



Cornell University  
Cooperative Extension

# Eastern NY Commercial Horticulture Program

Vol. 4, Issue 2  
May 3, 2017

## Grape News

### In this issue of Grape News:

◊ <u>Steely Beetle and Climbing Cutworm</u>	2
◊ <u>IPM Resources for Vineyards</u>	2
◊ <u>Disease Pest Overview</u>	3
◊ <u>Sprayer Calibration</u>	4
◊ <u>Cold Climate Viticulture Course at UVM</u>	4
◊ <u>Small Sprayers for Smaller Vineyards</u>	5
◊ <u>Methods for using own-rooted Vitis vinifera vines</u>	6
◊ <u>NGP Webinar</u>	6
◊ <u>Upcoming Events</u>	7

## Phenology

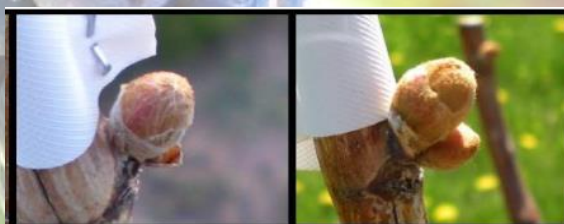
### Regional Update:

**Hudson Valley** – bud break on vinifera and later hybrids. 1” growth on early hybrids (Foch, Leon Millot etc.).

**Champlain Valley** – bud swell on hybrids

### April Temperatures and Rainfall, 2017

Weather Station	Avg Temp (F)	High Temp (F)	Low Temp (F)	Rain-fall (in)	DD Base 50 Accumulation Jan 1—Apr 30	
					2017	30 yr avg
Chazy	47.5	77.5	26.4	4.78	78.4	48
Peru	48.3	79.2	28.9	3.58	88.4	52
Willsboro	47.9	80.8	24.8	3.45	93.0	45
Clifton Park	51.8	85.0	29.0	3.48	168.3	75
Hudson	52.9	87.9	29.6	4.42	184.4	104
Highland HVRL	54.2	85.8	33.0	3.52	211.8	84
Rivehead	54.8	85.4	35.2	4.92	221.7	92



Early Bud Swell

Late Bud Swell



Bud Burst

1-to 3-inch shoots

### Warm Spring Conditions—Vines are feeling the heat!

The warmer temperatures across Eastern NY have helped to advance growth in the vines. Comparing the current season to that of the past several years, we are a close match for 2014 in terms of growth stages—at the Hudson Valley Research Lab in Highland, NY, bud burst occurred during the week of May 6 in 2014, similar to this year.

However, in terms of Growing Degree Days, we are much more advanced than normal. In the Hudson Valley GDDs are almost double that of 2014. Compared to the 30 year average, GDDs are more than double in the Hudson Valley and nearly double in the Champlain Valley. Much of the accumulation of GDD's has been in the past couple of weeks. (Table Above)

## Steely Beetle (grapeflea beetle) and Climbing Cutworm Management

*Two pests to be on the lookout for at budburst*

*Jim O'Connell, ENYCHP*

The grape flea beetle is one of the first spring pests of grape vineyards. It overwinters as an adult in areas neighboring commercial vineyards (e.g. woodlands, waste areas) and migrates in when temperatures are favorable for bud development. Adults are small in size (4-5mm), but are easily recognized by their oval, shiny black (or dark blue) bodies.

Overwintering adults will feed on and hollow out swollen grape buds (image), resulting in yield loss and/or stunted growth from secondary and tertiary buds. Larvae and summer adults will feed on the tender leaf tissue.



Steven VanTimmeren, MSU

Climbing cutworms refer to a number of species of larvae in the family Noctuidae. Larvae feed at night and hide during the day in dirt and debris below the grape vines. Full grown larvae are 30 to 36 mm (1-2 inches) in length. Larvae of the different species vary in color. Most have a dull gray-brown background color with various species having stripes, spots, or marked with dark brown, black, yellow and white splotches. Similar to the grape flea beetle, these pests attack the swelling grape bud (image), resulting in crop loss and/or stunted growth from secondary and tertiary buds.



