Ohio Grape-Wine Electronic Newsletter

Editor: Christy Eckstein, Executive Director,
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www.findohiowines.com
www.oardc.ohio-state.edu/grapeweb/



Content:

1 December 2017 (14)

- Vineyard Update from OARDC Wooster
- Vineyard Update from AARS Kingsville
- Avoid Costly Problems in the Spring by Proper Winterizing of Your Sprayer Now
- Vine & Wine News Additions to the Website "Buckeye Appellation"
- Upcoming Events
- Know Your Grape and Wine Experts





Vineyard Update from OARDC in Wooster:

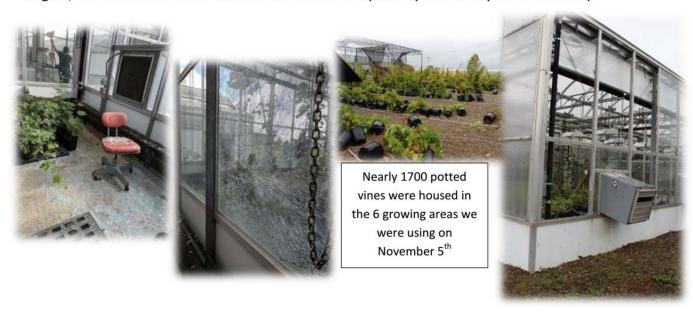
By Diane Kinney and Imed Dami, HCS-OSU (All photos were taken by Diane Kinney unless indicated otherwise)

Tornado: Déjà vu?

And here we go again. The evening of November 5th at roughly 6 p.m., winds in the neighborhood of 100 mph brought a small, EF-1 tornado which was about 50 yards wide and traveled on the ground for about a quarter of a mile through our Wooster campus. Oddly enough, it followed a familiar path blazed by a EF-2 tornado in September of 2010, just seven years ago. Fortunately, the damage incurred with this most recent event was to a much lesser degree. First and foremost, was the fact that everyone was safe. Unfortunately, the historic Barnhard Rice Homestead located in Secrest Arboretum suffered a second hit with roof damage (losing nearly half of the roof) resulting in extensive water damage from about 12 hours of rain before covering could be applied the following Monday morning.

On the main campus, the Horticulture and Crop Science greenhouses (which were replaced following the 2010 tornado) were once again directly in-line and took another hit from the high winds. A majority of the damage was in the form of broken glass and panels with little actual structural damage. Our group at the time had research in six greenhouses full of potted grapevines as well as an outside growing area and all areas sustained damage.

We were fortunate that most greenhouse projects had recently been completed with minimum research set back. With that being said, we were in a race against time and cold weather. Temperatures were predicted to drop below freezing during the night of November 8th (which was in fact true, see freeze note below) so having all of our vines exposed to the elements after having been pampered with perfect greenhouse temperatures, needed to find new homes and in a hurry. Complicating matters was the fact that no entrance was allowed in any greenhouses until they were cleared as structurally safe and insurance documentation was recorded. Finally receiving the all clear after the noon hour on Monday, we were in a race against time to have all the glass removed from pots and vines relocated before the deep freeze. With many hands of help, sore backs and cramping fingers, we succeeded in our mission and all was complete by end of day on Wednesday.







The historic Barnhart Rice
Homestead bore the brunt of
the EF-1 tornado that hit the
Wooster campus on the eve of
November 5th. Other
casualties on campus included
nearly 80 trees and corn crops.









Photo: Brian Hanna

Photo: Ken Chamberlain

Weather conditions:



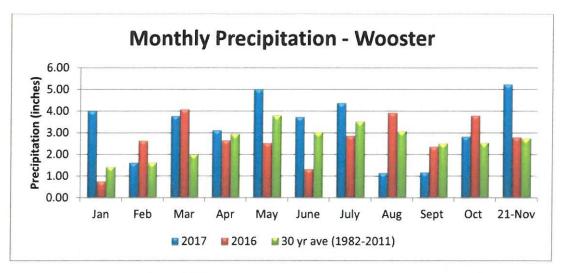
The morning of the 9th of November brought our first hard frost to the Wooster vineyard. Temperatures were below freezing for a significant amount of time. Our highest vineyard block (Block C-vinifera) recorded temperatures down to 31.0 °F while our lowest block (Block A – hybrids, ~10 ft lower in elevation) recorded

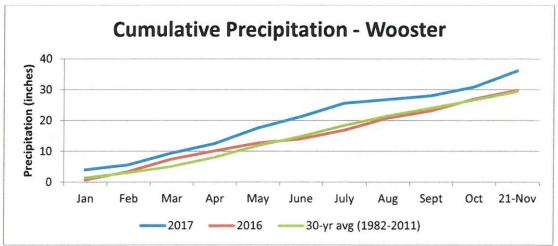
26.5 °F This cold trend continued for several days which resulted in complete leaf browning and leaf fall.





