Hard to very hard

- The alkalinity test measures the carbonate part in calcium carbonate and magnesium carbonate, while the hardness test measures the mineral part (calcium and magnesium).
- Measuring water pH and hardness is more informative than alkalinity alone
- Water pH and hardness vary depending on the time of year and location in NY state.
- Hard water neutralizes acids, preventing pH from dropping (becoming acidic).

### **Water pH and hardness impact pesticide efficacy**

- Water pH affects the stability of most pesticides.
- Pesticides work best within a specific pH range between 4 (acid) and 7 (neutral).
- When water is alkaline (pH > 8), pesticide active ingredients are less stable and may degrade.
- Dissolved minerals (calcium, magnesium) can bind to active ingredients, reducing their efficacy and causing precipitation (clogging spray nozzles).

### **How buffering and conditioning adjuvants work?**

Buffering adjuvants are used to adjust and stabilize the pH of the spray solution to the optimal pH range of 4 to 7 (see below for examples).

Water softening with conditioning agents removes calcium and magnesium by binding strongly to the minerals, preventing them from binding to the active ingredients (see below for examples).

### **Best practices for using buffering and conditioning adjuvants**

#### **(1) Test your water regularly**

This should be carried out regularly, at least every month during the growing season, or before every spray if possible.

##### **pH Testing:**

- Use test strips to measure the pH of spray water. pH strips with a multiple color indicator and a different pH range, or pH paper rolls, which are available online (Amazon) (see photo). In general, pH strips are more accurate than paper rolls.
- If you are in doubt about the results because the reading is between 7 and 8, add a buffering adjuvant to ensure that your pH is below 7.

##### **Hardness Testing:**

- Test strips for water hardness are also widely available and easy to use. If your water is > 7.5 gpg or 120 ppm, the water tank should be treated with a water softener.

#### **(2) Choose the right buffering and conditioning adjuvants**

Carefully read and follow the instructions on the adjuvant labels. It is essential to use the right quantity to obtain the desired adjustments.

**(3) Order of Mixing:** Always add the buffering and conditioning adjuvants to your tank water first, before adding the pesticides. This ensures that the water is buffered and conditioned before the active ingredients are added to the tank.

### **Examples of buffering adjuvants.**

There are many products available for only buffering the pH of water, or with multiple functions.

#### Products for pH buffering only:

- Buffer P.S. (Helena)
- Buffer Xtra Strength (Helena)

#### Buffering adjuvants with multiple functions:

- Li 700 (Loveland Products) is a pH buffering and a spreader/penetrant and drift control agent.
- Indicate 5° (Brandt) contains a pH indicator, turning the spray tank water pink when pH value of 4.5-5.5 is reached. It is also a spreader/penetrant.

### **Examples of conditioning adjuvants**

There are very few conditioning adjuvants available. It is best to choose a product containing citric acid (acid in lemon juice), a good mineral binder whose acidity also lowers the pH. EDTA is an excellent water softener, but it is a persistent substance in the environment that reduces the bioavailability of metals (iron, copper, etc.) essential to soil health and its use should be limited.

#### Products for buffering and conditioning:

- pH Adjust (Brandt)
- Crimson® NG (Winfield United)

#### Products with multiple functions:

- Weather Gard™ Complete (Loveland Products) is a deposition aid, drift control agent, penetrant (spreader), antifoam, and water buffering and conditioning agents
- FS AMS MAX DR TM (Insight FS) is water conditioner/AMS, drift reduction, surfactant.

Note: Ammonium sulfate (AMS) is a common fertilizer. It is a mineral acid that lowers the pH of spray water. It also dissolves calcium carbonate. Ammonium sulfate can be considered as a buffering and conditioning agent.

### Examples of OMRI listed adjuvants for both buffering and conditioning

- pH Down (SafeGro Laboratories)
- MixWell Acidifier (JH Biotech)
- CitriSan (Organisan Products)
- Constant BUPHER Acidifier (Brandt)



Photo 1. Examples of different pH strips and hardness strips. pH ranges from 0-14 and 4.5-10, hardness range 0-425 ppm. Price is about \$10 for 100-150 strips.



Photo 2. Easy, inexpensive testing of water pH and hardness using strips. Example of readings from sink water at Cornell AgriTech. The pH is between 7 and 7.5 with multicolor strips and between 6 and 7 with paper roll. Multicolored pH strips are more accurate than pH rolls. Water hardness is 7 gpg (120 ppm). Conclusion: this water needs to be treated by buffering and conditioning adjuvants.

# Mapping grapevine phenology across New York

Manushi B. Trivedi, Nicholas Gunner, Yu Jiang, Katie Gold

## Tracking phenology for pest and disease

Tracking and modeling phenology plays a key role in timing spray applications and providing early forecasts of disease risk. Recognizing this, FRAME networks is taking early steps to map phenological stages using open-source satellite images across United States.

