

Cornell Cooperative Extension Lake Erie Regional Grape Program



Icy January Vineyard-Jennifer Phillips Russo



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In this Crop Update:

- Bud Hardiness, May Frost Update, SLF- Jennifer Phillips Russo
- PA Grower Pesticide Credit Opportunities- Andy Muza

The Lake Erie Regional Grape Program is a Cornell Cooperative Extension partnership between Cornell University and the Cornell Cooperative Extensions in Chautauqua, Erie and Niagara county NY and in Erie County PA.

Contact Information:

Jennifer Phillips Russo - LERGP Viticulture Specialist: jjr268@cornell.edu (716) 640-5350 Kevin Martin – LERGP Business Management Specialist: Kmm52@psu.edu (716) 397-9674 Andy Muza – LERGP Disease and Pest Management Specialist: Ajm4@psu.edu (814) 825-0900 Kim Knappenberger – LERGP NEWA and Vineyard Improvement Program Contact Ksk76@cornell.edu Kate Robinson – Administrative Assistant Kjr45@cornell.edu



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Update to reaching you via text messaging

We are so excited and pleased that many of you responded to the survey and provided your text number. Unfortunately the program we are currently using requires us to also know the carrier so we can add the appropriate suffix to the bulk text requirements.

If you have previously supplied your text, please revisit this link to add your carrier information.

If you have not yet taken the survey, please take a minute to do so. We don't want you to miss out on any information that we send through this mode.

THANK YOU!





Viticulture

Jennifer Russo, Viticulture Extension Specialist, LERGP

BUD HARDINESS

Winter low temperatures that fall below a critical value can damage grapevine buds. The critical temperature for bud injury varies over the dormant season and responds to daily changes in temperature. We can measure this critical temperature through a procedure called differential thermal analysis, which involves controlled freezing of a sample of buds collected from vineyards. With funding from the New York Wine and Grape Foundation, we are monitoring bud hardiness in Concords (native), Vignoles (hybrid), and Riesling (vinifera) at different cropping levels to see if there is an effect on cold hardiness. We monitor samples every two weeks from November through March in the research vineyards at the Cornell Lake Erie Research and Extension Laboratory in Portland, NY.

Bud hardiness is a process that changes throughout dormancy and is determined by genetics and the environment. Seasonal differences, high cropping levels and late harvest can affect bud hardiness and vine health. These factors contribute to the risks of growing grapes in cool climates. To be sustainable in the sense that producing an annual crop at economically viable levels each year, the bulk juice grape growers must produce high yields and quality while reacting to climate related obstacles and wine grape growers' sustainability looking for ways of implementing mechanization to accommodate recent labor issues. We were funded to test and compare different crop load management effects on bud hardiness in three different grapevine species, American native *vitis labrusca* Concord, French native *vitis vinifera* Riesling, and French-American hybrid Vignoles.

Crop load can impact vine health and bud hardiness. Overcropping a vine will decrease vine size over time. Does overcropping really decrease bud cold hardiness of the buds you retain after pruning? Does the timing of crop adjustment decrease bud cold hardiness? Current practices and technologies have focused on crop adjustment to maximize yields and increase quality. These advancements have added to the reliability of return crop and contributed to an increase in vine size. This project hopes to provide insight on the risks and benefits of cropping levels, crop adjustment, and crop adjustment timing as well as identifying the relationship between cropping level and bud hardiness among native Concords, hybrid Vignoles, and vinifera Riesling varieties.

Bud hardiness data was collected from four grape cultivars in the Lake Erie Grape Region to develop dormant season bud hardiness profiles in collaboration with Tim Martinson in past years. Adding the level of differential crop load management effects on bud hardiness for V. labrusca, V. vinifera, and Inter-specific hybrid cultivars in the Lake Erie Grape Region from November – April would give growers the information needed to maximize yields and respond to climatic events. Armed with this information, growers could accurately identify when vines begin the deacclimation process allowing them to know when they should address risk management strategies such as delayed pruning.