The rain in Wooster continues to be off the charts. On Saturday November 18th we received another 2.15" putting us at a current month total of 5.24", which puts the yearly cumulative precipitation over the 30-yr avg by a whopping 6.74" with one more month to go.





Cultural Practices:

Now is the time to prepare for the upcoming growing year. Our vines, having been hilled in September and October, are now ready for a well-earned rest following the hard frost which defoliated the vines. It is worth noting that the heavy rains we received recently did take a bit of a toll on soil hilling at times taking soil mounds down to at or near the graft unions. This could in turn cause problems later on into the winter especially if we don't receive snow cover to help with further insulation when deep freezes occur.





Hilled vineyard (Right) and close-up of soil mound around a grapevine (Left). The soil line is currently right at the graft union due to heavy rain.

AARS Vineyard Report

Andy Kirk, Research Specialist & Station Manager, Ashtabula Agricultural Research Station

December is nearly upon us, and the population of South Florida will soon swell with many Ohio viticulturists and winemakers looking to decompress after a long, but rewarding, 2017 season. At the research station, we finished harvesting on November 8th with Teroldego, Sangiovese and Petite Manseng being the last of our 29 grape varieties. The issue of stubbornly high titratable acidity has been discussed in previous issues, and was influential in our decision to let these varieties hang into November. While I do not wish to harp on this subject ad nauseum, I will note out of interest that we saw little improvement in the Titratable Acidity values of late varieties during these last few weeks of hang time.

If you are grappling with high Titratable Acidity in the winery, I do highly recommend reading Todd Steiner's "Acid Reduction Techniques in Must and Wine" article, published in the September edition of this newsletter.

In general, November has been cool and wet at AARS. GDD for the month have tracked lower than historical Novembers (Figure 1), and we've seen an extra two inches or so of precipitation (not pictured). That said, there has been ample opportunity to get into the vineyards to complete tasks such as hilling up and removal of netting. One thing I am observing, with our sandy soil, is that our hilling up tends to erode somewhat after a heavy rain or a melting of snow. Thanks to a suggestion from Yvonne Woodworth, Research Assistant at AARS, we will try a new strategy next year to alleviate this. The plan is to begin hilling up a few weeks earlier and then sow grass onto the mounds, to prevent erosion during the winter.

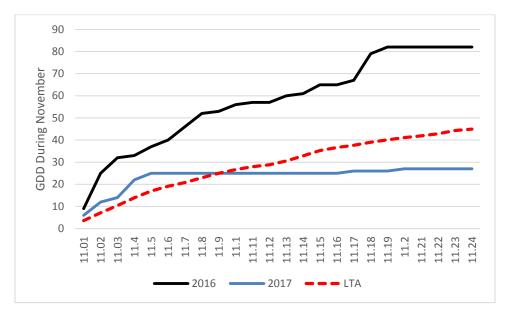


Figure 1: Historical GDD Accumulation in November

Also of interest, our first killing frost this autumn was the 9th of November, the first since the 23rd of March. That adds up to a 230 day frost-free season. In some publications (Jones 2004), this measure is used interchangeably with growing season length. My view is that the use of this number, in isolation, paints a distorted picture of the growing season along the Lake Erie shoreline. We experience many days in spring and fall where the highs are below 45, but the lake keeps our lows only slightly above freezing. This leads to the accumulation of frost free days, without an accumulation of GDD. This year alone, 40 of the 230 frost free days did not see GDD accumulation. In 2016, 37 days out of the 224 day "frost free period" did not result in the accumulation of GDD. Either way, in the spirit of the season, I am left feeling thankful for a vintage that was average in GDD (Figure 2), but excellent in quality.

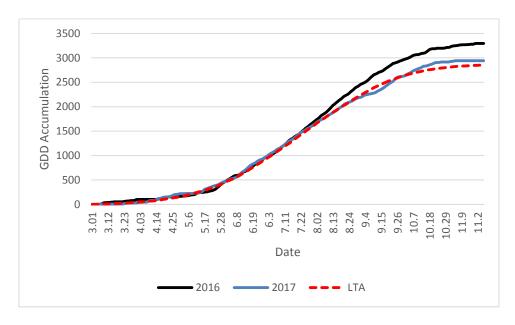


Figure 2: Growing Season GDD, 2017 and Historically.

