

# Cornell Cooperative Extension Finger Lakes Grape Program



August 12th, 2021

## Finger Lakes Vineyard Update

### In the Vineyard

Fruit continues to soften and turn color as the Finger Lakes continues through veraison. Berries on Cayuga White and Chardonnay are softening up along with several other white cultivars, and red fruited varieties like Pinot noir, Zweigelt and Lemberger are starting to show some color as well.

While we are in a less rainy pattern again, there is still more than adequate moisture in the soil to continue to promote canopy growth. I've seen a number of hedgers out and driving around over the past week, and with the hedging comes the pushing of new laterals, which are most vulnerable to new infections of downy mildew recently. This is less so the case in those places where growers are using pallasage, a management technique where the shoots are either wrapped along the top wire or tucked back into the canopy.

#### Temperature and rainfall changes: When are they happening?

Since 2002, the 10-year rolling average for growing degree days (GDD) in the Finger Lakes has been on a pretty steady climb (Fig 1). Our 10 year average has gone from about 2400 GDDs in 2000 to 2700 as of 2020, an increase of 12.5% over that period of time. During that same period of time, our average rainfall has also increased, but to a lesser extent (about 4.5%) and with much for variation than the increased in GDDs (Fig 2).

As I was pulling together the climate data to include in this week's Vineyard Update, I thought I'd take a closer look into a little more detail about just when during the season these averages have been changing. Is every month equally warmer than it was previously? Are there certain months that are wetter in recent years than they used to be? Looking at these kinds of questions might help to provide some understanding of what aspects of vineyard management might have to change due to the changing climate.

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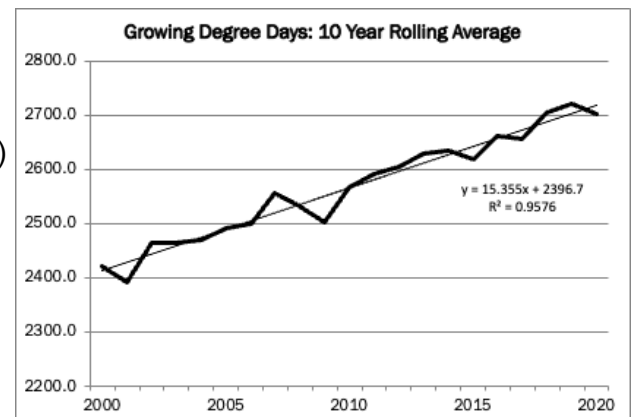


Figure 1. Ten year average GDDs (base 50F) recorded at Geneva, 2000-2020.

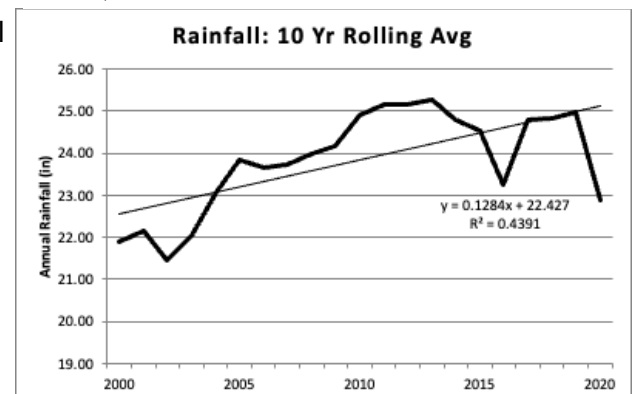
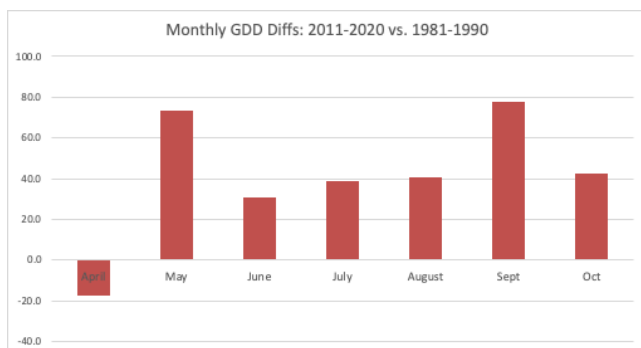


Figure 2. Ten-year average rainfall (Apr-Oct) recorded at Geneva, 2000-2020.