There is constant potential of bud and vine injury as a result of sudden low temperatures. Bud hardiness profiles from ongoing research is used to educate area grape growers and adjust their pruning levels. Adding a data layer of potential detrimental effects on bud hardiness due to crop load management decisions for American, French, and French-American hybrid cultivars would widen the scope of information and potential impact on sustainability

The treatments for the native portion of this research are Concord High Crop and Concord Low Crop. This data was gathered using Dr. Terry Bates's Big C research on our farm that is a variable rate within a variable rate trial. The Vignole (V) and Riesling (R) crop load trial with differential cluster drop timing treatments are three cropping levels or High (H) leave all fruit, Medium (M) leave 5 shoots per foot/one cluster per shoot, and Low (L) leave 4 shoots per foot/one cluster per shoot in Riesling. In Vignoles, we left all fruit for the High crop level, removed half of the fruit for Medium, and left one quarter of the fruit in the Low cropping level. The crop was adjusted by dropping clusters at three different times within those treatments: Early at fruit set (E), Mid-season around 30 days post bloom (M), and Late at veraison (L). Therefore, when looking at the table provided, if you wanted to find the Lethal Temperature 50 for Riesling, Medium Crop, where the clusters were dropped around 30 days after bloom, you would look for RMM. There is also a spur pruned vs. cane pruned trial in Riesling, where a total of 30 buds remained on each vine in three different management strategies: two 15 bud canes, six 5 bud spurs and 15 two bud spurs.

This article is not to analyze the data over the course of the trail, but to explain what you will find if you utilize our website to follow the LT50 for this season. The research will be analyzed and presented at a later date. Below is the table of our results for this past week:

Date	Variety	Cropping Level	Crop Adjustment Timing	LTE 50 (°F)	
			Ū		
	Concord	High		-12.14	
	Concord	Low		-16.85	
	Riesling	2 cane 15 bud		-11.20	
		6 spur 5 bud		-10.62	
		15 spur 2 bud		-8.03	
	Riesling	High	Early	-8.46	
			Mid-season	-9.67	
			Late	-11.49	
		Medium	Early	-10.61	
			Mid-season	-10.64	
			Late	-13.49	
		Low	Early	-6.74	
			Mid-season	-11.25	
			Late	-9.87	
	Vignoles	High	Early	-14.96	
			Mid-season	-15.95	
			Late	-4.04	
		Medium	Early	-10.79	
			Mid-season	-13.22	
			Late	-3.62	
		Low	Early	-13.99	
			Mid-season	-5.67	
			Late	-6.52	

Table 1. Lethal Temperature 50 in Fahrenheit f	for Bud Hardiness and Cropping Levels for the week of January 25, 20	021
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May 2020 Frost Event Update

I have been working with the FSA for disaster declaration in our regions for the frost events in May 2020. I pleased to share the following declaration with you:



U.S. Small Business Administration

U.S. SMALL BUSINESS ADMINISTRATION FACT SHEET – ECONOMIC INJURY DISASTER LOANS

(SBA DISASTER DECLARATION DUE TO DESIGNATION BY THE SECRETARY OF AGRICULTURE)

NEW YORK Declaration 16855

(Disaster: NY-00203) Incident: FROST

occurring: May 5 - 9. 2020

in Erie County, New York; the contiguous <u>New York</u> counties of: Cattaraugus, Chautauqua, Genesee, Niagara, and Wyoming

Application Filing Deadline: September 15. 2021

Disaster Loan Assistance Available:

<u>Economic Injury Disaster Loans (EIDLs)</u> – Working capital loans to help small businesses, small agricultural cooperatives, and small businesses engaged in aquaculture, and most private, non-profit organizations of all sizes meet their ordinary and necessary financial obligations that cannot be met as a direct result of the disaster. These loans are intended to assist through the disaster recovery period.

