

Vol. 2 Issue 3  
June 12, 2015

## Grapes News

### 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: [aw232@cornell.edu](mailto:aw232@cornell.edu)  
Grapes & Tree Fruit

Laura McDermott  
Cell: 518-791-5038  
Email: [lmg4@cornell.edu](mailto:lmg4@cornell.edu)  
Berries

Dan Donahue  
Phone: 845-691-7117  
Email: [djd13@cornell.edu](mailto:djd13@cornell.edu)  
Tree Fruit

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)

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)

Kevin Besler  
Phone: 845-344-1234  
Email: [krb98@cornell.edu](mailto:krb98@cornell.edu)

Business and Marketing  
Bob Weybright  
Phone: 845-797-8878  
Email: [rw74@cornell.edu](mailto:rw74@cornell.edu)

Jesse Strzok  
Phone: 608-556-4365  
Email: [js3234@cornell.edu](mailto:js3234@cornell.edu)

Layout: Lindsey Pashow

Content Editor: James O'Connell

### Phenology Updates

#### Lower Hudson Valley Phenology

Flowering, buckshot

#### Champlain Valley Phenology

Flowers well developed. 1<sup>st</sup> bloom anticipated this week



First bloom



Full bloom



Buckshot berries

*Photos from Vineyard IPM Scouting Report, week of 5/3/10, Univ. of WI Ext. Door Co. and Peninsular Ag. Research Sta., Stur-*

### Pest Alerts

#### **Black rot** – visible infections found in HVRL vineyard

The critical time for managing black rot with fungicides is the immediate pre-bloom to 4 weeks post bloom. Mancozeb, Captan and Ziram offer forward protection, while the strobilurin fungicides (e.g. Pristine, Flint, and other Group 11) as well as the sterol inhibitors (e.g. Rally, Mettle, and other DMIs Group 3) offer some reach back (typically not more than 3 days).



Black rot leaf lesions. Lesions have a darker perimeter and a black fungal body in the center. W. Wilcox.

#### **Downy mildew** – visible infections found in HVRL vineyard and Dutchess County

Although a different fungus than black rot, there is crossover on materials for control. Mancozeb, Captan and Ziram offer forward protection, while the strobilurin fungicides (Group 11) offer some reach back (typically not more than 3 days). It is important to rotate with different classes of materials to prevent resistance. Consult the 2015 Pest Management Guidelines for Grapes for a full list of materials available.



Downy mildew on lower surface of leaf. W. Wilcox.

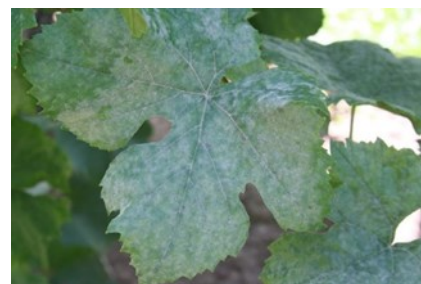
*Continued on next page*

*Pest Alerts, continued from previous page*

**Powdery Mildew**

Although no visible infections have been found in the Lower Hudson Valley, there have been multiple infection periods for this fungus.

Bloom is the most critical time of the year for control of cluster infections on all varieties. Mancozeb offers some forward protection for powdery mildew. The strobilurin fungicides offer some reach back (typically not more than 3 days). As with downy mildew, powdery mildew can develop resistance to fungicides. It is important to rotate with different classes of materials to prevent resistance. Consult the 2015 Pest Management Guidelines for Grapes for a full list of materials available.



Powdery mildew on upper surface of leaf. W. Wilcox.

**Weather Update**

It has been an un-seasonally hot, dry spring. Much needed rain took place the last weekend of May and again in the first week of June.

Over mother’s day weekend (May 22-23), a large portion of NY experienced a near frost. Many places in western NY (Wayne County in particular) sustained significant frost damage. Luckily most of Eastern NY escaped the frost—Hudson Valley stayed warm enough and in the north the temperatures were moderated by the lake. Unfortunately, some especially cool, low-lying sites did see significant damage.

Weather Station	Rainfall (in)		Temperature (F)			
	May	June 1-9	May High	May Low	June 1-9 High	June 1-9 Low
Chazy	2.72	1.83	83.6	35.7	74.3	38.4
Peru	1.69	1.50	87.9	34.6	75.9	38.2
Willsboro	3.41	2.21	86.6	36.4	74.2	39.8
Clifton Park	2.32	2.09	90.3	35.9	77.9	40.4
Hudson	1.77	1.87	91.0	39.1	81.8	41.3
Red Hook	1.86	1.90	89.5	33.8	78.7	38.3
Highland HVL	2.55	3.15	86.6	39.0	76.7	47.2

**Shoot Thinning: Good for the vines, but good for the wines?**

Excerpt from Hans Walter-Peterson, Finger Lakes Grape Program

In an ideal vineyard, a grower could simply prune the vines during the dormant season and know that they were perfectly balanced. During the growing season, the right number of shoots would emerge uniformly only in the places that you wanted them to be, with the proper number of clusters to balance that growth, while getting just the right amount of light exposure and air movement around the fruit to prevent disease and develop good color, balanced acidity, and great flavors.

