

# Ohio Grape-Wine Electronic Newsletter

Edited by: Dr. Maria Smith

August | 2018



*'Regent' at 100% Veraison Photo credit: Imed Dami, OARDC, Wooster, OH, 18 Aug 2018*

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## OGEN is back with a new format

After a July absence, OGEN is back with new content, a new format, and a new editor!

Timely viticulture and enology (V&E) content as well as updates within the V&E research program will continue to be provided in a monthly format. However, changes are planned for the coming year.

Keep subscribed to stay up-to-date on the latest happenings from OSU V&E!



# Welcome the new OGEN editor!

## Responsibilities and Contact information

*As the viticulture outreach specialist, Maria will be responsible for overseeing grower outreach for viticulture at OSU. Checkout some of her responsibilities below:*

- Primary contact for the viticulture extension and outreach
- Editor for the Ohio Grape and Wine Electronic Newsletter
- Publisher for The Grape Exchange (TGE) and Job Board
- Basic information on grape production, cultural practices, vineyard troubleshooting, and problem diagnosis
- Technical assistance to Ohio growers, vineyard visits, and site assessments

Your feedback is invaluable to the guidance of future viticulture and enology research and extension at OSU. Be on the lookout for surveys from both viticulture and enology regarding producer practices and improvements to OGEN and The Grape Exchange (TGE).

### Contact information:

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Office phone: 330-263-3825

## Maria Smith joins the OSU viticulture and enology team as the viticulture outreach specialist beginning August 13, 2018

Read her greetings to you and her bio. below!

It is a pleasure to introduce myself. My name is Maria, and I am originally from the small coastal town of Poquoson, VA. I completed my B.S. in biology with minors in chemistry and Spanish from Virginia Commonwealth University in 2009 and moved north to Ithaca, NY for my M.S. in horticulture at Cornell University, where I worked on ecophysiology of native and invasive woody ornamental plants until 2012. In 2014, I settled right in the middle of NY and VA in State College, PA to attend Penn State University for a Ph.D. in viticulture. At Penn State, I worked with Dr. Michela Centinari in a collaborative effort with grower-cooperators and Penn State Extension on research related to cold stress in *Vitis vinifera* and *Vitis* hybrids. That research included investigating early leaf removal for crop load management and effects on overwintering vine health and wine quality, as well as variety response and recovery to post-budburst freeze injury. I have additionally contributed to other Penn State research on spring frost avoidance and tolerance strategies and their impacts on wine quality and consumer sensory. Along with research, I took an active role as a student contributor for Penn State Extension, producing online content, assisting with workshops, and providing seminars for PA's annual industry conferences. I am thrilled to join the viticulture and enology team at The Ohio State University and look forward to serving the Ohio industry!



*Dr. Maria Smith, OSU viticulture outreach specialist.  
Photo credit: Imed Dami, OARDC-Wooster, August 31, 2018*

# OARDC-Wooster August Vineyard update

By: Diane Kinney and Imed Dami, HCS-OSU

*Table 1 2018 veraison dates and corresponding growing degree days (GDD) of varieties grown at the research vineyard in Wooster.*

Variety	Date 50% Veraison	GDD (1 Jan to Veraison)	GDD (1 Apr to Veraison)
Arandell	5-Aug	1971	1937
Aromella	5-Aug	1971	1937
Cabernet franc	14-Aug	2110	2077
Chambourcin	14-Aug	2110	2077
Chardonnay	8-Aug	2036	2003
Frontenac	1-Aug	1887	1854
Frontenac gris	1-Aug	1887	1854
La Crescent	1-Aug	1887	1854
Marquette	30-Jul	1846	1813
Riesling	10-Aug	2072	2039
Traminette	14-Aug	2110	2077

## Grape Phenology:

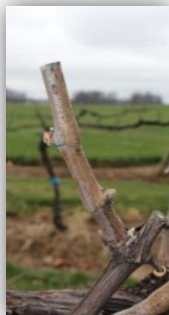
In Wooster, all varieties completed veraison by August 14 (Table 1, above). We have begun berry sampling to monitor fruit ripening. As in previous years, weekly fruit ripening of some varieties will be shared with OGEN subscribers, with the first posting sent this week. Even though veraison dates are ahead of 2017 by 1 to 4 days this year (2018), fruit ripening indicated by sugars, pH, and acid is happening really fast. The unusual heat in August led to rapid drop of juice total acids, which is completely the opposite to the acid situation that remained high in August of 2017.

It is likely that many varieties, especially the early ones, will be picked earlier in 2018 than previous years. ***So, be ready for an early harvest.***

# OARDC-Wooster (continued)



*Cab franc*  
29 Mar 2018



*Cab franc*  
28 Apr 2018



*Cab franc*  
29 May 2018



*Cab franc*  
27 Jun 2018



*Cab franc*  
30 Jul 2018



*Cab franc*  
28 Aug 2018



**Figure 1** 2018  
phenology progression  
of Cabernet Franc.  
Photo credit: Diane  
Kinney

## Weather Conditions:

*See next page for figures*

In Wooster, the weather station broke down in August, so the weather report is updated through the month of July. July was considered normal in the amount of rain at 4.1". With that being said, we still are considerably ahead of the long term average (25.41" vs 18.45"). We are also falling in the normal range when looking at temperatures for both the month and cumulative annual. It is when evaluating GDD that we see a loss for the month, but we still maintain higher cumulative numbers on the year of just over 100 units (GDD = 1907 as of 29 July). We hope to see a drier trend for the final ripening of our grapes in the coming months. If current weather conditions continue, we could anticipate seeing an earlier harvest than 2017.