References

Jones, G. V. (2004, June). Climate change in the western United States grape growing regions. In *VII International Symposium on Grapevine Physiology and Biotechnology* 689(pp. 41-60).

Avoid Costly Problems in the Spring by Proper Winterizing of Your Sprayer Now

Dr. Erdal Ozkan

Professor and Extension Agricultural Engineer
The Ohio State University
ozkan.2@osu.edu

It is very likely that you will not be using your sprayer again until next spring. If you want to avoid potential problems and save yourself from frustration and major headaches, you will be wise to give your sprayer a little bit of TLC (Tender Loving Care) these days. Yes this is still a busy time of the year for some of you, but don't delay winterizing your sprayer too long if you already have not done so. You don't want a pump that is cracked and/or not working at its full capacity because you did not properly winterize it before the temperature falls below freezing. Here are some important things you need to do with your sprayer this time of the year.

Rinsing

It is very likely that you did the right thing when you used the sprayer the last time: you rinsed the whole system (tank, hoses, filters, nozzles) thoroughly. If you did not, make sure this is done before storing the sprayer. A sprayer that is not rinsed thoroughly after each use, and especially after the spraying season is over, may lead to serious problems caused by cross-contamination of different products applied for different crops. Another problem that may result from lack of, or insufficient rinsing of the complete sprayer parts is clogged nozzles. Once the nozzles are clogged, it is extremely difficult to bring them back to their operating conditions when they were clean. Leaving chemical residues in nozzles will usually lead to changes in their flow rates, as well as in their spray patterns resulting in uneven distribution of chemicals on the target.

Depending on the tank, proper rinsing of the interior of the tank could be easy or challenging. It will be very easy if the tank is relatively new and is equipped with special rinsing nozzles and mechanism inside the tank. If this is not the case, manual rinsing of the tank interior is more difficult, and poses some safety problems such as inhaling fumes of leftover chemicals during the rinsing process. To avoid these problems, either replace the tank with one that has the interior rinse nozzles, or install an interior tank rinse system in your existing tank.

For effective rinsing of all the sprayer components, circulate clean water through the whole sprayer parts several minutes first with the nozzles off, then flush out the rinsate through the nozzles. Rinsing should be done preferably in the field, or on a concrete chemical mixing/loading pad with a sump to recover rinse water. Regardless, dispose of the rinsate according to what is recommended on the labels of the pesticides you have used. Always check the label for specific instructions. However, most labels recommend following procedure: If rinsing is done on a concrete rinse pad with a sump, put the rinsate collected in the sump back in the tank, dilute it with water and spray it in the field where there is no potential for the rinsate to reach ditches and other water bodies nearby. If the rinsing is done in the field, make sure you are not flushing out the rinsate in the system in one area. It is best to further dilute the rinse water in the tank and, spray it on the field on areas where there is no potential for the rinsate to reach ditches and other water bodies nearby.

Cleaning

Rinsing the system with water as explained above may not be sufficient to get rid of chemicals from the sprayer. This may lead to cross-contamination problems. Residues of some pesticides left in the sprayer may cause serious problems when a spray mixture containing these residual materials is applied on a crop that is highly sensitive to that pesticide. To avoid such problems, it is best to clean and rinse the entire spraying system with some sort of a cleaning solution. Usually a mixture of 1 to 100 of household ammonia to water should be adequate for cleaning the tank, but you may first need to clean the tank with a mixture containing detergent if tank was not cleaned weeks ago, right after the last spraying job was done. Some chemicals require specific rinsing solution. There is an excellent Extension Publication from University of

Missouri which lists many commonly used pesticides and the specific rinsing solutions required for them. It is available online. Check it out (http://extension.missouri.edu/p/G4852). However, you should always check the product label to find out the most recent recommendations on cleaning agents.

Cleaning the outside of the sprayer components deserves equal attention. Remove compacted deposits with a bristle brush. Then flush the exterior parts of the equipment with water. A high pressure washer can be used, if available. Wash the exterior of the equipment either in the field away from ditches and water sources nearby, or a specially constructed concrete rinse pad with a sump. Again, the rinsate should be disposed of according to the label recommendations. As I mentioned earlier, most labels recommends the same practice: put the rinsate collected in the sump back in the tank, dilute it with water and spray it in the field where there is no potential for the rinsate to reach ditches and other water bodies nearby.