HGIC, U of MD

Scouting for injury from these pests is easier than scouting for the pests themselves. Damage greater than 2% constitutes a need for control measures. Reducing or eliminating plant debris (waste) in and around the vineyard can help to reduce overwintering sites for these pests and may reduce spring population levels. However, during the growing season, chemical control is the most effective management option. Broad spectrum insecticides such as Sevin, Danitol, or Baythroid will work for both pests.

Please consult the New York and Pennsylvania Pest Management Guidelines for Grapes for rates and additional insecticides.

### Climbing Cutworms Factsheet:

<https://ecommons.cornell.edu/handle/1813/43085>

### Grape Flea Beetle Factsheet:

<https://ecommons.cornell.edu/handle/1813/43101>

## IPM Resources for Vineyards

Cornell IPM Fact Sheets for Grapes

<http://nysipm.cornell.edu/factsheets/grapes/default.asp>

New York and Pennsylvania Pest Management Guidelines for Grapes (published annually)

<http://store.cornell.edu/p-189430-2015-new-york-and-pennsylvania-pest-management-guidelines-for-grapes.aspx>

2016 Organic Production and IPM Guide for Grapes

<https://ecommons.cornell.edu/bitstream/handle/1813/42888/2016-org-grapes-NYSIPM.pdf?sequence=5&isAllowed=y>

Grape Disease Control, 2016. Dr. Wayne Wilco (published annually)

[http://rvpadmin.cce.cornell.edu/uploads/doc\\_308.pdf](http://rvpadmin.cce.cornell.edu/uploads/doc_308.pdf)

Grape Insect Control, 2016. Dr. Greg Loeb (published annually)

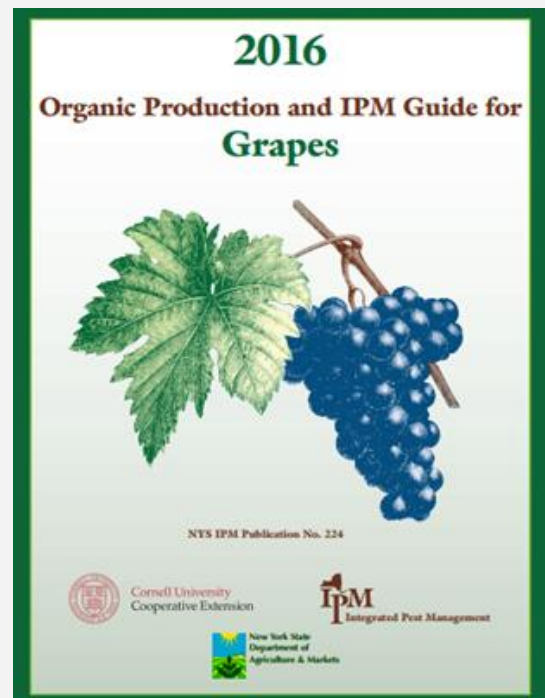
[http://rvpadmin.cce.cornell.edu/uploads/doc\\_308.pdf](http://rvpadmin.cce.cornell.edu/uploads/doc_308.pdf)

Cornell Vineyard Spraying Website, Dr. Andrew Landers

<http://web.entomology.cornell.edu/landers/pestapp/grape.htm>

Integrated Pest Management Strategy for Cold Climate Winegrape Growers. Lorraine Berkett

[http://www.uvm.edu/~fruit/grapes/gr\\_ipm/AnInitialIPMStrategy.pdf](http://www.uvm.edu/~fruit/grapes/gr_ipm/AnInitialIPMStrategy.pdf)



## Vineyard Disease Overview

Anna Wallis & Wayne Wilcox, *ENYCHP* – reprinted from *ENYCHP 2016 April Grape News*.

As we head into the growing season, there are several important diseases you should be prepared to control. In chronological order, below are the major diseases along with critical information about the biology and control of each.

