CFAES

OHIO GRAPE-WINE ELECTRONIC NEWSLETTER

Edited by: Dr. Maria Smith

June / 2019

Photo: Darbee Rhamy, performing traditional post-fruit set leaf removal in June 2019 (Photo by Diane Kinney)

IN THIS ISSUE:

High rainfall in June

While most of the state has seen below average June temperatures, rainfall has been high, with anywhere between 1 to 5 inches above average. This rainfall has continued to make disease pressure high, particularly for black rot and downy mildew, through critical infections periods during bloom and early fruit set.

As we approach mid-season, the vineyard agenda marches onward: crop estimation, traditional post-fruit set leaf removal, hedging/skirting, and continued scouting and management of pests and disease. If you have questions on mid-season vineyard management, please make sure to contact us!

-Maria and the V&E Team

OARDC-Wooster June Vineyard Update

By: Diane Kinney and Dr. Imed Dami, HCS-OSU (Photos by Diane Kinney)

Grape phenology:

In Wooster, all varieties completed bloom by the week of June 16th (**Table 1**). By the end of June, Cabernet franc (see photos below) has reached past fruit set. Overall, bloom dates occurred 2 to 10 days later in 2019 than in 2018.

Table 1: 2019 bloom dates and corresponding growing degree days (GDD) of varieties grown at the research vineyard in Wooster, OH.

Variety	50% Bloom	GDD 1 Jan - bloom	GDD 1 Apr - bloom
Arandell	13-Jun	685	670
Aromella	11-Jun	665	649
Cabernet franc	4-Jun	548	533
Chambourcin	11-Jun	665	649
Chardonnay	14-Jun	696	681
Frontenac	2-Jun	533	518
Frontenac gris	2-Jun	533	518
La Crescent	2-Jun	533	518
Marquette	3-Jun	538	523
Riesling	16-Jun	730	715

Phenology progression of Cabernet franc (Photos left and center show year-over-year comparison of phenological stage at the same date)

Cab franc (25 Apr 2018)

Cab franc (25 Apr 2019)

Cab franc (30 May 2019)

OARDC-Wooster June (continued)

Phenology progression of Cabernet franc (June 2019)

Cab franc (27 Jun 2019)

Weather Conditions:

In Wooster, June precipitation (through the 27th) was 6.66"; Five of those fell within a 10-day period between the 10th and 20th of the month. This corresponds to double the 30-yr average and a yearly cumulative of 21.94" (or >7" above average). This oddly coincides with almost the same volume as last year. Temperatures were slightly below the typical June numbers at 66 oF. As a result, June GDD (416) are below the long-term average (599). Cumulatively, we are 152 GDD units below the 30-yr average and nearly 330 units behind 2018 at this time of year. However, warmer temperatures have finally arrived and 125 GDD have been accumulated in the past 7 days.