## Cultural Practices:

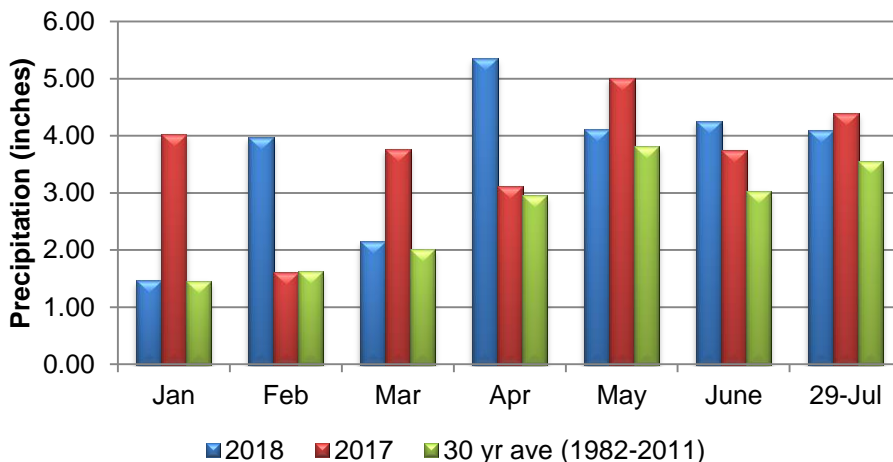
Fortunately, we did not have much damage due to Japanese Beetles in our vineyard this year. This was due to the fact we were able to maintain a tight spray schedule. We have seen a small amount of downy mildew infection, especially in susceptible varieties of vinifera. But, the spread has been contained. We completed cluster thinning and leaf pulling practices by the end of July. Final hedging and netting of vines was completed by mid-August. Fortunately, we were able to get ahead of the birds so as not to incur losses similar to last year at this point. We have recently begun berry sampling for fruit maturity and weekly updates will be posted on the Buckeye Appellation website as well as in weekly special announcements to our OGEN members as in previous years. Despite winter bud damage in vinifera varieties, our adjusted pruning seem to have worked very well. We even had to cluster thin with varieties that sustained nearly 50% bud damage. We have a very nice crop (finally!) of fruit hanging for harvest this year in Wooster.



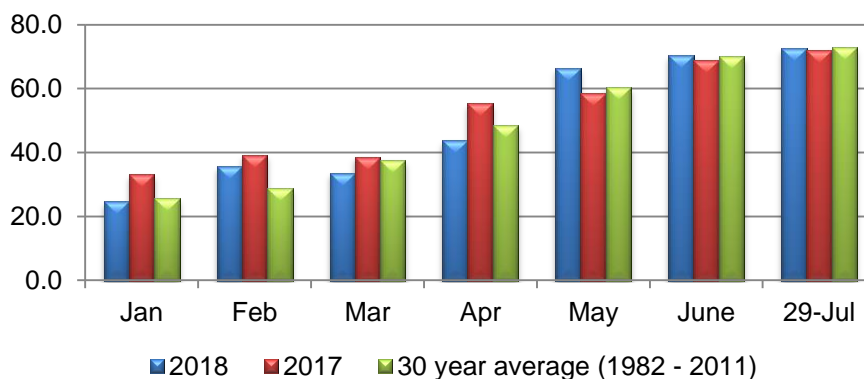
# OARDC-Wooster (continued)

## Weather conditions at OARDC-Wooster through July 2018

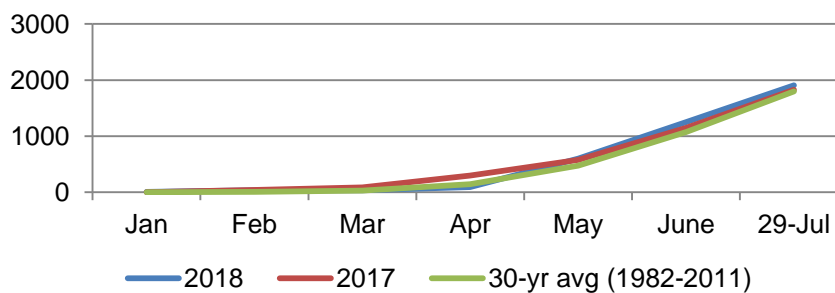
### Monthly Precipitation - Wooster



### Monthly Mean Temperature (F) - Wooster



### Cumulative growing degree days (GDD, Base 50F) - Wooster



# Ashtabula Agricultural Research Station (AARS) Updates

By: Andy Kirk, AARS-OSU

One theme during August was the onset of favorable conditions for disease development. I visited 9 vineyards locally in August. Almost all had some amount of downy mildew. Most of our growers have the situation sufficiently under control, and are taking measures to remediate the outbreak, or at least control it. Many of the infections I saw were high up in the canopy on new growth. One takeaway, personally, I had from this observation was that it is well worth the extra few minutes to re-position your nozzles when you are jumping on the sprayer for your late July and early August cover sprays. By that time, the canopy is reaching near peak height and it can be a challenge to achieve adequate spray coverage, depending on your sprayer. Whereas lower leaves have been sprayed 6 to 10 times by then, new foliage at the peak of your canopy has not and is at risk of infection.

The other main scenario for infection I observed was when the canopy had escaped or exceeded the height of the VSP trellis and thus was drooping down into the row. Downy Mildew infections depend on leaf wetness. Any conditions in your vineyard that slow the rate of drying in your canopy should be considered a risk factor for infection. In Germany (1) and Brazil (2), VSP systems have been linked to relatively lower incidence of downy mildew, which in those instances was attributed to the reduced leaf wetness. In our case, we were a little late to arrive to our second hedging, which created optimal infection conditions, even within our VSP trellising systems.