Unfortunately, those vineyards are virtually non-existent in our area, so growers need to use various tools and techniques to manipulate the vineyard canopy and the amount of crop in order to achieve the quantity and quality of crop that they need, while also maintaining healthy vines. One of those tools is shoot thinning, whereby excess shoots or shoots growing in the wrong places are removed from the vine.

In situations where there is excessive shoot growth, shoot thinning can be beneficial for several reasons, including:

- Improving bud fruitfulness by reducing shading in the interior of the canopy;
- Reducing disease pressure;
- Improving fruit exposure to sunlight, which can impact color and flavor development (possibly); and
- It is a relatively fast and inexpensive way (whether by hand or machine) to make adjustments to the canopy structure to bring it closer to “balance.”

*Continued on next page*

*Shoot Thinning: Good for the vines, but good for the wines?, continued from previous page*

It is generally recommended that shoot thinning be done when shoots are between 6-12" long. As shoots elongate past that point, the base of the shoot starts to lignify which makes it more difficult to remove the shoots cleanly. In general, try to target about 4-5 shoots per foot of canopy in VSP-trained vinifera varieties. Hybrid varieties that are trained on high-wire systems can have somewhat higher numbers depending on variety, while native varieties like Concord can have as many as 15 shoots per foot of row in highly productive vineyards.

Shoot thinning removes both reproductive and vegetative growth from the vine, but usually results in an overall reduction of both yield and cropload (yield to pruning weight ratio) (Sun et al. 2012), and therefore is most beneficial in situations where vines are overcropped. If vines already have a low yield to pruning weight ratio (i.e., are undercropped), it's much less likely that thinning will have any significant impact on fruit quality. However, the other benefits mentioned here – reducing shading and crowding which can improve bud fruitfulness and reduce disease pressure – might be significant enough on their own to potentially justify the practice. The only way to know for sure is to try some thinning in a couple of rows and see if any resulting benefits can justify the cost of the practice.

For the full article: [http://nygpadmin.cce.cornell.edu/uploads/doc\\_9.pdf](http://nygpadmin.cce.cornell.edu/uploads/doc_9.pdf)

## Grape Berry Moth

Wild grapes have bloomed, which means Grape Berry Moth season is almost here! Below is an excerpt from Greg Loeb's (Cornell Department of Entomology) 2014 grape pest review.

Grape berry moth is familiar to most grape growers in the eastern US. See our fact sheet on grape berry moth at <http://nysipm.cornell.edu/factsheets/grapes/pests/gbm/gbm.asp>. It is considered our most important arthropod pest and much of our current IPM strategy centers around its control. Grape berry moth (GBM) overwinters as a pupa in the leaf litter, emerging as adults in May and June to initiate the first generation of larvae that feed directly on young fruit clusters of wild and cultivated grapes. Depending on temperature, there can be one to three additional generations produced during the season. The larvae

cause damage in three ways. First, they can reduce yield by 1) directly feeding on the flower clusters, 2) hollowing out the grape berry and 3) causing premature berry drop. Second, they contaminate the juice that can lead to rejection of entire loads at the processing plant. This is mainly a serious problem for native grapes grown for sweet juice. Third, their feeding activity on flowers/young berries (first generation) and green or ripe fruit (later generations) create good conditions for the development of bunch rots. This is particularly a serious problem for wine grapes, especially those with tight clusters.

Full article along with updates on other grape insect pests can be found at: <http://fruit.cornell.edu/grape/pdfs/Loeb-Grape%20Insect%20Mite%20Pests%202014.pdf>

## IPM in Vineyards and an example minimal spray program

Adapted from Loraine Berkett UVM

Can you have a successful vineyard without spraying any pesticides? Unfortunately, this is unlikely in our climate. Lots of moisture during the growing season means lots of fungal growth, i.e. grape diseases. However, you can minimize your sprays by implementing an Integrated Pest Management (IPM) program. What is IPM?