Additional information about each is available in the Cornell factsheets available on the Cornell Grape Resources website: <https://blogs.cornell.edu/grapes/ipm/diseases/>

### Phomopsis

#### Biology

- ◇ Fungus persists (years) on infected wood
- ◇ Spores produced early, spread by rain-splashing to a couple feet

#### Control

- ◇ Prune out dead wood
- ◇ Critical spray time: when clusters first appear, 3-5" shoot growth

### Anthracnose

Although rarely considered a problem in *vinifera* varieties, it has been identified as a problem in some of the cold-climate varieties, including Marquette and several older Swenson varieties.

#### Biology

- ◇ Fungus overwinters primarily in cane lesions on the vine (also diseased berries on floor)
- ◇ Spores produced in spring, dispersed by splashing raindrops (short-distances)
- ◇ Likes it warm (70's and 80's) but infects at colder temps if wet long enough
- ◇ Young shoots, leaves and stems are susceptible. Berries are also susceptible through veraison

#### Control

- ◇ Remove infected tissue from the vineyard, tilling/mulc diseased berries on ground
- ◇ Critical Spray Time: 'delayed dormant' Lime-sulfur; early season broad-spectrum fungicides targeting phomopsis will also be effective against anthracnose.

### Downy mildew

#### Biology

- ◇ First infections come from spores in soil or on fallen leaves
- ◇ Specific weather conditions required: prefers warm, humid nights (64-72°F) and rain (>0.1")

#### Control

- ◇ Improve air circulation to speed drying time of leaves
- ◇ Critical Spray Time: apply a protectant beginning 2-3 weeks before bloom, then every 7-10 days

### Powdery mildew

#### Biology

- ◇ Does NOT require free water (rain or dew) for infection
- ◇ Warmer temperatures speed sporulation (mid 60s-80s)
- ◇ Sensitive to direct sunlight (UV) exposure

#### Control

- ◇ Canopy management to improve air circulation and sunlight exposure
- ◇ Critical Spray Timing: starting at 3-5" shoot growth and depending on weather conditions. Protection of bloom through pea-sized berries is CRITICAL

### Black rot

#### Biology

- ◇ Fungus overwinters in mummies, infects during rain

#### Control

- ◇ Sanitation: Remove mummies from vines and trellis
- ◇ Critical Spray Time: start of bloom through +4 weeks

### Botrytis

#### Biology

- ◇ Many fungus sources, especially old cluster stems
- ◇ Infection can occur during bloom and remain latent until berries begin to ripen

#### Control

- ◇ Improve air circulation through site selection, canopy management, and loosening clusters
- ◇ Critical Spray Time: varies by season and is weather-dependent



### Cold Climate Viticulture Course at University of Vermont

Tuesdays and Thursdays, 9:00 am – 3:45 PM

June 20 – July 13, 2017

University of Vermont Horticulture Research & Education Center, South Burlington, VT

#### Information and registration

<http://www.uvm.edu/~summer/course/201706/61819/summer-2017/plant-soil-science/cold-climate-viticulture/>



This is an ideal ‘crash course’ for anyone who is seriously considering winegrape production in Vermont or surrounding regions. Students will learn principles and practices of commercial cold-climate grape production, including: site selection and preparation; varietal selection; vine training; nutrient, water and pest management; harvest; and introductory winemaking considerations. Special emphasis will be placed on environmental and economic sustainability of the vineyard operation. The class will apply knowledge of integrated horticultural and pest management practices in a real vineyard setting. The class format will consist of a combination of classroom lectures, hands-on fieldwork, and visits to local commercial vineyards. Students are responsible for their own transportation to the UVM Horticulture Research and Education Center.

UVM students have already begun signing up for fall courses, and often sign up for summer courses as well at the same time. If you have any interest in taking Terry Bradshaw’s summer Cold Climate Viticulture course, signing up sooner rather than later is recommended.