To achieve control of the downy mildew outbreak, many individuals I spoke to were using systemic fungicides such as Revus Top or Phostrol, often alternating between the two. **Please note that it is possible to burn your foliage with either of these products, depending on tank mix partners, varietal sensitivity (to Revus Top), and application rate.** On a side note, I have also seen a limited amount of powdery mildew in local vineyards, including our own in Kingsville. Please see the 2018 edition of Dr. Melanie Lewis Ivey and Rachel Medina's "Developing an effective fungicide spray program for grapes in Ohio" for a full list of preventative and post-infection products for both Downy and Powdery Mildew. **Watch your Pre-Harvest Intervals**, particularly the 14 days for Revus Top.

## August 2018 fruit maturity for AARS

It is sometimes said there is an eye of the storm in the frantic pace of the grape growing season. Usually this theoretical lull falls in August here in Northeast Ohio. This year "the storm" has kept its pace right through August, in more ways than one. At AARS, I am projecting a slightly early harvest this year, although a lot could change in September. Last year, we were on track for a very late harvest and then had a string of 90 degree days in September that got us back on schedule. Here are our numbers for Pinot Noir and Regent, as of August 27th, 2018.

*Table 1 Fruit maturity as of August 27, 2018 for Pinot Noir and Regent*

Variety	Brix	pH	TA (g/L)
Pinot Noir	16.5	3.18	11.75
Regent	17.0	3.15	10.35

According to the NEWA DMCast, our weather station at AARS observed downy mildew infection period conditions on a daily basis from 8/17/18 to 8/21/18.

To access a NEWA pest & disease forecast for your nearest location, visit "[www.newa.cornell.edu](http://www.newa.cornell.edu)" and click on "OH" under "station pages".

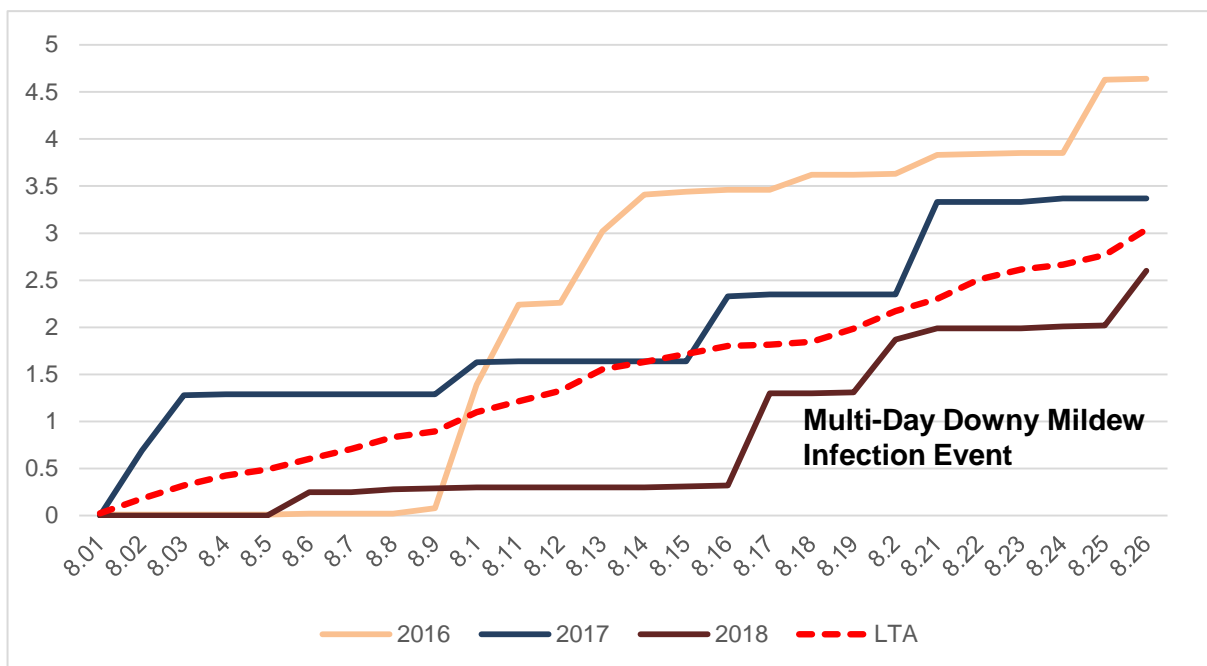


Figure 1 August precipitation at AARS

## AARS (continued)



### Downy Mildew Identification Basics

- ❖ Oily yellow spots on the upper surface of the leaf.
- ❖ On the under side of the leaf, you will typically observe scaly, white growth in a patchy pattern.
- ❖ Lesions change in color throughout the course of the infection and treatment regimen.