### In the Vineyard (continued from page 1)



**Figure 3. Differences in monthly GDD accumulation between 1981-1990 and 2011-2020.**

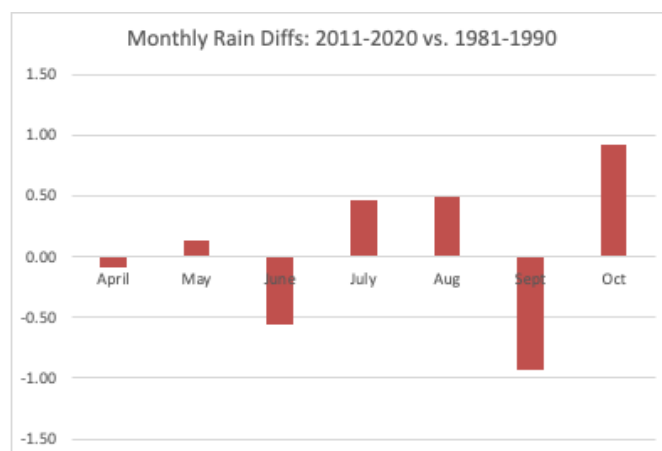
#### Growing Degree Days

For this (very) quick and dirty analysis, I compared the most recent 10 year monthly averages (2011-2020) for GDDs and rain to the monthly averages from 30 years ago (1981-1990). Average seasonal GDDs during the 2011-2020 period are about 287 GDD higher than 30 years ago, with the greatest increases being in the months of May and September (Fig 3). It is interesting to see that we have slightly fewer GDD in April on average in recent years compared to a few decades ago, but this decrease is the only one we see. The increases in average GDDs in June, July, August and October are all fairly equal.

So what could this mean for vineyard management if this kind of trend continues? One of the consequences of greater heat accumulation is that warmer air is able to hold more moisture, meaning that there is the potential for greater disease pressure over the entire growing season. A warmer May could mean that we reach budbreak a bit earlier and shoot growth is a bit faster, which could increase the chances of frost injury. It could also mean that disease organisms and insects emerge from their overwintering phase a little earlier in the year which would impact the timing of early spray programs. Warmer temperatures in September and October can mean that vines will be able to ripen fruit earlier, or achieve higher levels of ripeness than usual.

#### Rainfall

As mentioned before, the net change in average rainfall over the past 30 years has been up in general, but with much more variation than what we have seen in GDDs. The monthly average rainfall over these two periods reflects that as well (Fig 4). Rainfall in the beginning of the season hasn't changed too much, but as we get further into the season, the magnitude of the differences gets bigger. Each month in the middle of the season has about 0.5" differences, but with June and August pretty much cancelling each other out. When we get to the important ripening months of September and October, the differences between the two periods is even larger – almost 1" of difference – but in opposite directions. During the period 2011-2020, we had 4 years where September rain totaled less than 2", and two other years where it was just above that.



**Figure 4. Differences in average monthly rainfall between 1981-1990 and 2011-2020.**

While it would be great if Septembers continued to be dry, we all know that rainfall patterns in particular can swing back and forth a lot between years, and within them as well (see July 2021). What we are seeing more of in our region, as predicted by climate models for years before this, is that we are seeing bigger swings in rainfall patterns, with large rain events that drop multiple inches in a short period of time and extended periods with no rain at all. These can have both positive and negative implications for vine growth and management, but growers will need more information about adjusting to these conditions, such as the management of the vineyard floor, soil properties and water stress.

### In the Vineyard (continued from page 2)

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There are many, many more factors that need to be considered with regard to how the changing climate will influence grape growing in the Finger Lakes. Will higher humidity mean there's more cloud cover and less direct sunlight? Are nighttime temperatures changing similar to daytime temperatures, and what could that mean for acidity in the fruit at harvest? As we all know, nothing stays the same with regard to the weather around here for very long, so things will certainly continue to change from one year to the next. But I think it's still informative to see what some of the larger, longer-term trends are and to give consideration to what they might mean for our industry.