For more information contact Terry Bradshaw at [Terence.Bradshaw@uvm.edu](mailto:Terence.Bradshaw@uvm.edu)

Terence Bradshaw, Ph D.  
Research Assistant Professor  
Tree Fruit and Viticulture Specialist  
University of Vermont Plant and Soil Science  
210 Jeffords Hall / 63 Carrigan Drive  
Burlington, VT 05405

Director

UVM Horticulture Research and Education Center  
Catamount Educational Farm  
65 Green Mountain Drive, South Burlington, VT  
(No US Mail Service at Farm)  
<http://www.uvm.edu/~hortfarm> / <https://www.facebook.com/UVM.CatFarm>



### Sprayer Calibration

Using your sprayer effectively is completely dependent on correct calibration. If you are applying too much pesticide, you are wasting money and potentially contaminating the environment. If you are not applying enough pesticide, you will not get adequate pest control and your crop may be damaged. Applying above or below the rate specified on the label is against the law. There are many resources available to help you calibrate your sprayer. Step-by-step instructions are included in the New York and Pennsylvania Pest Management Guidelines for Grapes. There are also numerous videos online available to walk you through calibration. One example of a video produced by Andrew Landers: <https://www.youtube.com/watch?v=6izHj0GF1rY>

## Small Sprayers for Smaller Vineyards

*Andrew Landers, Cornell University, New York State Agricultural Experiment Station*

<http://www.nysaes.cornell.edu/ent/faculty/landers/pestapp>

*As you prepare for the coming growing season, one of the most important considerations will be pest management. Knowing your equipment will provide adequate coverage is just as important as knowing the pests you are fighting and the methods you are using to control them. The information below, provided by Andrew Landers, Cornell Pesticide Application Technology Specialist, is tailored specifically to smaller vineyards.*

There are many important points to consider before purchasing a sprayer, not least of which is the area to spray, the proximity of the local supplier, standard of manufacture etc. A fact sheet on Machinery selection – crop sprayers for orchards and vineyards is available from the author. There are many growers with small vineyards who don't require airblast sprayers and have a need for spraying equipment ranging from backpack sprayers to small truck or ATV mounted machines.

### **Canopy sprayers**

#### **1. Backpack sprayers**

Small capacity (4-5 gallon) sprayers will produce up to 150 psi pressure. Weight is an important consideration and growers should select a sprayer with good, wide, padded straps to ease the load. Correct nozzle selection according to the target is very important to ensure even coverage. A good size filling hole at the top is also important (\$95-150 approx.).

Maintaining a constant flow is crucial for good application. The use of a spray management valve such as a CF valve will ensure a constant output irrespective of hand pump action (\$12 approx.).

An alternative to the hand pump backpack is the electric backpack, which utilises a small rechargeable battery. Max. pressure is quite low (\$265 approx.).

#### **2. Portable gas sprayers**

If weight is a problem, and ground conditions are relatively smooth, a sprayer with a small 1/4hp gas engine, 12 gallon tank and 16" wheels is available from Dramm (\$930).

Larger capacity tanks (14—100 gallons) are often trailed and can be pulled by a lawn tractor, ATV or small tractor. Often fitted with a small electric, battery powered pump or a 4-10hp gas engine (\$289-3000).

#### **3. Portable Mist and air blower backpacks**

Knapsack mistblowers are also available and comprise a small fan driven by a petrol engine and a tank and nozzle assembly. The airflow from the fan is emitted via a tube and a nozzle provides the droplets, the resulting spray is blown into the canopy and gives better penetration and deposition than a traditional knapsack sprayer.

Where motorised sprayers are used, good maintenance must be practised as they often use two stroke engines which are notorious for poor starting qualities. Besides creating fine drift-prone droplets, they are noisy and you are walking into a mist (\$800-900).

#### **4. Small mounted sprayers**

Ideal for mounting onto the carrier rack of an ATV, 15-25 gallons, they use a small electric pump to provide up to 70 psi (\$230-350).

#### **5. Large skid mounted sprayers**

Ideal for fitting into the back of a pick-up truck these sprayers have a tank capacity of 35-200 gallons, and electric or gas engine

power (\$400-2700).

#### **6. Small trailed airblast sprayers**

Very small airblast sprayers, such as the interestingly named Lil' Squirt from PMB sprayers with a tank up to 110 gallons, a 5.5hp gas engine and which can be towed by an ATV are available. Larger tank capacity up to 300 gallons is also available. Remember the larger the gas engine, the more important it is to buy an electric start option (\$5000).