*Integrated pest management (IPM) is a sustainable approach to managing pests which combines biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks. IPM is based on knowledge such as knowledge about the biology of the different pests, how they interact with the crop, and how the environment/weather affects this interaction. IPM is also information-driven including information on the development stage of particular pests, size of the pest population ( i.e., whether threshold levels have been reached that require action), and whether there are sufficient natural predators in your vineyard which might manage a pest situation without your intervention. Note that "pests" not only refer to insects but also to other arthropods such as mites, pathogens that cause disease, weeds, and vertebrate pests such as birds, voles, raccoons, deer, etc.*

*IPM in Vineyards and an example minimal spray program, continued from previous page*

To implement IPM in your vineyard you can take the following steps

1. **Read.** Many resources are available for you to learn about IPM Theory including the Cornell Pest Management Guidelines, Cornell Grapes Website, Northern Grapes Project archives... You may also want to get your pesticide applicators license—an article the April newsletter breaks down this process.
2. **Attend.** Local extension events to regional conferences and meetings are available throughout the year. We will continue to advertise these in our newsletters and on the ENY website.
3. **Ask Questions.** At both organized meetings and informal gatherings, present your problems to others. *Many growers have said that they initially learned from a grower “mentor” who was willing to share insights and knowledge. University and extension personnel are also available to help.* There is nothing like learning from experience, and it saves a lot of time to learn from someone else’s experiences.
4. **Observe.** Be in your vineyard *at least once per week* during the growing season. Observing and taking notes will help you learn what pests (diseases, insects, birds, weeds, wildlife) your vines are susceptible to and the key times for managing them.

**Managing diseases** in a vineyard is often the biggest challenge in our region. It is important to be proactive (i.e. preventive, instead of reactionary). Once a disease is present in your vineyard, it is often too late to treat it; although it is sometimes possible to slow down the spread. Another major concern is resistance. Using the same chemicals over and over can lead to resistance making them less effective. Choose materials to target the problem pests in your vineyard (see the Cornell Guidelines for specific recommendations) and rotate materials based on the pesticide Group #.

### Example of a Skeletal Spray Program

Stage of Growth	Fungicide Option	Target organisms
5” – 8” shoot	Mancozeb	Phomopsis, BR, DM
Immediate Pre-Bloom to Early Bloom	Mancozeb + Rally	Phomopsis, BR, DM + PM, BR
1st Post-Bloom (10-14 days from last spray)	Mancozeb + Rally	Phomopsis, BR, DM + PM, BR
2nd Post-Bloom (10-14 days from last spray)	Sovran or Abound* or Pristine or Sulfur* + Mancozeb or Sulfur* + Captan	BR, DM, PM BR, DM, PM PM + BR, DM PM + DM
Additional Summer Sprays	Sulfur Captan or phosphonate	PM DM

For Lorraine Berkett’s Full Article on IPM in Vineyards follow this link:

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

#### Vineyard Pest Management Webinar Recording

This webinar was held Wednesday, May 13<sup>th</sup>

Dr. Andrew Landers, Pesticide Application Technology Specialist, Cornell Geneva  
 Dr. Wayne Wilcox, Grape Pathology Program, Cornell Geneva

In this recorded webinar, Wayne Wilcox discussed major vineyard pathogens and control measures. Andrew Landers provided information about effective pesticide application, including sprayer calibration.

You may view a recording of the webinar by following the link below:

<https://cornell.webex.com/cornell/ldr.php?RCID=b538a16d369f67730170d93d9e360e1c>



## The American Society for Enology and Viticulture-Eastern Section (ASEV-ES) is proud to announce Dr. Wayne Wilcox as the 2015 recipient of the ASEV-ES Outstanding Achievement Award.

Disease management is a critical component of viticulture east of the Rockies, and over his career Dr. Wilcox has delivered science-based guidelines that have allowed growers across the region to manage diseases more efficiently and sustainably. His in-depth knowledge of the biology of fungal pathogens has been key to improving the timing of management interventions over the course of the growing season.

A northern California native, Dr. Wilcox received his B.S. in Horticulture and M.S. and Ph.D. degrees in Plant Pathology, all from the University of California at Davis. Since 1984, he has been a professor at Cornell's New York State Agricultural Experiment Station in Geneva (Finger Lakes region), where he has led the grape pathology program for the past 21 years.

His programmatic focus is on the applied biology and practical, integrated management of the major fungal diseases of grapes, utilizing both viticultural and fungicidal tools. He has published nearly 100 research articles in scientific journals, in addition to numerous technical reports and popular articles in grower newsletters and trade magazines, and is the senior editor of the forthcoming *2nd Edition of the Compendium of Grape Diseases, Disorders, and Pests*, an international publication of the American Phytopathological Society. He is also a co-author of the New York/Pennsylvania Pest Management Guidelines for Grapes, and his yearly "Grape Disease Control" newsletter provides grape growers throughout eastern North America with current, practical guidance for the growing season. He also organized and co-teaches a course in Grape Pest Management, in support of Cornell's undergraduate major in viticulture and enology. His extension activities have focused on educational programs for grape growers, vineyard managers, winery owners, and private and public sector agricultural advisers on the identification, biology, and management of infectious diseases. Dr. Wilcox's research program is integrated with his extension program, providing data for educational programs and opportunities to demonstrate specific concepts in the field.