### IPM

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With the arrival of veraison in more and more vineyards comes the need to pay more attention to botrytis management. Some early signs of botrytis were showing up during the rainy period in July in some tight clustered varieties like Vignoles and Riesling, especially where fruit set was higher than normal which is leading to clusters that are even more tightly packed than they normally are. As berries begin to soften, it will be easier for them to split or tear near the stem, which makes an easy spot for botrytis organisms to start working their way into the interior. Several growers I spoke with this week are planning on "pre-veraison" and "post-veraison" botrytis sprays in these situations. If the weather continues as it has for the past couple of weeks – as in less rain, not oppressive heat and humidity – that could help to reduce the pressure to some extent.



As I mentioned earlier, recent hedging passes in a lot of vineyards has meant a spurt of young shoots from lateral buds recently, and we are seeing evidence of lots of downy mildew lesions on these younger leaves. Fortunately, many of the lesions that I saw earlier this week did not look to have active sporulation going on. Remember that downy mildew spores require some kind of water on the leaf in order to begin an infection. If the spore sits on a leaf but no water is present, the spore will die within a few hours of landing on that surface. This is why keeping canopies open and with adequate airflow can be such a help with managing a disease like DM. If the leaves are dry, the spores are unable to infect. It's that simple - to understand at least, but certainly not to do all the time.

### IPM (continued from pg. 3)

*GBM Model results – August 11, 2021*

Location	GDDs	Biofix Date	Pest Status	Management Recom-
Dresden	1761	5/30/2021	***	###
Romulus	1663	6/1/2021	**	##
Hammondsport	1533	6/3/2021	*	#
South Bristol	1542	6/3/2021	*	#
Williamson	1531	6/5/2021	*	#

\* Second generation larvae are protected within berries and completing their development.

\*\* Egg laying continues

\*\*\* Third generation larvae are protected within berries and completing their development.

#### Management Recommendation

# The most effective time for treatment of second-generation grape berry moth is over. Prepare to scout all vineyard blocks for grape berry moth damage when DD accumulation reaches 1470-1620 DD. During scouting, determine if the number of damaged clusters from previous generation exceeds the treatment threshold of 15%. If above threshold, control measures should be applied starting at 1620 DD.

## For materials that are contact insecticides, e.g. pyrethroids and carbamates, apply between 1621-1710 DD in vineyards where scouting found more than 15% damaged clusters. Low risk vineyards rarely require this treatment.

### The most effective time for treatment of third generation grape berry moth is over. With the exception of extremely warm years, egg-laying is reduced and most pupae enter diapause (overwintering stage) after 1700 DD.

The Cornell Farmworker Program and the Finger Lakes Community Health clinic co-sponsor two free webinars (one in English and another in Spanish) with Dr. José Canario, and Ellen Hey, NP.

El Programa de Apoyo a los Trabajadores Agrícolas de la Universidad de Cornell y la clínica Finger Lakes Community Health está organizando los siguientes dos eventos virtuales gratuitos (uno en inglés y el otro en español) con el Dr. Canario y la enfermera especializada Ellen Hey.

### **English webinar: Doubts about COVID-19 vaccines? Ask the Doctors**

Local farmworkers will also be available to answer questions about their experiences being vaccinated  
**Tuesday, August 24, 2021 @ 4:30 PM (ET)**

### **Llamada en español: ¿Dudas sobre las vacunas para el COVID-19? Pregúnteles a los médicos.**

Unos trabajadores agrícolas también estarán disponibles para responder a sus preguntas y ofrecerán sus experiencias al recibir la vacuna  
**martes, 24 de agosto, 2021 @ 7:00 PM (ET)**



We invite you to this one-hour English webinar to discuss issues surrounding vaccine hesitancy and other barriers to vaccination. Doctors Canario and Ms. Hey will also respond to your questions. If you have any questions, please contact the Cornell Farmworker program at [farmworkers@cornell.edu](mailto:farmworkers@cornell.edu) or call 607-224-8821.

***Please register as soon as possible.*** Choose one way to register. You will receive instructions on how to connect to the call on the 24<sup>th</sup>.

Invitamos cordialmente a los trabajadores agrícolas y personas interesadas a una llamada gratuita y presentación en español donde hablaremos sobre las dudas que gente tiene sobre las vacunas del COVID-19, y responderemos a sus preguntas. Por favor invite a sus compañeros de trabajo y familiares. Si tiene alguna pregunta, puede mandar un correo a [farmworkers@cornell.edu](mailto:farmworkers@cornell.edu) o llamar al 607-224-8821. El volante bilingüe está adjunto a este correo.