#### **7. Small mounted airblast sprayers**

Three-point hitch, PTO driven models with a 22 or 24" fan, for fitting onto 25hp tractors are available. Beware of drift, consider models which direct the air via deflectors (\$3700+).

### **Herbicide application**

**1. All the sprayers, 1-5 above, (except the airblast) can be used for herbicide application BUT be very careful that there is no carry-over from herbicide residues in the sprayer, therefore wash out very thoroughly.**

**2. The use of Controlled Droplet Applicators (CDA)** will considerably reduce the need to carry vast amounts of water. A spinning disc (battery powered) will produce 95% of the same-size droplets, thus reducing chemical rates by 50% and water rates. Herbi and Mantis (trade names) are hand-held sprayers (\$200-400)

ATV or tractor mounted shielded CDA sprayers such as the Environmist from BDi also reduce spray rates (\$2100).

#### **3. Wick wipers**

Where occasional weeds are a problem, the use of a hand-held wick wiper is an easy-to use, effective option (\$35 -55)

### **Where to look/buy?**

To find sources of sprayers and equipment, you can reference the list printed on page 5 of the ENYCHP 2016 May Grape Newsletter: [https://rvpadmin.cce.cornell.edu/pdf/enych\\_newsletter/pdf233\\_pdf.pdf](https://rvpadmin.cce.cornell.edu/pdf/enych_newsletter/pdf233_pdf.pdf)

## Winery, Farm Winery and Micro Winery in New York – what is the difference?

*Elizabeth Higgins, Ag Business Management, ENYCHP*

If you pay attention to food and beverage news in New York you will hear a lot about “farm wineries”, What is the difference between a farm winery and a winery without the farm distinction? Do they have to be on a farm?

In order to manufacture and sell alcoholic beverages in New York State you will need a license from the New York State Liquor Authority. To make and sell wine there are three types of licenses: Winery, Farm Winery and Micro Winery. The primary differences are as follows: Farm and Micro Winery licenses are cheaper. Farm and Micro Wineries must use 100% NYS grapes or ag products, must be located on a farm, and are restricted in volume of production. However, farm and micro wineries have the advantage of much more freedom to sell other NYS craft beverages that they do not produce, whereas winery license holders are more restricted to selling their own wine or, in some cases NYS wine.

What if your farm is in a poor location to attract people to a winery or is not set up for the public? Not to worry – NYS allows a farm winery license holder to operate up to 5 branch offices, so you can market your wine in a more favorable location (with the correct permit, of course). More detail is below and in some of the links provided.

### Cost

- Winery licenses (\$3,025, 3 years) cost more than farm winery (\$525, 3 years) which cost more than micro winery (\$210, 3 years).

### Production

- Winery licensee holders can produce an unlimited amount of wine. Farm winery licenses are limited to 250,000 gallons/year and micro winery licenses are limited to 1,500 gallons/year
- Winery license holders can produce wine from anything grown anywhere. Farm winery license holders and micro wineries must use 100% New York grapes, fruits or other agricultural products (e.g. dandelions)
- Winery license holders cannot produce other alcoholic beverages under that license. Farm winery and micro winery license holders can also produce cider.
- Farm wineries and micro wineries must be located on farms (but they do not need to use grapes produced on the farm). For example, a dairy farm could open a winery on their farm, using grapes purchased from other growers in New York.

Tastings and sales by the bottle – sales by the glass is more restrictive for all categories.

- At a winery
  - Winery license holders can offer tastings and sell bottles of any wine they produce under their license and any NYS labeled wine.
  - Farm winery and micro winery license holders can offer tastings of and sell full bottles of any NYS labeled wine, NYS labeled beer, NYS labeled cider and NYS labeled liquor. They are not limited to what they produce.
- At a farmer’s market, county fair or NYS State Fair; other licensed premises; charitable events; other events – with the correct marketing permit:
  - Winery license holders can offer tastings of and sell full bottles of any wine they produce under their license if they have a marketing permit. At charitable events and other licensed premises, they can also offer tastings of and sell other NYS labeled wine.
  - Farm winery and micro winery license holders can offer tastings of and sell full bottles of any NYS labeled wine or cider, not just what they produce.