Winterizing

Check one more time to make sure there is no liquid left inside any of the sprayer parts to prevent freezing. Especially the pump, the heart of a sprayer, requires special care. You don't want a pump that is cracked and/or not working at its full capacity because you did not properly winterize it before the temperature falls below freezing. After draining the water, add a small amount of oil, and rotate the pump four or five revolutions by hand to completely coat interior surfaces. Make sure that this oil is not going to damage rubber rollers in a roller pump or rubber parts in a diaphragm pump. Check the operator's manual. If oil is not recommended, pouring one tablespoon of radiator rust inhibitor in the inlet and outlet part of the pump also keeps the pump from corroding. Another alternative is to put automotive antifreeze with rust inhibitor in the pump and other sprayer parts. This also protects against corrosion and prevents freezing in case all the water is not drained. To prevent corrosion, remove nozzle tips and strainers, dry them, and store them in a dry place. Putting them in a can of light oil such as diesel fuel or kerosene is another option.

Storage

Find ways to protect your sprayer against the harmful effects of snow, rain, sun, and strong winds. Moisture in the air, whether from snow, rain, or soil, rusts metal parts of unprotected equipment of any kind. This is especially true for a sprayer, because there are all kinds of hoses, rubber gaskets and plastic pieces all around a sprayer. Yes, the sun usually helps reduce moisture in the air, but it also causes damage. Ultraviolet light softens and weakens rubber materials such as hoses and tires and degrades some tank materials. The best protection from the environment is to store sprayers in a dry building. Storing sprayers in a building also gives you a chance to work on them any time during the off-season regardless of weather. If storing in a building is not possible, provide some sort of cover. When storing trailer-type sprayers, put blocks under the frame or axle and reduce tire pressure during storage.

Finally, check the condition of all sprayer parts one more time before leaving the sprayer behind. Identify the parts that may need to be worked on, or replaced. Check the tank, and hoses to make sure there are no signs of cracks starting to take place. Check the painted parts of the sprayer for scratched spots. Touch up these areas with paint to eliminate corrosion. By the way, don't forget to cover openings so that birds don't make a nest somewhere in your sprayer, and insects, dirt, and other foreign material cannot get into the system.

Vine & Wine News @ Buckeye Appellation 2017

By: Diane Kinney and Imed Dami, HCS-OSU

Vine & Wine News continues to provide updates on grape growing and wine making in Ohio and elsewhere. These updates will be posted on the program website, *Buckeye Appellation* at: http://ohiograpeweb.cfaes.ohio-state.edu/. We would like to invite you to visit the website on a regular basis to help inform you of what our OSU Team has available to you through OGEN, TGE, research updates, events and news. Our hope is that it becomes a resource you look up periodically. So why not bookmark this site today?

In the month of November, we have posted the following:

Educational Materials:

- Ohio Grape Electronic Newsletter (OGEN) on homepage and tab (current issue).
- The Grape Exchange (TGE) on the homepage and tab (latest posting on Nov 16).
- 2017 Fruit Maturity (10) on the homepage and tab (Grape Growing).

News:

- November 13: This 8000-year-old jar holds traces of what may be Eurasia's oldest wine
- November 8: Changes Made to Rules on Applying Fertilizer
- November 2: <u>FY19-FY24 Extension and Research Prioritization Survey</u>
- October 27: Ohio Climbing Up in Wine Production

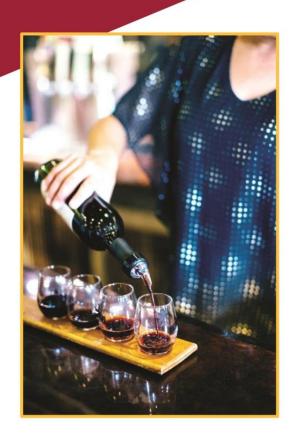
Upcoming Events:

- December 6: 2017 Post Fermentation Workshop: Lakehouse Winery
- December 12: 2017 Post Fermentation Workshop: Meranda-Nixon Winery
- December 14: Commercial Grape & Wine Workshop Back to Basics
- January 9: 2017 Post Fermentation Workshop: Indian Bear Winery
- January 16: 2017 Post Fermentation Workshop: Vermillion Valley Vineyards
- February 19-20: 2018 Ohio Grape and Wine Conference

Miscellaneous:

- Homepage Slide: 2018 Ohio Grape & Wine Conference Registration Materials
- Homepage Slide: <u>2017 Fruit Maturity</u> at OSU-Wooster and AARS-Kingsville

2018 Ohio Grape and Wine Conference





Registration Information



February 19-20, 2018 Embassy Suites Columbus-Dublin 5100 Upper Metro Place Dublin, Ohio 43017