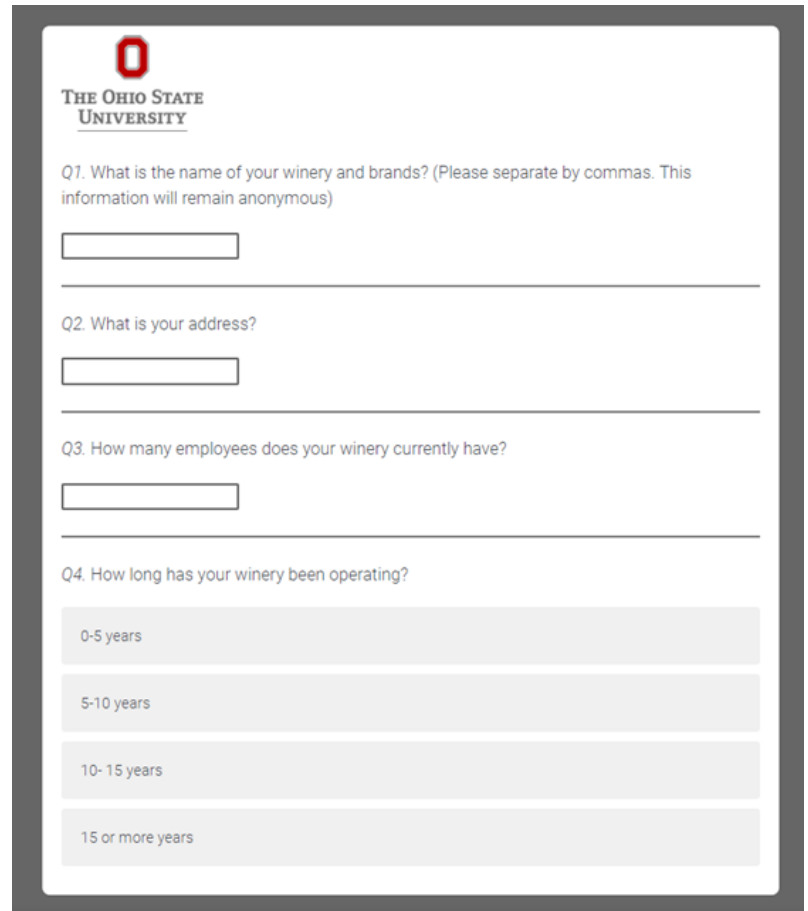
### References

1. Kraus, C., Pennington, T., Herzog, K., Hecht, A., Fischer, M., Voegelé, R. T., ... & Kicherer, A. (2018). Effects of canopy architecture and microclimate on grapevine health in two training systems. *Vitis*, 57(2), 53-60.
2. de Bem, B. P., Bogo, A., Everhart, S., Casa, R. T., Gonçalves, M. J., Marcon Filho, J. L., & da Cunha, I. C. (2015). Effect of Y-trellis and vertical shoot positioning training systems on downy mildew and botrytis bunch rot of grape in highlands of southern Brazil. *Scientia Horticulturae*, 185, 162-166.

# Enology updates!

By: Lisa Robbins and Todd Steiner, HCS-OSU

The number of Ohio wineries (A2-permit holders) is constantly growing! The Ohio Division of Liquor Control currently reports approximately 300 wineries. With this in mind, we are in need of updating our records and statistics for our industry! We are working in collaboration with OGIC to develop a better grasp of total wine production and fruit sourcing used across the state and also provide an update of current cellar practices being performed. Therefore, The Ohio State University Enology Program is in the process of putting together a survey for Ohio winemakers to complete. This survey may likely influence future OSU enology research and extension projects with the ultimate goal of increasing wine quality and consistency throughout the state. All information completed in the survey will remain completely confidential. We appreciate your willingness to complete the survey in a timely and honest fashion in helping us derive a sound appreciation of our current industry status.



The screenshot shows a survey form titled "THE OHIO STATE UNIVERSITY". It contains four questions:

- Q1. What is the name of your winery and brands? (Please separate by commas. This information will remain anonymous) - Input field.
- Q2. What is your address? - Input field.
- Q3. How many employees does your winery currently have? - Input field.
- Q4. How long has your winery been operating? - Radio button options: 0-5 years, 5-10 years, 10-15 years, 15 or more years.

2018 sample survey questions. Photo credit: Dr. Lisa Robbins,

**All wineries: keep an eye out for the survey coming your way within the next few months!**



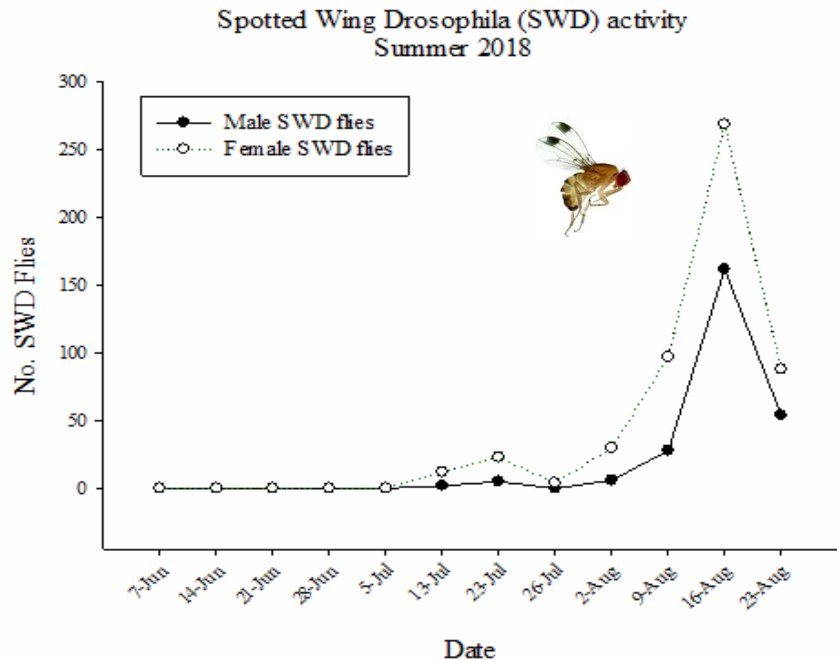
# Update on grape insect pests

By: Elizabeth Long, OARDC Entomology



SWD

**IMPORTANT:** The number of adult flies in the trap does not indicate the level of infestation in fruit. As the season progresses and fruit becomes ripe, the best way to determine SWD larval infestation is using a saltwater test. See OSU's Integrated Pest Management (IPM) Program YouTube station for a helpful video on how to conduct the saltwater test: <https://www.youtube.com/watch?v=MtMXHxqcSVs>



## Brown Marmorated Stink Bug (Photo: bottom right)

This is the first year that Dr. Long's team has monitored BMSB at the OARDC research vineyard in Wooster, OH (Wayne County). Monitoring BMSB at the Ashtabula Agricultural Research Station (AARS) in 2017 revealed very low levels of BMSB activity in the vineyard. Current 2018 results in Wayne County reflect similarly low levels of activity. Weekly monitoring at OARDC began June 14, 2018 and will continue through September of this year.