Credit Requirements:

- <u>Credit History</u> Applicants must have a credit history acceptable to SBA.
- <u>Repayment</u> Applicants must show the ability to repay the loan.
- <u>Collateral</u> Collateral is required for all EIDL loans over \$25,000. SBA takes real estate as collateral when it is available. SBA will not decline a loan for lack of collateral, but SBA will require the borrower to pledge collateral that is available.

Interest Rates:

The interest rate is determined by formulas set by law and is fixed for the life of the loan. The maximum interest rate for this program is 3.000 percent.

Loan Terms:

The law authorizes loan terms up to a maximum of 30 years. SBA will determine an appropriate installment payment based on the financial condition of each borrower, which in turn will determine the loan term.

Loan Amount Limit:

The law limits EIDLs to \$2,000,000 for alleviating economic injury caused by the disaster. The actual amount of each loan is limited to the economic injury determined by SBA, less business interruption

insurance and other recoveries up to the administrative lending limit. SBA also considers potential contributions that are available from the business and/or its owner(s) or affiliates. If a business is a major source of employment, SBA has the authority to waive the \$2,000,000 statutory limit.

Loan Eligibility Restrictions:

- The applicant business must be located in the declared disaster area.
- Only uninsured or otherwise uncompensated disaster losses are eligible.
- The economic injury must have been the direct result of the declared disaster.
- Nurseries are only eligible for economic injury caused by declared drought disasters.
- By law, agricultural enterprises such as farmers and ranchers are not eligible for any type of SBA assistance.
- Applicants who have not complied with the terms of previous SBA loans are not eligible. This
 includes borrowers who did not maintain flood and/or hazard insurance on previous SBA
 loans.
- Loan assistance is available only to the extent the business and its owners cannot meet necessary financial obligations due to the disaster. This determination is made by SBA.

Note: Loan applicants should check with agencies / organizations administering any grant or other assistance program under this declaration to determine how an approval of SBA disaster loan might affect their eligibility.

Refinancing:

Economic injury disaster loans cannot be used to refinance long term debts.

Insurance Requirements:

To protect each borrower and the Agency, SBA may require you to obtain and maintain appropriate insurance. By law, borrowers whose damaged or collateral property is located in a special flood hazard area must purchase and maintain flood insurance. SBA requires that flood insurance coverage be the lesser of 1) the total of the disaster loan, 2) the insurable value of the property, or 3) the maximum insurance available.

Completing the SBA Loan Application:

The application asks for the same information about the business and its principal owners that are generally required for a bank loan. If you need help, SBA personnel will explain the forms and give you assistance at no charge. You may use the services of accountants, attorneys, or other representatives at your own expense, if you wish. Use of a representative and the fees they charged must be listed on your loan application.

Applicants may apply online, receive additional disaster assistance information and download applications at https://disasterloan.sba.gov/ela. Applicants may also call SBA's Customer Service Center at (800) 659-2955 or email disasterloan.sba.gov/ela. Applicants may also call SBA's Customer Service Center at (800) 659-2955 or email disasterloan.sba.gov/ela. Applicants may also call SBA's Customer Service Center at (800) 659-2955 or email disasterloan.sba.gov/ela. Applicants may also call SBA's Customer Service Center at (800) 659-2955 or email disaster assistance. Individuals who are deaf or hard-of-hearing may call (800) 877-8339. Completed applications should be mailed to U.S. Small Business Administration, Processing and Disbursement Center, 14925 Kingsport Road, Fort Worth, TX 76155.