The 2018 Ohio Grape and Wine Conference Overview

The Ohio Grape & Wine Conference (OGWC) will take place on February 19-20, 2018, at the Embassy Suites – Dublin/Columbus. The conference is jointly organized by the Ohio Grape Industries Committee (OGIC), Ohio State University Extension, Department of Horticulture and Crop Science Viticulture and Enology Programs at OSU-OARDC and the Ohio Wine Producers Association (OWPA). The 2018 conference consists of both general and concurrent sessions covering a wide range of relevant topics for grape growers and winemakers. We are pleased to announce our featured speakers in both enology and viticulture with Dr. Markus Keller, Professor of Viticulture at Washington State University; Dr. Misha Kwasniewski, Assistant Research Professor and Enology Program Leader at the University of Missouri; and Lee Lutes, Head Winemaker, Black Star Farms, Suttons Bay, Michigan. Monday morning will begin with a half-day, crash course on topics covering best production practices in the vineyard and winery. Topics will be presented in concurrent sessions in both viticulture and enology for experienced producers and beginners. The conference will formally open Monday afternoon with a welcome followed by presentations from our featured speakers and industry updates in the general session. Tuesday will consist of full-day, concurrent sessions with technical presentations in both viticulture and enology.

Our featured speakers will cover the following topics:

- ✓ Dr. Misha Kwasniewski: Monday General Session Dr. Kwasniewski will present on snake oil or alchemy techniques to salvage a vintage. Tuesday Concurrent Sessions Dr. Kwasniewski will cover his recent work identifying the current status of wine quality in Missouri wines through an analysis survey of industry wines and providing areas of needed improvement where we can all benefit from the results
- ✓ Lee Lutes: Monday General Session Mr. Lutes will cover an important topic in providing authenticity of the Michigan grape and wine industry in addition to providing ways to improve industry perception and quality. Tuesday Concurrent Sessions Mr. Lutes will present important enological information such as Flash Detente from Black Star Farms to coincide with a tasting.
- ✓ Dr. Markus Keller: Monday General Session and Tuesday Concurrent Sessions Dr. Keller will be presenting on fruit ripening and explain the nuts and bolts involved in this very important component of grape and wine production. He will also clarify or dispel the myth of "hang time" based on recent research findings and will describe the different types of berry shrivel and why they take place. In addition, Dr. Keller will share how growers cope with cold damage in Washington State and what methods of protection they deploy. Finally, he will share how his program at Washington State University has addressed this issue.

In addition to our featured speakers above, our in-state specialists from OSU/OARDC will also present valuable information and research updates in viticulture covering: disease, insect and weed management and impact of viticultural practices on vine health and fruit quality. Topics covered in the enology concurrent session include a special regulatory update and in-depth question and answer period with the Ohio Division of Liquor Control, wine filtration, a commercial winemakers' panel discussing winery sanitation practices and several other topics covering critical cellar applications and processing techniques in the winery,

*Topics scheduled subject to change without notice

*Final program agenda will be sent early in the New Year!

Additional Highlights of the 2018 Conference:

- ✓ A mixture of topics for both new and advanced grape growers and wine producers.
- ✓ We are currently working with the Ohio Department of Agriculture (ODA) to obtain pesticide recertification credits for educational sessions involving disease, weed and insect management.
- ✓ Full 2-day registration at a low rate of \$210, with a discounted rate provided for more than 2 individuals attending from one establishment or family. Full registration includes access to the Monday morning's concurrent viticulture and enology workshop, all technical sessions and trade show. Social events and meals are also included: Monday buffet lunch; Ohio wine reception, and banquet on Monday evening; and buffet lunch on Tuesday. You are also entitled to a conference packet and flash drive with Power Point presentations provided at registration.
 - One flash drive per registered winery/vineyard/family.
- Special passes are also available for better accessibility and flexibility of the conference to attendees. Passes include: viticulture or enology workshop pass; one-day conference pass; complimentary student registration (not including meals and flash drive) and conference pass with meal options.
- ✓ An expanded two-day trade show with both vineyard and winery equipment and services
- ✓ Technical session format: In addition to the special Monday morning viticulture and enology concurrent sessions, there will be general and additional concurrent sessions all day Tuesday in both viticulture and enology which allow more choices for attendees.
- Special events include: Ohio commercial wines featured at the Ohio Wine Reception, "OQW" and/or 2017 Director's Choice award-winning wines paired with mouthwatering entrees at the Monday evening banquet and select Ohio Wine Competition medal award-winners at the Tuesday buffet lunch.
- After banquet social providing a good place and time to socialize and network with members of the Ohio grape and wine industry.

Join us and experience the 2018 OGWC. We hope to see you there!