## Key phenological stages of interest

We are kindly asking for your help in recording and sharing basic phenological observations, such as:

1. Bud-break (EL stages: 6-7)
2. Shoot growth 3-4 inches - (EL stages: 9-12)
3. Shoot growth 6-10 inches - (EL stages: 12-15)
4. Immediate pre bloom / rachis elongation (EL 17-19)
5. Full Bloom (EL stages: 25-26) – 100% cap-off
6. Immediate post bloom/ pea size berry (EL stages: 29-31)
7. Bunch fully closed (EL stages: 32)
8. 100% Veraison - (EL stages: 35-36)
9. Harvest – (EL stages: 38-39)

Please ensure that at least 10 vines in the area and at least 90% shoots per vines are at the target phenological stage you intend to record. Select a most representative location in term of vigor and yield in the vineyard. Avoid at least 100ft of area from the edges of the vineyard. Record the observation from the same location throughout the season.

## How can you participate?

1. Sign up on the mobile app using the QR code.
2. Share your observations via email or text to the provided contact details below.

*All shared data will be used solely for research and extension purposes, with respect for your privacy and anonymity.*



Contact:  
Manushi Trivedi – [mbt43@cornell.edu](mailto:mbt43@cornell.edu)  
Mobile: 607-882-0101



# 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, May 27, 2025 4:30 – 6:00 PM

Stanbro Vineyard

5895 Route 21, Naples NY

Our next Tailgate Meeting will be on Tuesday, May 27 at Gene Stanbro's Vineyard in Naples. 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:

- June 10 - Vine Country Farms, 8531 County Route 74, Prattsburg NY 14873
- June 24 - Sheldrake Point Winery, 7448 County Road 153, Ovid NY 14521
- July 8 - Boom Point Vineyards, 7483 Salmon Creek Rd., Williamson NY 14589
- August 5 - Anthony Road Wine Company, 1020 Anthony Rd., Penn Yan NY 14527
- August 19 - 680 Cellars, 3050 Swick Rd., Ovid NY 14521



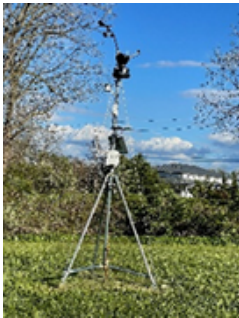
Ryan Young (UREL)

# 2025 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs
5/15/25	78.4	58.3	0.00	18.4	237.7
5/16/25	83.1	60.4	0.54	21.8	259.4
5/17/25	79.5	58.5	0.14	19.0	278.4
5/18/25	61.7	52.9	0.00	7.3	285.7
5/19/25	53.6	45.7	0.00	0.0	285.7
5/20/25	54.5	39.4	0.00	0.0	285.7
5/21/25	52.7	43.0	0.57	0.0	285.7
Weekly Total			1.25"	66.4	
Season Total			8.26"	285.7	

GDDs as of May 21, 2024: 346.6

Rainfall as of May 21, 2024: 6.36"



Seasonal Comparisons (at Geneva)

## Growing Degree Days

	2025 GDD <sup>1</sup>	Long-term Avg GDD <sup>2</sup>	Cumulative days ahead (+)/behind (-) <sup>3</sup>
April	86.3	63.9	+5
May	162.3	257.2	+4
June		484.3	
July		647.2	
August		596.8	
September		361.1	
October		113.9	
TOTAL	248.6	2522.9	

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 <sup>4</sup>	Long-term Avg Rain <sup>5</sup>	Monthly deviation from avg <sup>6</sup>
April	2.81"	2.86"	-0.05"
May	3.63"	3.04"	
June		3.58"	
July		3.48"	
August		3.19"	
September		3.43"	
October		3.39"	
TOTAL	6.44"	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)



RESEARCH · RELATIONSHIPS · RELEVANCE

## FOLLOW FLGP:



@CCEFLGP



[FINGER LAKES GRAPE PROGRAM](#)



@CCEFLGP

## BLOG

[BLOGS.CORNELL.EDU/FLXGRAPES/](https://blogs.cornell.edu/flxgrapes/)

## WEBSITE

[FLGP.CCE.CORNELL.EDU/](https://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/](https://flgclassifieds.cce.cornell.edu/)

## TEAM

**Hans Walter-Peterson**  
Team Leader

**Ellen Coyne**  
Project Field Technician

**Brittany Griffin**  
Team Coordinator

*Cornell is an equal opportunity employer. For more information click [here](#). CCE does not endorse or recommend any specific product or service. This program is solely intended to educate consumers about their choices. Contact CCE if you have any special needs such as visual, hearing or mobility impairments.*