BMSB has been detected across a growing number of Ohio counties since 2008, however their numbers vary considerably with location and crop. With regard to grapes, BMSB may cause damage by feeding directly on the cluster stem (rachis) or on berries. Feeding injury to the clusters can cause berry drop, or soft and discolored berries. There is some evidence that BMSB feeding may increase incidence of sour rot and facilitate SWD infestation in thin-skinned grape varieties.

The image below shows the current trap used to monitor BMSB. It consists of a clear sticky panel with two pheromone lures hanging from the bottom corners. Adults are attracted to the odors from the lures and when they fly to the trap and land, they are trapped on the panel. **To date, the highest weekly BMSB trap capture is 7 adults. The total number of BMSB captured so far this season is 24 adults.**



BMSB

## Spotted Wing Drosophila (Figure: top)

SWD is a problematic pest late in the season, particularly in grapes because these are one of the few small fruits available to SWD as the summer ends. Unlike common vinegar flies, female SWD can cut the skin of grapes to deposit eggs, which further develop into larvae that are visible in the fruit. Egg-laying damage can contribute to pathogen infections that reduce the quality of grape berries and juice, and of course no one wants to see larvae in fruit they plan to eat!

Weekly SWD monitoring began on May 31, 2018. **To date, SWD trap numbers are lower this year than last.** At this time last year, we were seeing SWD numbers in the 600-700 range. The graph below shows the number of male and female SWD flies captured from two baited traps at the OARDC research vineyard in Wooster, OH (Wayne County).



An odor-baited BMSB trap at the OARDC research vineyard in Wooster, OH. Photo credit: E. Long.

# The “Intelligent Sprayer”: A one-of-a-kind sprayer that can reduce pesticide consumption in vineyards

By: Erdal Ozkan, FABE-OSU

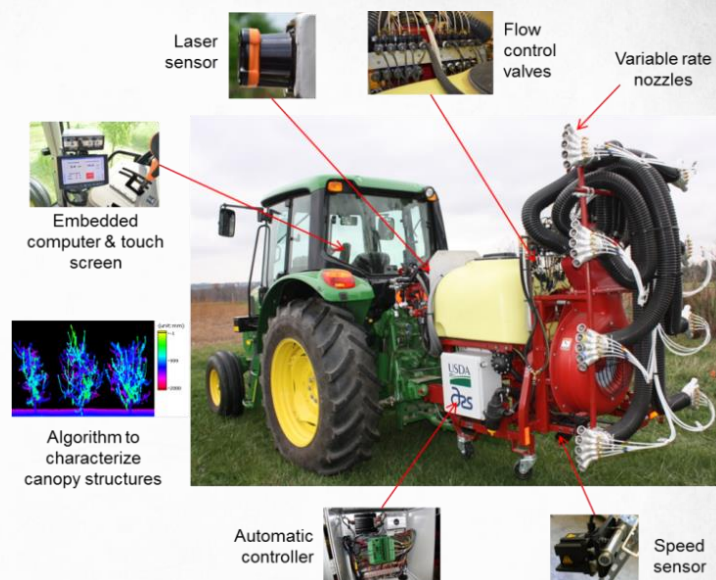
Conventional sprayers used in vineyards and other specialty crop production may waste a minimum of 30% of the pesticide sprayed during continuous spraying. Pesticide waste in the vineyard may occur from numerous sources of variability, including gaps between plants and differences in canopy density throughout the growing season. Conventional sprayers do not take into account variability in target conditions, continuing to spray a fixed amount of pesticide per acre. The excess pesticide discharge not only increases the risk of environmental air and water pollution, but also creates an economic loss to growers. Due to the potential problems caused by conventional sprayer nozzles, the research team collaboration between OSU (CFAES) and USDA-ARS designed and field-tested an automated variable-rate precision sprayer that can recognize the gaps between targets, delivers pesticides to exactly where the target is, and varies the application rate according to target size, shape, and foliage density with minimum operator involvement. (Continued next page)



**Figure 1** Intelligent sprayer in vineyard row. Photo credit: Dr. Heping Zhu

## What makes this sprayer “intelligent”?

The components that make this sprayer “intelligent” include: a high-speed laser scanning sensor, a travel speed sensor, a sophisticated automatic nozzle flow rate controller, an embedded computer, a touch screen, a control switch box, and 40 variable-rate nozzles on two sides of the sprayer. The laser sensor detects the target and provides data for the computer to process and eventually make assessments about vine canopy conditions using an algorithm developed in-house by the design team. The algorithm also determines the optimum amount of spray to be discharged from each one of the 40 nozzles independently according to the foliage conditions at their designated canopy sections. The touch screen monitor in the cab displays the sprayer travel speed, total discharged spray volume, spray width, and the number of active nozzles. Operators, if needed can modify spray parameters on the touch screen, and by using a set of toggle switches can choose sprayer outputs from one or both sides of the sprayer, or they can turn the intelligent mode on or off.



**Figure 2** Intelligent sprayer and components. Photo credit: Dr. Heping Zhu

When the intelligent sprayer is used in a situation like the one shown in the picture below, it is very likely that only the bottom 5 nozzles on the left side will be activated to spray; while all 20 nozzles on the right side, aligned with a taller canopy will be activated to spray.





**Figure 3** The “intelligent sprayer”, developed and tested by a team of researchers from USDA-ARS (Wooster Ohio) and OSU College of Food, Agricultural, and Environmental Sciences (CFAES). The team is led by Dr. Heping Zhu (Ag. Engineer, USDA-ARS) and supported by a number of technicians, students, and international scientists both from USDA-ARS and OSU. Photo credit: Dr. Heping Zhu.