Spotted Lanternfly News

On Behalf Of Brian C. Eshenaur, NYS IPM Spotted Lanterfly Contact:

Here's a recent article from our colleagues at Penn State that clearly lays out some current misconceptions and truths about Spotted Lanternfly. Article Link:

Spotted lanternfly experts debunk myths about the prodigious, pestilent pest



Native to Asia, the spotted lanternfly was first discovered in Berks County in 2014. The insect has a broad host range including fruit, ornamental and woody plants and is a threat to the state's agriculture and forestry industries. IMAGE: HEATHER LEACH

UNIVERSITY PARK, Pa. — As the spotted lanternfly extension associate in Penn State's <u>College</u> <u>of Agricultural Sciences</u>, Heather Leach often receives calls and emails from concerned citizens about the insect interloper.

Occasionally, she will hear stories or "myths" from them about management or the biology of the pest, an invasive planthopper that feeds on more than 70 species of plants, including agricultural and hardwood commodities.

"People who are dealing with spotted lanternfly are frustrated and worried," Leach said. "In their search for answers, they sometimes are willing to believe or try anything. But it's never a good idea to take questionable information at face value."

While most falsehoods are innocuous, some have the potential to cause harm to the environment, animals and even humans. Below are a few garden-variety myths about the spotted lanternfly from Leach and her colleagues.

Pressure washing destroys spotted lanternfly eggs. While pressure washing might physically remove egg masses from surfaces, there is no evidence that it kills eggs. Additionally, high-

pressure sprays can cause permanent damage to trees and other living plants.

The most effective way to destroy egg masses is to scrape them off using a plastic card or putty knife. Then, place the masses into a bag or container with rubbing alcohol or hand sanitizer, which can be disposed of in the trash. They also can be smashed or burned.

Milkweed is toxic to spotted lanternfly. According to <u>Penn State Extension</u> educators, milkweed leaves contain cardiac glycosides. These compounds affect heart function, making them toxic to most species of birds and mammals, so these predators avoid them. However, there is no science currently showing that milkweed is poisonous to the spotted lanternfly, Leach said.

On a positive note, milkweed is the sole host plant of the monarch butterfly. By planting milkweed species native to their region, property owners can support this important pollinator. But they should not expect to milk any benefit related to the spotted lanternfly.

The spotted lanternfly needs tree of heaven to reproduce. It does not, according to Kelli Hoover, professor of entomology, whose lab researched the insect's reproduction cycle. She said while Ailanthus altissima, a noxious and invasive weed tree commonly known as tree of heaven, is the pest's preferred host, spotted lanternfly can produce offspring without it.

"We reared spotted lanternflies from egg to adult — and they reproduced — without ever having access to tree of heaven," said Hoover, adding that the specimens were fed a diet of planted silver maple, willow and river birch trees in a controlled outdoor setting.

Interestingly, development from egg to adult was slightly faster when spotted lanternflies were given tree of heaven, suggesting that it is a good host for them. Because tree of heaven is attractive to spotted lanternfly, Hoover recommends removing it, if affordable and feasible.

Homemade sprays are safe and effective. Folks may be tempted to use home remedies that include household items such as dish soap, glass cleaner, vinegar, salt, garlic and chili/cayenne peppers.

These suggestions may have the potential to harm humans, pets and plants, do not come with precise directions, may not be effective, and their use can violate the law, noted Emelie Swackhamer, a horticulture extension educator based in Montgomery Country, one of 26 counties in the current spotted lanternfly quarantine zone.

Homeowners who choose chemical control to deal with spotted lanternflies should research the pros and cons and use registered insecticides only. IMAGE: EMELIE SWACKHAMER

She encourages nonchemical control methods such as destroying egg masses, swatting the insects with fly swatters, trapping them and eliminating the tree of heaven. For homeowners who choose chemical control, she recommends they use a registered insecticide and research the pros and cons. It is good idea to use least toxic options first, including organic or natural-based insecticides such as neem oil or insecticidal soaps.

"People who want to kill spotted lanternflies effectively and safely with insecticides must follow directions carefully," said Swackhamer. "Every situation is different; no one method will work for everyone. Remember, all insecticides present safety risks, so people must use caution with these products."