Sincerely

OGWC Planning Group - Ohio Grape Industries Committee; Department of Horticulture & Crop Science, The Ohio State University; OSU Extension/OARDC, The Ohio State University; and Ohio Wine Producers Association









2018 Ohio Grape and Wine Conference Featured Speakers

Dr. Markus Keller, Professor of Viticulture, Washington State University



Dr. Markus Keller is the Chateau Ste. Michelle Distinguished Professor of Viticulture at Washington State University's Irrigated Agriculture Research and Extension Center in Prosser. Dr. Keller received his MS in plant science and PhD in natural science from the Swiss Federal Institute of Technology in Zürich. He has conducted viticulture research and taught in North and South America, as well as in Europe and Australia. Dr. Keller's research focuses on environmental factors and management practices as they influence crop physiology and production of wine and juice grapes. He is the author of the textbook "The Science of Grapevines – Anatomy and Physiology" and currently serves as the science editor for the two journals of the American Society for Enology and Viticulture.

Lee Lutes, Head Winemaker, Black Star Farms



Lee Lutes was an integral part of the development and construction of the Winery at Black Star Farms in 1998. Mr. Lutes is currently the head winemaker/general manager and oversees the winemaking operations for two processing facilities on the Leelanau and Old Mission Peninsulas. These facilities were developed separately and in 2007 expanded to specialize in separate red and white wine production. Mr. Lutes is also the director of the Black Star Farms distillation program that produces European-style fruit brandies and dessert wines. He is a proud, self-taught winemaker with 25 years of experience making wine and time spent studying in various regions around the world. Mr. Lutes served as an assistant winemaker at Abbazia di Valle Chiara in the Piedmont region of Northern Italy prior to moving back to his native Northern Michigan in 1993. He is a proud supporter of all things Michigan, and is most passionate about

the area's Rieslings and Pinot Noirs.

<u>Dr. Misha T. Kwasniewski, Assistant Research Professor and Enology Program Leader at the University of Missouri</u>



Dr. Misha T. Kwasniewski has been an Assistant Research Professor and Enology Program Leader at the University of Missouri since 2013. He grew up in a farming family in Western New York where he still has family involved in the Concord grape industry. Dr. Kwasniewski received a PhD in Food Science in 2013 and a BS in Viticulture and Enology in 2009, both from Cornell University. His research focuses on using analytical tools such as GC-MS and LC-MS to understand changes in metabolites, especially those important to flavor, that are impacted by decisions made in the vineyard, vinification or during storage. Dr. Kwasniewski currently collaborates with researchers across the U.S. and a paper he co-authored was awarded the American Journal of Enology and Viticulture Best Viticulture paper of 2014. He has taught several upper level winemaking and analysis courses as well as is involved with the direction of graduate projects based both in Food Science and Plant Science departments, involving the impacts of various viticultural interventions on plant metabolites, as well as finding winemaking solutions to minimize quality issues.

- ✓ Boehm Label
- ✓ Collinwood Grape Company
- ✓ Criveller
- ✓ GBS Corp
- ✓ George Ackerman
- ✓ Green Hoe
- ✓ JD Equipment
- ✓ Kent State University Ashtabula

- ✓ Misco
- ✓ Ohio Wine Producers Association
- ✓ Paul Hall & Associates
- ✓ Scott Laboratories
- ✓ Smith Leavitt Insurance Agency
- ✓ Spec Trellising
- ✓ The Ohio State University/OARDC
- ✓ Zenan USA

Lodging Information

Hotel reservations should be made directly with the hotel. Mention the "OGW" for special rate.

Embassy Suites Columbus-Dublin

5100 Upper Metro Place Dublin, Ohio 43017 (614) 790-9000

www.columbusdublin.embassysuites.com

On-Line Reservations:

http://embassysuites.hilton.com/en/es/groups/personalized/C/CMHESES-OGW-20180217/index.jhtml?WT.mc_id=POG

*90 rooms blocked for Sunday evening and 140 rooms blocked for Monday evening

Rate:

\$112 + tax (includes full hot and cold breakfast buffet, including a cooked-to-order omelet station and complimentary evening reception with light snacks and beverages of your choice.)

*cut-off date **January 27, 2018** by midnight or until the room block is sold out, whichever comes first, so be sure to make your reservations early to avoid not receiving the specified room rate

Driving Directions

From the North:

Take any major highway to I-270. Take I-270 West to US 33 E/OH-161 E towards Dublin. Turn right onto Frantz Road. Turn right onto Upper Metro Place. Hotel is located on the right.

From the West:

Take any major highway to I-70 East. Take I-270 North to US 33 E/OH-161 E towards Dublin. Turn right onto Frantz Road. Turn right onto Upper Metro Place. Hotel is located on the right.