# “Intelligent Sprayer” (continued)

## Does the intelligent sprayer really work?

Field experiments conducted in an Apple orchard at the Ohio Agricultural Research and Development Center (OARDC) Horticulture farm in Wooster show promising results in terms of providing uniform spray coverage on targets and reducing spray losses in the air and on the ground compared to a conventional sprayer. The intelligent sprayer reduced airborne spray drift by up to 87%, and reduced spray loss on the ground by 68% to 93% compared to a conventional sprayer. The results would likely be somewhat similar if tests were conducted in a vineyard.

Although these are impressive numbers, confirming savings in pesticide cost and reduced spraying time, the success of the intelligent sprayer will eventually lie in its reliable performance over a long period of use operating under varying spray application conditions, and providing satisfactory pest control. To address these two concerns, the intelligent sprayer has been tested for pest control efficacy and for its reliability and durability in 2017 and 2018 growing seasons in two wineries: a winery in Napa Valley, California and Klingshirm Winery in Avon Lake, OH. The intelligent sprayers used at these sites were operated by the growers with technical support from the development team. At this point, growers seem satisfied with the efficacy of the intelligent sprayer without finding the sprayer operation too difficult.

## What kind of savings do we get with an intelligent sprayer?

With intelligence sprayers, we have seen reductions in three areas: 1) amount of spray mixture needed per acre of vineyard; 2) pesticide loss through air or ground; and 3) more than 50% reductions in amount and cost of pesticides applied per acre compared to pesticide consumption by conventional sprayers. All of these reductions were realized by the growers, while achieving at least the same level of efficacy obtained with their conventional sprayers.

In addition to direct cost savings, there are some indirect cost savings associated with using the intelligent sprayer. For example, the intelligent sprayer will save growers' time by requiring fewer spray tank refills due to lower spray use *versus* a conventional sprayer over the same area. This allows growers to cover more acres per tankful compared to the area sprayed with a conventional sprayer. Under some severe insect infestation situations, this added spraying time may be even more important than the actual dollars saved as a result of reduced pesticide use.

**The “intelligent sprayer” makes split-second decisions on-the-go, while travelling at speeds up to 5 miles/hr.**

## Results of Sprayer Trial

Reduced airborne spray drift up to 87% and loss on the ground by 68-93% compared to conventional sprayer in orchard trial,

2017 and 2018 vineyard trials in Napa Valley, CA and Avon Lake, OH show satisfactory pest control and ease of operation by growers

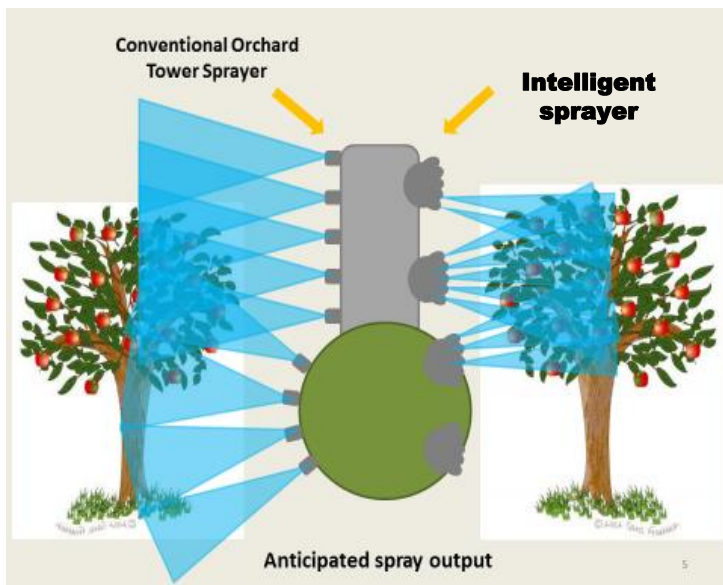


# “Intelligent sprayer” (continued)

## What is next for the intelligent sprayer project?

The initial objective of the team who contributed to this project was to design and develop one type of intelligent sprayer and test its performance in a variety of application conditions. This has been accomplished.

The intelligent sprayer research team's new objective is to explore ways to make the intelligent sprayer concept an affordable option to growers who do not want to give up their older but functional conventional sprayer. To meet this objective, the intelligent sprayer design team has developed a kit that can be retrofitted on almost any conventional orchard sprayer that specialty crop and fruit growers use today.



Intelligent sprayer concept. Photo credit: Yu Chen, OSU

## When is this technology going to be commercially available?

With its unique design, the intelligent sprayer is the first functioning automatic spraying system of its kind in the world. Not only has the intelligent sprayer proven its potential to positively impact the economic wellbeing of specialty crop and fruit growers in terms of reduced pesticide cost and time savings, but it also protects the environment from potential pollution resulting from excessive use of pesticides.

The intelligent sprayer has already won two design awards: a national award by The American Society of Agricultural and Biological Engineers, and the 2018 Innovator of the Year award from CFAES.

Several sprayer manufacturers have visited the intelligent sprayer development site and have expressed enthusiasm for the technology and their interest in adapting this new technology to their sprayer designs. Smart Guided Systems, LLC in Indiana already established plans to commercialize the intelligent sprayer technology available for growers in 2019. Detailed information can be found in this company's website (<https://www.smartguided.com/>).

Erdal Ozkan, Professor and Extension Ag Engineer, can be reached at 614-292-3006, or [ozkan.2@osu.edu](mailto:ozkan.2@osu.edu).