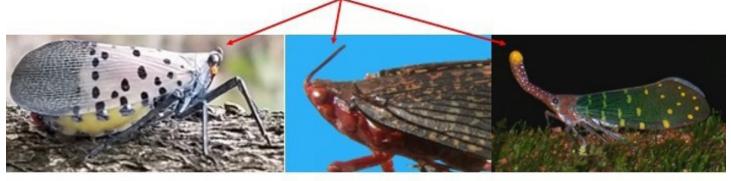
Spotted lanternflies are luminescent. The origin of this fallacy most likely lies in the pest's name, according to Julie Urban, associate research professor in the Department of Entomology.

"Lanternfly' is a name that refers to the insect family 'Fulgoridae,' to which the spotted lanternfly and more than 500 other insect species belong," she said. "These insects often possess unusual physical features, including an extension or enlargement of the head, as in the case of spotted lanternfly."

At one time, scientists hypothesized these insects' enlarged domes housed bioluminescent bacteria that could make them glow. This led to the insect family being named for "Fulgora," the Roman goddess of lightning.



Head process in various Fulgoridae species.



Lycorma delicatula (left). Photo by T. Leskey, USDA. Kalidasa lanata (center) and Pyrops intricata (right). Photos by J. Urban, Penn State.

The spotted lanternfly, shown at left, is a member of an insect family that often possess unusual physical features, including an extension or enlargement of the head. IMAGE: JULIE URBAN

While the spotted lanternfly possesses powers such as feasting on plants, depositing sticky honeydew and taking up residence anywhere, the ability to glow — or to fly well, for that matter — is not among them.

For the latest science-based information about the spotted lanternfly, visit the Penn State Extension website at <u>https://extension.psu.edu/spotted-lanternfly</u> or call 888-4BAD-FLY (888-422-3359). Extension also offers a monthly spotted lanternfly newsletter. To subscribe, visit <u>https://extension.psu.edu/spotted-lanternfly</u>.

MEDIA CONTACTS

Amy Duke

ajd217@psu.edu Work Phone: (814) 865-6616

Regional Resources & Activities:

- Webinar: How research has changed winemaking practice at small to medium-sized wineries East and West (registration now open) | Thomas Henick-Kling, Director, Viticulture & Enology, Wine Science Center, Washington State University, Richland WA and Peter Bell, winemaker, Fox Run Vineyards, Geneva NY | Feb-03
- <u>Ohio Virtual Grape and Wine Conference (Day 1 Enology Focus)</u> | Ohio Grape Industries Committee (OGIC), Ohio State University Extension, OSU South Centers, Department of Horticulture and Crop Science Viticulture and Enology Programs at The Ohio State University Wooster Campus, Ohio Wine Producers Association (OWPA) | Feb-15
- <u>Ohio Virtual Grape and Wine Conference (Day 2 Viticulture Focus)</u> | Ohio Grape Industries Committee (OGIC), Ohio State University Extension, OSU South Centers, Department of Horticulture and Crop Science Viticulture and Enology Programs at The Ohio State University Wooster Campus, Ohio Wine Producers Association (OWPA) | Feb-16
- <u>Ohio Virtual Grape and Wine Conference (Day 3 Marketing Focus)</u> | Ohio Grape Industries Committee (OGIC), Ohio State University Extension, OSU South Centers, Department of Horticulture and Crop Science Viticulture and Enology Programs at The Ohio State University Wooster Campus, Ohio Wine Producers Association (OWPA) | Feb-17
- <u>Webinar: Trunk diseases or winter injury: Managing vine renewal (registration not yet open)</u> | *Annie Klodd, assistant extension professor, University of Minnesota Extension* | Feb-17
- <u>Webinar: Production practices affecting fruit quality in cold hardy "Minnesota" cultivars (registration</u> <u>not yet open)</u> | *Amaya Atucha, assistant professor of horticulture, University of Wisconsin-Madison* | Feb-17
- B.E.V. New York, Day 1 (Save the date: details coming) | Mar-03
- B.E.V. New York, Day 2 (Save the date: details coming) | Mar-04
- B.E.V. New York, Day 3 (Save the date: details coming) | Mar-05
- <u>Webinar: Winemaker Roundtable: Rose Wine Production (registration not yet open)</u> | *Emily Pelton, Veritas Vineyard and Winery, Charlottesville, VA, Sarah Troxell Galen Glen Winery, Andreas PA, and David Breeden Sheldrake Point Vineyards, Ovid, NY* | Mar-10
- <u>Webinar: Spring frost mitigation strategies with chemical products and delayed pruning (registration</u> <u>not yet open)</u> | *Imed Dami, professor of viticulture, Ohio State University, and Michela Centinari, associate professor of viticulture, Pennsylvania State University* | Mar-24
- <u>Penn State 2021 Vineyard Pest Management Series Spotted Lanternfly Update</u> | *Heather Leach, Extension Associate, Penn State; Michela Centinari, Associate Professor of Viticulture, Penn State; and Flor Acevedo, Assistant Professor of Entomology* | Mar-30
- <u>Penn State 2021 Vineyard Pest Management Series Vineyard Pest Management: Conventional and</u> <u>Alternative Vineyard Floor and Weed Management</u> | *Lynn Sosnoskie, Assistant Professor of Weed Ecology and Management for Specialty Crops, Cornell University, and Alice Wise, Senior Educator, Viticulture, Cornell University* | Mar-31
- <u>Penn State 2021 Vineyard Pest Management Series</u> <u>Disease and Insect Updates</u> | *Bryan Hed, Grape Pathology Research Technologist, Penn State, and Rufus Isaacs, Professor of Entomology, Michigan State University* | Apr-01
- <u>Webinar: Game-Changing Innovations Every Small Winery Should Know (registration not yet</u> <u>open)</u> | *Clark Smith, WineSmith Consulting, Santa Rosa California* | Apr-14

- Webinar: Towards clean fruit and foliage: new findings on resistance management and spray scheduling to manage grapevine diseases (registration not yet open) | Mengjun Hu, assistant professor, University of Maryland, and Tim Miles, assistant professor, Michigan State University | Apr-28
- <u>New York's Farm Laborer Wage Board Recommends Retaining 60-hour Overtime Threshold</u> | Cornell
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PA Update Andy Muza, LERGP Extension Team & Penn State Extension- Erie County

Update on Pesticide Recertification Credits for Pennsylvania Growers

In the last Crop Update (January 14, 2021) I indicated that I would relay registration information for 2 upcoming **Winter Commercial Tree Fruit Schools** when agendas and registration details were finalized. Well, registration is now open for these webinars which will be conducted on February 22 and March 1 (see details below). Pennsylvania Department of Agriculture (PDA) pesticide recertification credits will be available at these meetings.

I have also included information on 3 upcoming webinars for the **2021 Vineyard Pest Management Series** that will be conducted on March 30 and 31 and April 1. In addition, I am including information on the **2021 Mid-Atlantic Fruit and Vegetable Convention** and resources on **Where to Find Additional Pesticide Recertification Credits.**

Winter Commercial Tree Fruit School: Part I - (FREE - but registration is required to receive the link to access the webinar). <u>https://web.cvent.com/event/552dd83e-451b-4a8d-94b3-5c45333c4c4e/summary?locale=en-US&i=p9L08dbcBE6offPOEqZEhw</u>

The annual Penn State Extension **Winter Commercial Tree Fruit School: Part I** for commercial growers provides an opportunity for growers to learn about the latest innovations, techniques, and concerns for managing orchards in Pennsylvania. This session will review topics including invasive and unexpected fruit pest challenges, a review of the new tree fruit rootstocks, results of the REDpulse Defoliation Trial, and more!

WHEN: Monday (February 22) from 9 AM - 12:30 PM.