His work is valued by the grape industry and colleagues alike for its impact, as demonstrated by his ASEV Best Viticulture Paper Award in 2012 for research that correlated powdery mildew severity with canopy density. In 2015, he received the award again for seminal work on the persistence of sulfur spray residues during ripening and wine making. In 2013, he received the Australian Journal of Grape and Wine Research Best Viticulture Paper Award for the optimization of a new technique to detect pathogens on grape berries before disease symptoms are visible.

Dr. Wilcox will receive his award at the 40<sup>th</sup> Annual ASEV-ES Conference in Dunkirk, NY July 23-25, 2015, where he will give a presentation on "Mold & Mildews, Spots & Rots: Grape Pathology in the East". For more information about the conference, visit <http://www.asev-es.org/>.



### Quick Links

Cornell Grapes Website <http://www.fruit.cornell.edu/grape/>

Northern Grapes Project <http://northerngrapesproject.org/>

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

Jim's Blog <http://blogs.cornell.edu/hudsonvalleygrapes/>

NEWA Weather and Pest Forecasting <http://newa.cornell.edu/>

**2015 ENYCHP Programming Thus Far:**

The growing season is well under way. Both Anna and Jim have been responding to a lot of grower calls and making farm visits. Here are some programs they offered, as well as upcoming programs. For up to date information on programming events, please visit the ENYCHP web page at: <http://enych.cce.cornell.edu/>.

February 10-12, 2015 Hudson Valley Fruit School Kingston, NY

A three day session where tree, fruit, berry and grape growers from the Hudson Valley came together to listen to speakers from Cornell University, Cornell Cooperative Extension, and others address the latest pest, disease and other challenges facing the tree fruit, berry and grape industries. A trade show event also took place at this conference.

March 28 and April 4 2015 Vine Training and Pruning Champlain Valley, Upper Hudson Valley

These workshops covered various grape vine training systems available for cold hardy varieties including vertical shoot positioning (VSP), Top Wire Cordon (TWC), and Umbrella Kniffin (UK). Also included in these workshops was a discussion of the pros and cons of each system, followed by in field pruning demonstrations.

April 3 and April 17, 2015 Grape Pruning Workshop Hudson Valley Research Lab Highland NY

These workshops covered cane and spur pruning for wine grapes grown on a vertical shoot positioning (VSP) system. The pros and cons of each method were discussed. In field demonstrations followed, along with one on one practice sessions with the growers who attended.

April 25, 2015 Site Evaluation and Establishment Upper Hudson Valley

This workshop covered the basic considerations for selecting a site for your future vineyard and how to establish a new planting, including land prep and vineyard planning. Those in attendance also participated in a hands on planting workshop.

May 7, 2015 Vineyard Pest Management Upper Hudson Valley

This workshop covered essential vineyard pest management practices, covering the major pests of vineyards, IPM strategies, and resources available to help guide your pest management decisions. Attendees also received hands on demonstration on proper calibration.

May 13, 2015 Vineyard Pest Management Webinar Champlain Valley

Similar to the field workshop held on May 7, this webinar covered essential vineyard pest management practices, covering the major pests of vineyards, IPM strategies, and resources available to help guide your pest management decisions. Growers were able to connect to this event from remote locations.

May 20, and May 27 2015 Business Management Upper Hudson Valley, Champlain Valley

This workshop covered the basics of business management for vineyards and wineries. Topics of discussion included obtaining a winery license and marketing your own wine, as well as risk management and insurance.

July 7, 2015 Grapevine Canopy Management Workshop Lower Hudson Valley

This workshop will cover the basics of grape vine canopy management, as well as its importance in pest management, and fruit load. Come out and meet your fellow grape growers and learn about proper canopy management.

If you have an idea for a workshop and/or you would like to host a workshop, please contact your local educator to let them know!

Cornell Cooperative Extension and the staff assume no liability for the effectiveness of results of any chemicals for pesticide use. No endorsement of any products is made or implied. Every effort has been made to provide correct, complete, and current pesticide recommendations. Nevertheless, changes in pesticide regulations occur constantly and human errors are still possible. These recommendations are not substitutes for pesticide labeling. Please read the label before applying any pesticide. Where trade names are used, no discrimination is intended and no endorsement is implied by Cornell Cooperative Extension.

Diversity and Inclusion are a part of Cornell University's heritage. We are a recognized employer and educator valuing AA/EEO, Protected Veterans, and Individuals with Disabilities.