Growers who want to participate in efficacy testing and evaluation of the intelligent sprayer, and the manufacturers interested in exploring ways to produce sprayers with intelligent features should contact **Dr. Heping Zhu**, the project team leader. (email: [Heping.Zhu@ARS.USDA.GOV](mailto:Heping.Zhu@ARS.USDA.GOV))

# Wines and Vines News @ Buckeye Appellation | 2018

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* (BA) 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 months of July and August, we have posted the following updates. Simply click on the blue link and the desired document will automatically open.

## **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 August 28).

## **News:**

- ❖ [Fruit Maturity](#) at the OSU-Wooster and AARS-Kingsville
- ❖ [OSU Viticulture Program Wins National Award](#)
- ❖ [Three New I-Corps Teams from CFAES](#)

## Wines and Vines News @ Buckeye Appellation | 2018

The 2018 grape bid is now open for excess research wine grapes. Please follow the instructions and form for submission on Pages 15-16.

# Save the Date!



**2019 Ohio Grape & Wine Conference**  
February 18-19, 2019  
Embassy Suites Columbus/Dublin  
5100 Upper Metro Place  
Dublin, OH 43017





**Procedure for sale of excess grapes from  
The Ohio State University  
College of Food, Agricultural, and Environmental Sciences - August 2018**

Grapes produced at The Ohio State University's research vineyards are grown to support research programs for the benefit of Ohio's grape and wine industries. Excess grapes that are not used for experimental purposes will be offered for sale on a competitive bid basis. The College of Food, Agricultural, and Environmental Sciences (CFAES) has established a procedure for sale of excess grapes to provide a fair and equitable process for sale.

**NOTE: Grapes will only be available in years when excess research product is available and not used in research projects.**

Proceeds from the sale of grapes will be used to support OARDC grape research activities. Bidders must submit their proposal on the attached form to:

OSU Wooster Campus  
Fiscal Office  
1680 Madison Avenue, Wooster, OH 44691

Deadline for receipt of bids is **5:00 p.m. Friday, September 7, 2018**. Bids will be tabulated by Fiscal Office personnel on the following work day during regular business hours.

**Terms:**

1. The amounts indicated are estimates of grapes available. OSU has first priority for use of grapes for research purposes, and reserves the right to change amounts offered for sale up to the date of harvest.
  2. OSU will offer only grapes that are of acceptable quality and produced from standard commercial practices.
  3. Grapes offered for bid will be divided into lots by variety and location with a minimum established bid price. Bidders may bid on any amount up to the maximum available per lot. The goal is to offer grapes for sale openly to multiple buyers.
  4. Awarded bidders must pick up grapes within 48 hours of harvest notification during regular business hours established by the location where they are produced. OSU will notify awarded bidders of harvest date with 24 hours' notice. See bid form for contact information at Wooster Campus Horticulture Unit 2 and Ashtabula Ag Research Station-Kingsville.
- ❖ OSU may provide cold storage of grapes until pick up if there is sufficient cold storage space available at the vineyard location, but will not provide delivery nor arrange or cover costs of transportation.
  - ❖ Grapes will be harvested into OSU containers, but buyers must transfer grapes to their own containers when picked up. OSU will not provide pallets or other special packaging materials.
  - ❖ Buyers shall coordinate loading requirements with OSU farm managers where grapes are produced, and OSU makes no guarantee of assistance or availability of equipment to load grapes.
  - ❖ Buyers who fail to pick up grapes at the arranged location and time, will automatically forfeit their purchase, and OSU will reserve the right to offer grapes to a local buyer at the established minimum bid price.
  - ❖ OSU reserves the right to sell non-bid grapes to buyers of its choosing only at the established minimum bid price.



# BID FORM 2018

Bids for purchase of Grapes from The Ohio State University's Wooster Campus and Ashtabula Ag Research Station

**DEADLINE: 5:00 PM, Friday, September 7, 2018**

## Instructions:

Bidders shall submit their bid for grapes (price per pound) and the amount they are interested in up to the amount available. For questions: Contact Lisa Simpson 330-263-3939

Bids shall be submitted via fax or US mail to:

The Ohio State University Wooster Campus Fiscal Office

1680 Madison Avenue

Wooster, OH 44691

Fax: 330-263-3713

Ashtabula Agricultural Research Station – Kingsville, Ohio															
	Variety-Lot	Estimated Available (lbs)	Minimum Bid Price (\$/lb)	Bid Price (\$/lb)	Pounds Desired										
<b>Vineyard Blocks</b>															
	Cabernet franc – Systems & Clones	5390	\$0.80												
	Gruener Veltliner	1230	\$0.80												
	Pinot noir	1090	\$1.00												
	Pinot gris	1970	\$0.80												
	Regent	950	\$0.80												
<b>Miscellaneous Lots</b>															
	Auxerrois	310	\$0.80												
	Arandell (NY-95)	400	\$0.70												
	Concord	910	\$0.20												
	Seedless Concord	300	\$0.30												
	Frontenac	300	\$0.50												
	Jupiter	140	\$0.50												
	Siegeerrebe VT	210	\$0.50												
	Vanessa	230	\$0.50												
	Chambourcin	666	\$0.70												
	Frontenac Gris	150	\$0.50												
	Traminette	1025	\$0.70												
<b>Specifications</b> Most varieties trained to VSP training system. Crop adjustments were made to Vinifera and hybrid wine-grape varieties as follows: For shoots longer than 24" -> leave 2 clusters For shoots between 12" and 24" -> 1 cluster For shoots less than 12" -> no clusters Leaf removal in all varieties on shaded side of row. Shoot positioning for all wine grape varieties. Hedging done as applicable.															
<b>Vineyard Location Contacts:</b> <table border="0"> <tr> <td>Ashtabula Agricultural Research Station (Kingsville)</td> <td>OARDC Horticulture Unit 2</td> </tr> <tr> <td>Andrew Kirk, Research Specialist</td> <td>Becky Colon, Assistant Manager- Fruit Crops</td> </tr> <tr> <td>2625 South Ridge Road E., P.O. Box 467</td> <td>5082 Oil City Road</td> </tr> <tr> <td>Kingsville, OH 44048</td> <td>Wooster, OH 44691</td> </tr> <tr> <td>440-224-0273</td> <td>330-263-3712</td> </tr> </table>						Ashtabula Agricultural Research Station (Kingsville)	OARDC Horticulture Unit 2	Andrew Kirk, Research Specialist	Becky Colon, Assistant Manager- Fruit Crops	2625 South Ridge Road E., P.O. Box 467	5082 Oil City Road	Kingsville, OH 44048	Wooster, OH 44691	440-224-0273	330-263-3712
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# THE OHIO STATE UNIVERSITY