PDA Pesticide Recertification Credits: This webinar is designed for 1 Core and 2 category credits (Categories - Private, 02,18) pending PDA approval.

Winter Commercial Tree Fruit School: Part II - (FREE - but registration is required to receive the link to access the webinar). https://web.cvent.com/event/0c6dac5a-53bb-4308-a473-204481c094dd/summary?locale=en-US&i=bJTaIDTC10GdRu87yqhqhQ This session will review best management practices for pesticide storage and safety, new technologies for peach production, and more!

WHEN: Monday (March 1) from 9 AM - 12:30 PM

PDA Pesticide Recertification Credits: This webinar is designed for 1 Core and 2 category credits (Categories - Private, 02, 18) pending PDA approval.

2021 Vineyard Pest Management Series

Below are three webinar registration pages that constitute the **2021 Vineyard Pest Management Series**. These will be held on March 30 and 31 and April 1.

<u>Spotted Lanternfly Update</u> - (FREE - but registration is required).

https://extension.psu.edu/2021-vineyard-pest-management-series-spotted-lanternfly-update The 2021 Vineyard Pest Management Series - Spotted Lanternfly Update will review the latest information on spotted lanternfly management in vineyards. As well as present research findings on potential damage to grapevines, management options, and other observations from the 2020 field season. A brief overview will be given on future Spotted Lanternfly research that will start in summer 2021 in Southeast Pennsylvania.

WHEN: Tuesday (March 30) from 10 AM – 12 PM.

PDA Pesticide Recertification Credits: This webinar is designed for 4 category credits (Categories - Private, 02, 18) pending PDA approval.

<u>Conventional and Alternative Vineyard Floor and Weed Management</u> - (FREE - but registration is required).

https://extension.psu.edu/vineyard-pest-management-conventional-and-alternative-vineyard-floorand-weed-management

The 2021 Vineyard Pest Management Series - Conventional and Alternative Vineyard Floor and Weed Management session will review alternative under-vine management strategies as well as conventional weed management options with herbicides. Benefits, drawbacks, and best management practices for mowing, cultivation, and using perennial under-vine cover crops will be discussed. Herbicide options for the management of weeds in vineyards will be discussed in addition to how herbicide choices and programs should be refined based on the specific weeds (e.g., annual, perennial, glyphosate resistant) observed in your vineyard.

WHEN: Wednesday (March 31) from 10 AM – 12 PM.

PDA Pesticide Recertification Credits: PDA has approved this webinar for 4 category credits (Categories - Private, 02, 18).

Disease and Insect Updates - (FREE - but registration is required).

<u>https://extension.psu.edu/2021-vineyard-pest-management-series-disease-and-insect-updates</u> The **2021 Vineyard Pest Management Series - Disease and Insect Updates** will review vineyard disease and insect management considerations for the 2021 growing season. As well as Disease and insect management findings from 2020. An update will also be given on current pesticides registered for grapes.

WHEN: Thursday (April 1) from 10 AM – 12 PM.

PDA Pesticide Recertification Credits: This webinar is designed for 4 category credits (Categories - Private, 02, 18) pending PDA approval.

2021 Mid-Atlantic Fruit and Vegetable Convention - (Virtual) – https://www.mafvc.org/ **February 8 (Monday) – Thursday (February 11)**. A minimum of **one core credit** will be awarded on each date through the presentation by Penn State Pesticide Education Specialist Jim Harvey. **Three category credit** presentations per meeting will also be provided by the Penn State Faculty and Research Specialists.

Registration will be open to all at a cost of \$40 per person.

Where to Find Additional Pesticide Recertification Credits

On-Line Pesticide Recertification Credits

<u>Penn State Extension (pestcredits)</u> has a dedicated web page for recertification credits. This new web page can also be searched by education format (such as online courses, webinars, conferences, and workshops) and also by category--look along the left-hand side to select the options you want. Another thing to note on this page, if a price is not shown under the title, then it is not available at this time. However, you may be able to provide your email for those

courses, and when it becomes available again you will be sent an email.