### **For more information:**

- o NYS Liquor Authority website with forms to apply for licenses and permits: <https://www.sla.ny.gov/forms-quick-find#wholesale>

### **Information about winery licensing and permits:**

- o ABC Law New York State <http://public.leginfo.state.ny.us/lawssrch.cgi?NVLWO>
- o Donahue, Thomas. 2014. Comparison of Winery, Farm Winery and Micro Winery Licenses. Prepared by the NYS Liquor Authority. <https://cdn.esd.ny.gov/NYSBeverageBiz/Data/WineryLicenseComparison.pdf>





## Video presents methods for using own-rooted *Vitis vinifera* vines

Posted on April 18, 2017 by Mallory Fournier, MSU IPM Program

Learn about the research investigating if the insecticide Movento can provide long-term protection against phylloxera in own-rooted *Vitis vinifera* vines in Michigan.



Phylloxera on a leaf. Photo: M. Fournier

Phylloxera is a devastating insect pest of vineyards that produces galling on the leaves. More seriously, it produces a nymph stage that feeds on the roots of grapevines, either killing the vines or leaving them very weak and unproductive. Two general strategies to combat this insect pest include developing phylloxera-resistant hybrid varieties and phylloxera-resistant rootstocks. Additionally, Bayer Crop Sciences has a product called Movento that has efficacy in controlling phylloxera on the roots of grapevines.

Thanks to funding from the [Michigan Grape and Wine Industry Council](#), [Tom Zabadal](#) and Jenny Schoonmaker of Michigan State University began a project to see if this chemical strategy could be used in Michigan to grow own-rooted vines of the *Vitis vinifera* species and protect them from phylloxera. Growers can watch a short video about this project at "[Developing methods for use of own-rooted \*Vitis vinifera\* vines in Michigan vineyards.](#)"

The video addresses the following questions that were part

of the project:

- Can Movento provide long-term protection to vines against phylloxera infestation of roots?
- If so, how often does Movento need to be applied to achieve this protection?
- If Movento provides long-term protection against root phylloxera, what strategies might growers employ to establish own-rooted vines in both new and existing vineyards?
- What are the most efficient ways to employ those strategies?

To access "[Developing methods for use of own-rooted \*Vitis vinifera\* vines in Michigan vineyards](#)" and other wine grape research videos on a variety of topics, go to the [Michigan State University Extension Grapes Research page](#).

This article was published by [Michigan State University Extension](#). For more information, visit <http://www.msue.msu.edu>. To have a digest of information delivered straight to your email inbox, visit <http://www.msue.msu.edu/newsletters>. To contact an expert in your area, visit <http://expert.msue.msu.edu>, or call 888-MSUE4MI (888-678-3464).

### Next NGP Webinar – Tuesday 5/9

Announcing the May Webinar (last webinar of the season):  
**"Introducing Itasca – Minnesota's new cold-hardy white wine grape"**

**Tuesday, May 9th, 2017**

**12:00 Noon EST**

**7:00 pm EST**

**With Matthew Clark, Jennifer Thull, and John Thull**



The University of Minnesota has released its newest wine grape variety. Itasca is lower in acid, exhibits improved cold-hardiness, and should be suitable for making a dry-style white wine. The final Northern Grapes Webinar will discuss the characteristics of this new variety including tasting notes, growth habit, and juice chemistries. Matthew Clark is an assistant professor of grape breeding and enology at University of Minnesota. His research focuses on traditional and molecular plant breeding techniques to develop improved cold-hardy grape varieties for wine production. Jennifer Thull, gardener, and John Thull, research professional, work in grape breeding and enology at University of Minnesota.