COLLEGE OF FOOD, AGRICULTURAL,  
AND ENVIRONMENTAL SCIENCES

Name & Address	Phone	Email & Website	Area of Expertise & Assistance Provided
<b>Dr. Imed Dami, Professor &amp; Viticulture State Specialist</b> Dept. Of Horticulture & Crop Science 216 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3882	e-mail: <a href="mailto:dami.1@osu.edu">dami.1@osu.edu</a> Website: <a href="http://BuckeyeAppellation.com">Buckeye Appellation</a>	Viticulture research and statewide extension & outreach programs.
<b>Dr. Doug Doohan, Professor</b> <b>Dept. Of Horticulture &amp; Crop Science</b> <b>116 Gourley Hall – OARDC</b> <b>1680 Madison Avenue</b> <b>Wooster, OH 44691</b>	330-202-3593	Email: <a href="mailto:Doohan.1@osu.edu">Doohan.1@osu.edu</a> Website: <a href="http://OARDCWeedLab.com">OARDC Weed Lab</a>	Vineyard weeds and control. Recommendation on herbicides.
<b>Dr. Gary Gao, Small Fruit Specialist and Associate Professor</b> , 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: <a href="mailto:gao.2@osu.edu">gao.2@osu.edu</a> Website: <a href="http://OSUSouthCenters.com">OSU South Centers</a>	Viticulture Research and Outreach in southern Ohio
<b>Dr. Melanie Lewis Ivey, Assist. Professor</b> Dept. of Plant Pathology 224 Selby Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3849 330-465-0309	Email: <a href="mailto:ivey.14@osu.edu">ivey.14@osu.edu</a> Website: <a href="http://OSUFruitPathology.com">OSU Fruit Pathology</a>	Grape Diseases Diagnostics and Management. Recommendation on grape fungicides and biocontrols. Good Agricultural Practices and Food Safety Recommendations.
<b>Diane Kinney, Research Assistant</b> Dept. Of Horticulture & Crop Science 218 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3814	Email: <a href="mailto:kinney.63@osu.edu">kinney.63@osu.edu</a> Website: <a href="http://BuckeyeAppellation.com">Buckeye Appellation</a>	Vineyard and Lab Manager – Viticulture Program. Website manager for Buckeye Appellation website.
<b>Andrew Kirk, AARS Station Manager</b> Ashtabula Agricultural Research Station 2625 South Ridge Road Kingsville, OH 44048	440-224-0273	Email: <a href="mailto:Kirk.197@osu.edu">Kirk.197@osu.edu</a>	Viticulture Research and Outreach in northeastern Ohio.
<b>Dr. Elizabeth Long, Assist. Professor</b> OSU/OARDC Entomologist 105 Thorne Hall 1680 Madison Avenue Wooster, OH 44691	330-263-3725	Email: <a href="mailto:long.1541@osu.edu">long.1541@osu.edu</a>	Fruit and vegetable insects.
<b>Dr. Erdal Ozkan, Professor &amp; Extension State Specialist</b> Food, Agriculture & Biological Engineering Dept, OSU 590 Woody Hayes Drive Columbus, OH 43210	614-292-3006	Email: <a href="mailto:ozkan.2@osu.edu">ozkan.2@osu.edu</a>	Pesticide application technology, Sprayer calibration
<b>Patrick Pierquet, Research Associate</b> Dept. Of Horticulture & Crop Science 220 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3879	Email: <a href="mailto:Pierquet.1@osu.edu">Pierquet.1@osu.edu</a>	Wine Cellar Master Enology research, micro-vinification, sensory evaluation, and laboratory analysis
<b>Dr. Lisa Robbins, Research Assistant</b> Dept. of Horticulture & Crop Science 218 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330- 202-3543	Email: <a href="mailto:Robbins.210@osu.edu">Robbins.210@osu.edu</a>	Cellar assistant Enology research, sensory evaluation, and laboratory analysis
<b>Dr. Maria Smith, Viticulture Outreach Specialist</b> Dept. of Horticulture & Crop Science 205 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3825	Email: <a href="mailto:Smith.12720@osu.edu">Smith.12720@osu.edu</a> Website: <a href="http://BuckeyeAppellation.com">Buckeye Appellation</a>	Evaluation of site suitability for vineyard establishment and all aspects of commercial grape production. Primary contact for Viticulture Extension and Outreach.
<b>Todd Steiner, Enology Program Manager &amp; Outreach Specialist</b> Dept. Of Horticulture & Crop Science 118 Gourley Hall – OARDC 1680 Madison Avenue Wooster, OH 44691	330-263-3881	Email: <a href="mailto:Steiner.4@osu.edu">Steiner.4@osu.edu</a> Website: <a href="http://BuckeyeAppellation.com">Buckeye Appellation</a>	Commercial wine production, sensory evaluation, laboratory analysis/setup and winery establishment. Todd is the primary research and extension contact of the enology program.

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