***Regístrese lo más pronto posible.*** Escoja una manera para registrarse. Recibirá un mensaje con instrucciones para conectarse a la llamada el 24 de agosto.

1. [Click here to register online \(English\).](#)
1. [Clic aquí para registrarse en la web \(español\).](#)

**Or 2. Register by phone at (607) 224-8821. Include your name, city where you live, and any questions you might have.**

**O 2. Regístrese por teléfono al (607) 224-8821. Incluya su nombre, ciudad donde vive y algunas preguntas que tiene**



# Cornell Farmworker Program

Department of Development Sociology, 275H Warren Hall, Cornell University, Ithaca, NY, 14853



*This research survey should be arriving in NY growers' mailboxes in the next several days. It will appear in an envelope from Michigan State University, but the research is being done by Cornell. If you have a little spare time before harvest gets underway, please consider filling out the survey and having your employees do the same. Thanks. – HCW-P*

### **Labor Research! What's Happening in Your Farm?**

Richard Stup, [Cornell Agricultural Workforce Development Program](#)

An important research project is gearing up in the next few weeks to understand what is happening with New York farm labor during this time of great change in markets, regulations and technology. It's an opportunity for the voices of actual farm employers and employees to be heard through research! Strong participation from farm employers and employees is important!

Farm employers who operate fruit, vegetable, and greenhouse/nursery operations should watch their U.S. mail for a pre-notification letter in the coming weeks, followed a few days later by a survey packet. This survey packet will contain an employer survey plus six copies of an employee survey (3 in English, 3 in Spanish). We are asking farm employers to complete the employer survey to give us hard numbers about your farm's labor situation and the changes from 2019 to today. Employers will distribute the employee surveys to members of their team to complete and share current employee perspectives about the farm and employee management. All surveys will remain anonymous and only group data with no identifying information will ever be reported.



The dairy part of this research will start a few weeks after the fruit, vegetable, and greenhouse portion.

Objectives of this research are to:

- Identify what human resource management practices are most effective at achieving high performance and labor efficiency.
- Describe New York farm employee hours, compensation, quality of work life and satisfaction with working conditions and relations.
- Describe how labor markets and regulations are affecting labor usage, enterprise selection, and business plans for New York farms.
- Identify what labor-saving technologies farms are adopting and how they best fit in an overall human resource management strategy.

#### *How to participate:*

Watch your mail for the letter and survey packet, then follow the enclosed instructions to participate by mail, or use the online survey option. If you don't get a mailing in the next few weeks, and you operate a New York farm with hired employees, then reach out to Julie Berry ([jrb7@cornell.edu](mailto:jrb7@cornell.edu)) to request a survey packet. Include your name, farm name, mailing address, phone, and email.

#### *Project leadership:*

This project, "New York Farm Labor in Transition," is led by Richard Stup ([res396@cornell.edu](mailto:res396@cornell.edu)) of Cornell's College of Agriculture and Life Sciences (CALIS), in collaboration with colleagues from the Dyson School of Applied Economics and Management, and the School of Industrial and Labor Relations (ILR).

*Support for this research is provided by:*

- Unites States Department of Agriculture, Agricultural Marketing Service
- New York State Department of Agriculture and Markets
- Farm Credit East
- Northeast Dairy Producers Association
- Dairy Farmers of America
- Upstate Niagara Cooperative

Thank you for taking time to participate in this research!



### Upcoming Events

Don't forget to check out the calendar on our website (<http://flgp.cce.cornell.edu/events.php>) for more information about these and other events relevant to the Finger Lakes grape industry.



### FLGP Virtual Tailgate Meeting

Tuesday, August 17, 2021 4:30 – 6:00 PM

Via Zoom

Registration link: <https://cornell.zoom.us/meeting/register/tJwrceqprzksHNXJTbu-5ViDvfB9E0hcUObf>

Our final Tailgate Meeting for the 2021 season (wow, how did that happen?) will be held on Tuesday, August 17. As always, the agenda for these meetings is very loose, so please come with your questions, observations, opinions about what's going on in the vineyard.