To register for the webinar, please visit the link below:

[https://cornell.qualtrics.com/jfe/form/SV\\_6rtPeOtaWTh3xuR](https://cornell.qualtrics.com/jfe/form/SV_6rtPeOtaWTh3xuR)

## ENYCH Program Educators:

### Fruit

**James O'Connell**

**Phone:** 845-691-7117

**Email:** [jmo98@cornell.edu](mailto:jmo98@cornell.edu)

**Berries & Grapes**

**Anna Wallis**

**Phone:** 443-421-7970

**Email:** [aew232@cornell.edu](mailto:aew232@cornell.edu)

**Tree Fruit & Grapes**

Dan Donahue

**Phone:** 845-691-7117

**Email:** [djd13@cornell.edu](mailto:djd13@cornell.edu)

**Tree Fruit**

Laura McDermott

**Cell:** 518-791-5038

**Email:** [lgm4@cornell.edu](mailto:lgm4@cornell.edu)

**Berries**

### Vegetables

Chuck Bornt

**Cell:** 518-859-6213

**Email:** [cdb13@cornell.edu](mailto:cdb13@cornell.edu)

Amy Ivy

**Phone:** 518-561-7450

**Email:** [adi2@cornell.edu](mailto:adi2@cornell.edu)

Teresa Rusinek

**Phone:** 845-340-3990 x315

**Email:** [tr28@cornell.edu](mailto:tr28@cornell.edu)

Erik Schellenberg

**Phone:** 845-344-1234

**Email:** [js3234@cornell.edu](mailto:js3234@cornell.edu)

Crystal Stewart

**Cell:** 518-775-0018

**Email:** [cls263@cornell.edu](mailto:cls263@cornell.edu)

Maire Ullrich

**Phone:** 845-344-1234

**Email:** [mru2@cornell.edu](mailto:mru2@cornell.edu)

### Business and Economics

Elizabeth Higgins

**Phone:** 845.691.7151

**Email:** [emh56@cornell.edu](mailto:emh56@cornell.edu)

*Content Editor: Anna Wallis*

*Layout: Abby Henderson*

# UPCOMING Events

Are you a farmer in Eastern New York with a question about the management side of your farm business? The Cornell Cooperative Extension Eastern NY Commercial Hort Team, in collaboration with CCE County offices, is offering free farm business technical assistance appointments this summer on Tuesdays at various locations in our service region

## Ag Business Tuesdays

### **Dutchess County**

May 16, 2017  
1.5 hour appts between 9:00am to 5:00pm  
Millbrook, NY

### **Schoharie County**

May 30, 2017  
1.5 hour appts between 9:00am to 5:00pm

### **Orange County**

June 20, 2017  
1.5 hour appts between 9:00am to 5:00pm  
Middletown, NY

### **Essex County**

June 27, 2017  
1.5 hour appts between 9:00am to 5:00pm  
Westport, NY

## Bramble Pruning Workshops

### **Cashin's Farm**

May 9, 2017  
3:00pm-5pm  
Fultonville, NY

### **Bowman's Orchard**

May 11, 2017  
3:00pm-5pm  
Rexford, NY

### **Story Farms**

May 16, 2017  
3:00pm-5pm  
Catskill, NY

**James O'Connell**  
Phone: 845-691-7117  
Email: [jmo98@cornell.edu](mailto:jmo98@cornell.edu)  
Berries & Grapes



**Anna Wains**  
Phone: 518-410-6823  
Email: [aw232@cornell.edu](mailto:aw232@cornell.edu)  
Grapes & Tree Fruit



## Quick Links

Cornell Grapes Website

<http://www.fruit.cornell.edu/grape/>

ENYCHP

<http://enych.cce.cornell.edu/>

Northern Grapes Project

<http://northerngrapesproject.org/>

NEWA Weather and Pest Forecasting

<http://newa.cornell.edu/>

Viticulture and Enology Cornell

<https://grapesandwine.cals.cornell.edu/>

Veraison to Harvest

<http://grapesandwine.cals.cornell.edu/newsletters/veraison-harvest>

Appellation Cornell

<http://grapesandwine.cals.cornell.edu/newsletters/appellation-cornell>

NYS IPM Fact Sheets

<http://www.nysipm.cornell.edu/factsheets/grapes/>