From the East:

Take any major highway to I-70 West. Take I-70 West to I-270 North to US 33 E/OH-161 E towards Dublin. Turn right onto Frantz Road. Turn right onto Upper Metro Place. Hotel is located on the right.

From the South:

Take any major highway to I-71 North. Take I-71 North to I-270 West. Take I-270 West to US 33 E/OH-161 E towards Dublin. Turn right onto Frantz Road. Turn right onto Upper Metro Place. Hotel is located on the right.

2018 Ohio Grape and Wine Conference Registration

	Feb	ruary 1	9-20, 2018					
Name:			Company:	20.70		Page		
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Additional Registrants:			Like	Likely Track:		Enology \		ulture
Name:								
Name:								
Name: Each registrant has the option to choose full or partial regist the same parts of the conference.	ration for the	conference	e. Not all of a compa	any's registran	ts are requi	red to follow the	same pa	nth or atter
Full Registration: Includes access to all technical sessions an and Tuesday: Ohio wine reception and banquet are all include shared during the conference (one flash drive per winery/far	ded. Each regi	stering cor	events and meals (mpany will also rece	buffet lunch - ive a flash driv	Monday an e holding a	d Tuesday); aftern Ill of the Power Po	noon bre pint pres	eaks - Mond entations
Registration Type	Qua	ntity	Fee before or on January 26**			Fee after January 26		otal \$
Full Registration (first and second attendee)			\$210 Per Attendee		\$225 Per Attendee			
Full Registration (all attendees after company's second)	egistration (all attendees after company's second)		\$180 Per Attendee		\$195 Per Attendee			
Partial Registration: This type of registration allows you to o In order to receive meals and social event access, please rei				e. Partial regi	stration do	es not include me	eals or so	ocial events
Registration Type	Туре		Quantity Fee bef		re or on Fee afte y 26** January 2			Total \$
Special Monday Morning Workshop: Doesn't include buffet lunch				\$70		\$85		
Conference Pass: Includes entrance to all specialty, general and concurrent sessions and NO meals.				\$125		\$140		
One-Day Conference Pass: Same as Conference Pass registration, but only for one day of the conference. Excludes meals.		Mond		\$90	\$90		\$105	
Same Day Conference Pass: Purchasing the One-Day Conference Pass the day of the conference. Excludes meals.				N/A		\$115		20
Student Pass: Complimentary access to the conference. Excludes meals and flash drive.				N/A		N/A		
Meals: If purchasing partial registration, meals must a	lso be purch	ased sepa	rately. These ma y	y NOT be pu	rchased th	e day of the co	nferenc	ce.
Meals (Price is Per Attendee)			Quantity	Fee before or on January 26**		Fee after January 26		Total \$
Buffet Lunch (Monday)				\$2	8	\$35		
Ohio Wine Reception (Monday Evening)				Included Conference		Included for Conference Atte		
Banquet featuring Ohio Quality Wines and/or 2017 Director's Choice Award-Winners (Monday evening after Ohio Wine Reception)				\$7	5	\$85		
Breakfast Buffet (Tuesday Morning – if staying at hotel is already included in room rate)				\$1	8	\$23		
Trade Show Buffet Lunch Featuring Ohio Wines (Tuesday)				\$2	7	\$32		
Please indicate and describe special dietary needs here	e:							
Total Amount Enclosed for All Registration and Meals ^a							\$	
elect Form of Payment: □Check (made payable to Ohio credit Card Number: f credit card billing is different than address above, please	Verificat	ion Code:	Expir	lasterCard ation Date: _	□Visa	Questions: Contact: Ch Phone: 614 Fax: 614-46	nristy Ecl 1-728-64	

Zip: _

Please note, no refunds will be made after January 26, 2018

christy.eckstein@agri.ohio.gov

Return form & payment to: **Ohio Grape Industries Committee**

8995 East Main Street Reynoldsburg, OH 43068

^{**}Discount applies to all registrations postmarked on or before January 26, 2018

OHIO AGRICUTURAL RESEARCH AND DEVELOPMENT CENTER OHIO STATE UNIVERSITY EXTENSION

Commercial Grape & Wine Workshop ~ Back to Basics

Learn the "ABC's" of grape growing and winemaking!

Join us for an informative workshop to review the 2017 growing and harvest season, learn the "nuts and bolts" of grapevine winter protection techniques, gather information on pest management practices used at the Research and Demonstration Vineyards at OSU South Centers, learn the fundamentals of vineyard fertility management, and learn the winemaking "101" along with other key cellar practices, sensory evaluation skills, and laboratory procedures in producing quality wines.

Thursday,

December 14, 2017

9:30 a.m. — 3:30 p.m.