One topic of conversation for the meeting will be an update on sour rot management. Dave Combs, field technician for Katie Gold's lab, will be present to talk about the latest understandings about bunch rots like sour rot.

Participants will need to register before attending their first virtual meeting in order to receive the Zoom link. Registration for the online Tailgate Meetings is only required once – the link you receive when you register will work for all four online meetings this year.

The virtual and in-person Tailgate Meetings have been approved for 0.75 pesticide recertification credits. We will also need to receive an image or photocopy of your pesticide license before the first meeting that you attend. These images/copies can be sent to Brittany Griffin at [bg393@cornell.edu](mailto:bg393@cornell.edu). More information will be included in your confirmation email.

### 2021 GDD & Precipitation

FLX Teaching & Demonstration Vineyard – Dresden, NY					
Date	Hi Temp (F)	Lo Temp (F)	Rain (inches)	Daily GDDs	Total GDDs
8/4/21	81.5	56.3	0.00	18.9	1724.2
8/5/21	83.7	58.3	0.00	21.0	1745.2
8/6/21	89.8	62.4	0.00	26.1	1771.3
8/7/21	87.3	69.6	0.43	28.5	1799.7
8/8/21	85.5	65.7	0.04	25.6	1825.3
8/9/21	89.8	70.9	0.00	30.4	1855.7
8/10/21	88.0	71.4	0.00	29.7	1885.4
Weekly Total			<b>0.47"</b>	<b>180.1</b>	
Season Total			<b>14.26"</b>	<b>1885.4</b>	

GDDs as of August 10th, 2020: 1899.7

Rainfall as of August 10th, 2020: 11.20"



#### Seasonal Comparisons (at Geneva)

#### Growing Degree Days

	2021 GDD <sup>1</sup>	Long-term Avg GDD <sup>2</sup>	Cumulative days ahead (+)/behind (-) <sup>3</sup>
April	72.0	62.7	+2
May	256.6	254.6	+1
June	608.9	481.5	+7
July	599.7	646.4	+5
August	205.0	593.2	+5
September		358.7	
October		109.9	
TOTAL	1742.2	2507.1	

<sup>1</sup> Accumulated GDDs for each month.

<sup>2</sup> The long-term average (1973-2019) GDD accumulation for that month.

<sup>3</sup> 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

### Precipitation

	2021 Rain <sup>4</sup>	Long-term Avg Rain <sub>5</sub>	Monthly deviation from avg <sup>6</sup>
April	2.34"	2.83"	-0.49"
May	1.86"	3.12"	-1.26"
June	2.23"	3.55"	-1.32"
July	4.95"	3.43"	+1.52"
August	.56"	3.20"	
September		3.49"	
October		3.40"	
<b>TOTAL</b>	<b>11.94"</b>	<b>23.02"</b>	

<sup>4</sup> Monthly rainfall totals up to current date

<sup>5</sup> Long-term average rainfall for the month (total)

<sup>6</sup> Monthly deviation from average (calculated at the end of the month)

### Additional Information

Become a fan of the [Finger Lakes Grape Program on Facebook](#), or follow us on [Twitter \(@cceflgp\)](#) as well as YouTube. Also check out our website at <http://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!

#### Finger Lakes Grape Program Advisory Committee

**Eric Amberg**- Grafted Grapevine Nursery  
**Bill Dalrymple**- Dalrymple Farm  
**Matt Doyle**- Doyle Vineyard Management  
**Eileen Farnan**- Barrington Cellars  
**Chris Gerling**- Cornell University Extension  
**Luke Haggerty**- E & J Gallo  
**Tina Hazlitt**- Sawmill Creek Vineyards  
**Cameron Hosmer**- Hosmer Winery  
**T.J. Brahm** – Randall Standish Vineyards

**Harry Humphreys**- Overlook Farms  
**Gregg McConnell**- Farm Credit East  
**Herm Young**– Young Sommer Winery  
**John Santos**- Hazlitt 1852 Vineyards  
**Steve Sklenar**– Sklenar Vineyard  
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## Cornell Cooperative Extension Finger Lakes Grape Program

**Hans Walter-Peterson**—Team Leader  
**Donald Caldwell**—Viticulture Technician

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.

[flgp.cce.cornell.edu](http://flgp.cce.cornell.edu)



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