Keeping Pesticides Out of Groundwater – available now – **2 credits (core)** - \$25 (**Note: Limited time offer at \$12.50 through January 31.**) <u>https://extension.psu.edu/keeping-pesticides-out-of-groundwater-online</u>

Personal Protective Equipment for Pesticide Applicators – available now – **1 credit (core)** - \$15 (Note: Limited time offer at \$7.50 through January 31). <u>https://extension.psu.edu/personal-protective-equipment-for-pesticide-applicators</u>

Winterizing Pesticide Sprayers – available now – **1 credit (core)** - \$15 (Note: Limited time offer at \$7.50 through January 31). <u>https://extension.psu.edu/winterizing-pesticide-sprayers</u>

<u>PaPlants (www.paplants.pa.gov)</u> is the complete database of all approved recertification courses, including the online courses, managed by the Pennsylvania Department of Agriculture. Select Online or Webinar as the Meeting Type and the category that you need. Click on Search and see the list of available courses or webinars. Many opportunities are available for most categories!

Correspondence Courses

Correspondence Courses (Workbooks) is another way that applicators can earn some recertification credits. Applicators choosing this method will be mailed a workbook, which they will need to read and complete activities and/or review questions. Then you will take a quiz on the material and mail the quiz back to Penn State for grading. If you pass, you will receive a completion certificate in the mail and we will notify the Pennsylvania Department of Agriculture that you passed. If you fail, we will send you a different quiz, and you can take the quiz a total of three times.

Workbooks are sold at \$10. There is free shipping **through March 31, 2021**, but after that shipping will be added.

Category Options:

Pumpkin Diseases - <u>https://extension.psu.edu/pesticide-applicator-recertification-workbook-pumpkin-diseases</u> Category Credits (2) - Private Category, and Categories 03 and 18

Forage Diseases - <u>https://extension.psu.edu/pesticide-applicator-recertification-workbook-forage-diseases</u> Category Credits (2) - Private Category, and Categories 01 and 18

Tomato Diseases - <u>https://extension.psu.edu/pesticide-applicator-recertification-workbook-tomato-diseases</u> Category Credits (2) - Private Category, and Categories 03 and 18

Core Options:

Pesticide Spill Protocol - <u>https://extension.psu.edu/pesticide-applicator-recertification-workbook-pesticide-spill-protocol</u> **Core Credits - 2**

Pesticide Record Keeping - <u>https://extension.psu.edu/pesticide-applicator-recertification-workbook-pesticide-recordkeeping</u> Core Credits - 2

Adjuvants and Pesticides - <u>https://extension.psu.edu/pesticide-applicator-recertification-workbook-adjuvants-and-pesticides</u> **Core Credits - 2**

Pollinators and Pesticides (1 core credit) - <u>https://extension.psu.edu/pesticide-applicator-</u> recertification-workbook-pollinators-and-pesticides **Core Credits - 1**

Other links of interest:

LERGP Web-site:

Cornell Cooperative Extension website:

Cornell CALS Veraison to Harvest Newsletter:

Efficient Vineyard:



Appellation Cornell Newsletter:

COVID-19 resources:

Need information? View the following Cornell CALS and CCE Resource Pages Updated Regularly

General Questions & Links:

https://eden.cce.cornell.edu/

Food Production, Processing & Safety Questions:

https://instituteforfoodsafety.cornell.edu/coronavirus-covid-19/

Employment & Agricultural Workforce Questions:

http://agworkforce.cals.cornell.edu/

Cornell Small Farms Resiliency Resources:

https://smallfarms.cornell.edu/resources/farm-resilience/

Financial & Mental Health Resources for Farmers:

https://www.nyfarmnet.org/

Cornell Farmworker Program

www.farmworkers.cornell.edu

www.trabajadores.cornell.edu (en espanol)