Hosted by Dr. Gary Gao, Todd Steiner, & Ryan Slaughter

Location: OSU South Centers 1864 Shyville Rd., Piketon, OH Large Auditorium, Research Building

Cost: \$25.00*

To Register:

Contact Charissa Gardner gardner.1148@osu.edu or at 740.289.2071 ext. 132

DEADLINE to Register:

Monday, December 11, 2017





Presentations will include:

- 2017 Growing & harvest season review
- Second Vineyard Management Practices
- Soil & Nutrient Analaysis & Fertility Management
- Winemaking "101" for both white and red wine production
- Blending to produce better wines (includes a tasting)
- A review of hyperoxidation in Riesling wine production
- Field tour of the new wine grape research plot under high tunnel
- And more!





CFAES provides research and related educational programs to clientele on a nondiscriminatory basis. For more information: http://go.osu.edu/cfaesdiversity

OSU Grape & Wine Research & Outreach Specialists

Please contact the following Research, Extension/Outreach Specialists and Educators if you have any questions relating to their respective field of expertise.

Contact Information							
Name & Address	Phone Email & Website		Area of Expertise & Assistance Provided				
Dr. Imed Dami, Professor & Viticulture State Specialist Dept. Of Horticulture & Crop Science 216 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3882	e-mail: dami.1@osu.edu Website: Buckeye Appellation	Viticulture research and statewide extension & outreach programs. Recommendation on variety selection. Imed is the primary research contact of the viticulture program.				
Dr. Doug Doohan, Professor Dept. Of Horticulture & Crop Science 205 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-202-3593	Email: Doohan.1@osu.edu Website: OARDC Weed Lab	Vineyard weeds and control. Recommendation on herbicides.				
Dr. Gary Gao , Small Fruit Specialist and Associate Professor, OSU South Centers 1864 Shyville Rd, Piketon, OH 45661 OSU main campus, Rm 256B, Howlett Hall, 2001 Fyffe Ct Columbus, OH	740-289-2071 Ext. 123 Fax: 740-289- 4591	Email: gao.2@cfaes.osu.edu Website: OSU South Centers	Viticulture Research and Outreach, VEAP visits in southern Ohio, vineyard management practices, soil fertility and plant nutrition, fruit quality improvement, variety evaluation, table and wine grape production.				
Dr. Melanie Lewis Ivey, Assist. Professor Dept. of Plant Pathology 224 Selby Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3849 330-465-0309	Email: ivey.14@osu.edu Website: OSU Fruit Pathology Facebook: OSU Fruit Pathology	Grape Diseases Diagnostics and Management. Recommendation on grape fungicides and biocontrols. Good Agricultural Practices and Food Safety Recommendations.				
Andrew Kirk, AARS Station Manager Ashtabula Agricultural Research Station 2625 South Ridge Road Kingsville, OH 44048	330-263-3881	Email: Kirk.197@osu.edu Website: OSU Branch Campus	Wine grape production in Northeast OH, especially vinifera varieties				
Dr. Elizabeth Long, Assist. Professor OSU/OARDC Entomologist 105 Thorne Hall 1680 Madison Avenue Wooster, OH 44691	330-263-3725	Email: long.1542@osu.edu	Fruit and vegetable insects.				
David Marrison, County Extension Director, Assoc. Professor & Extension Educator OSU Extension – Ashtabula County 39 Wall Street Jefferson, OH 44047	440-576-9008 Ext. 106	Email: Marrison.2@osu.edu Website: Ashtabula OSU	Vineyard and winery economics, estate planning and extension programs in Northeast Ohio.				

Contact Information							
Name & Address	Phone	Email & Website	Area of Expertise & Assistance Provided				
Dr. Erdal Ozkan, Professor & Extension State Specialist Food, Agriculture & Biological Engineering Dept, OSU 590 Woody Hayes Drive Columbus, OH 43210	614-292-3006	Email: ozkan.2@osu.edu	Pesticide application technology, Sprayer calibration				
Patrick Pierquet, Dept. Of Horticulture & Crop Science 130 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3879	Email: Pierquet.1@osu.edu	Wine Cellar Master – OSU Micro-vinification, sensory evaluation and laboratory analysis				
Todd Steiner, Enology Program Manager & Outreach Specialist Dept. Of Horticulture & Crop Science 118 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3881	Email: Steiner.4@osu.edu Website: Buckeye Appellation	Commercial wine production, sensory evaluation, laboratory analysis/setup and winery establishment. Todd is the primary research and extension contact of the enology program.				
Dr. Celeste Welty OSU main campus Department of Entomology Columbus, OH	614-292-2803	Email: Welty.1@osu.edu	Fruit and vegetable insects				