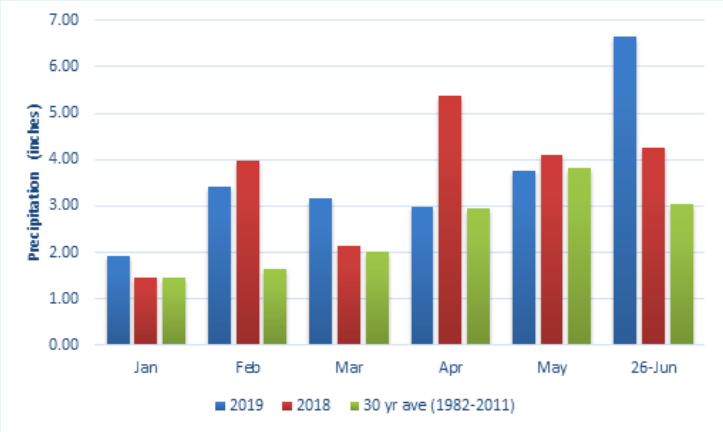

Figure 1. Monthly mean precipitation for Wooster, OH

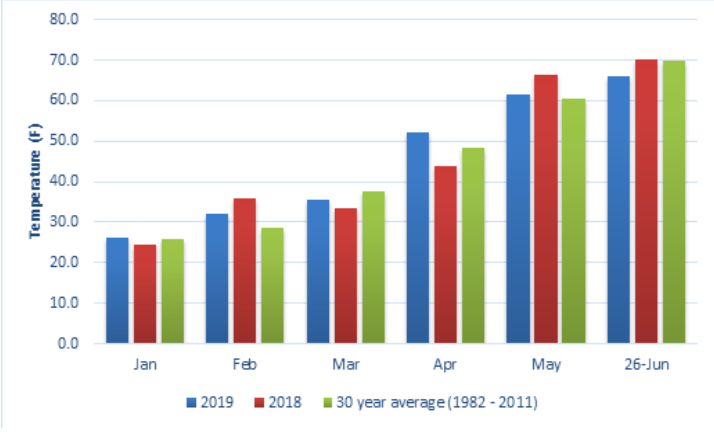

Figure 2. Monthly mean temperature for Wooster, OH

OARDC-Wooster June (continued)

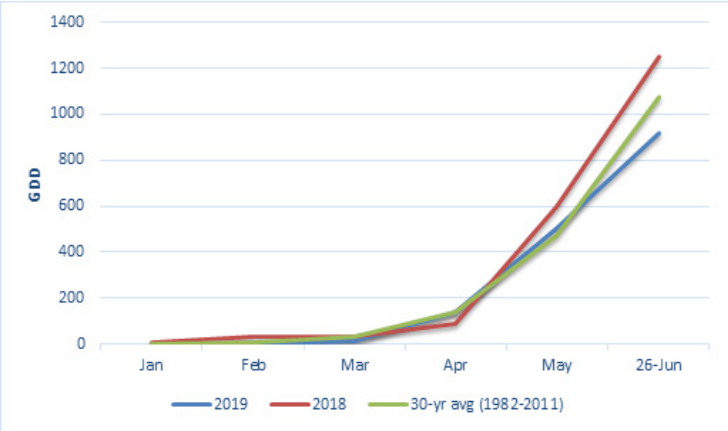

Figure 3. Cumulative GDD for Wooster, OH

Cultural Practices:

Due to significant winter bud damage, fruit set was very low in cold sensitive varieties of *Vitis vinifera*. This meant vine management had to be adjusted, especially canopy management.

After pruning adjustment in March and April, we have completed a couple of rounds of shoot suckering, shoot positioning and tucking of vinifera trained on VSP. It is generally recommended that leaf pulling be conducted between post-fruit set to pea-or marble size, but before veraison. In our vineyard, we leaf pull on the cool side of canopy in white varieties; we pull leaves on both sides of canopy in red varieties. This of course is merely a general guideline to follow; variety, vine, vigor, weather, fruit exposure, heat/sunlight intensity, wine style, all enter into consideration of how many leaves (or none) to remove. We will soon estimate crop and may drop clusters in some varieties. Please watch the newly –released video by our program on canopy management at this link: https://ohiograpeweb.cfaes.ohio-state.edu/video

The first sight of Japanese beetles (JB) occurred last Friday, June 28. Make sure you watch for JB and spray vines timely especially young vines, which are the most susceptible. We are at our 5th spray of fungicides/insecticides and vines look clean and healthy thus far. Information on management of insects and diseases can be found at the following links:

- 2019 Developing a Grape Fungicide Program Guide:
- Midwest Fruit Pest Management Guide 2019-2020:

Join Jeff Copeland, owner of Summer Song Vineyard, Dr. Maria Smith, OSU Viticulture Outreach Specialist, and members of the OSU enology team for a vineyard tour and discussion of grape production, disease and winter injury management, and best practices for producing quality wine. Cost of the event is $10 per person and includes dinner. Pre-registration is required—register by July 30th by contacting OSU Extension, Jefferson County at 740-264-2212 or email lyon.194@osu.edu.

Location: 46375 Old Hopedale Road, Cadiz, OH 43953 **Cost:** $10 per person

Details: Register by July 30th **Contact information:** Erika Lyon
740-264-2212 (phone) lyon.194@osu.edu (email)

NAME:_____ PHONE:_____ $10 x ____ ATTENDING

AMOUNT ENCLOSED_____

Sign up for the ANR Extension Connection Newsletter? (circle one) Y / N
If so, please list your email or address:

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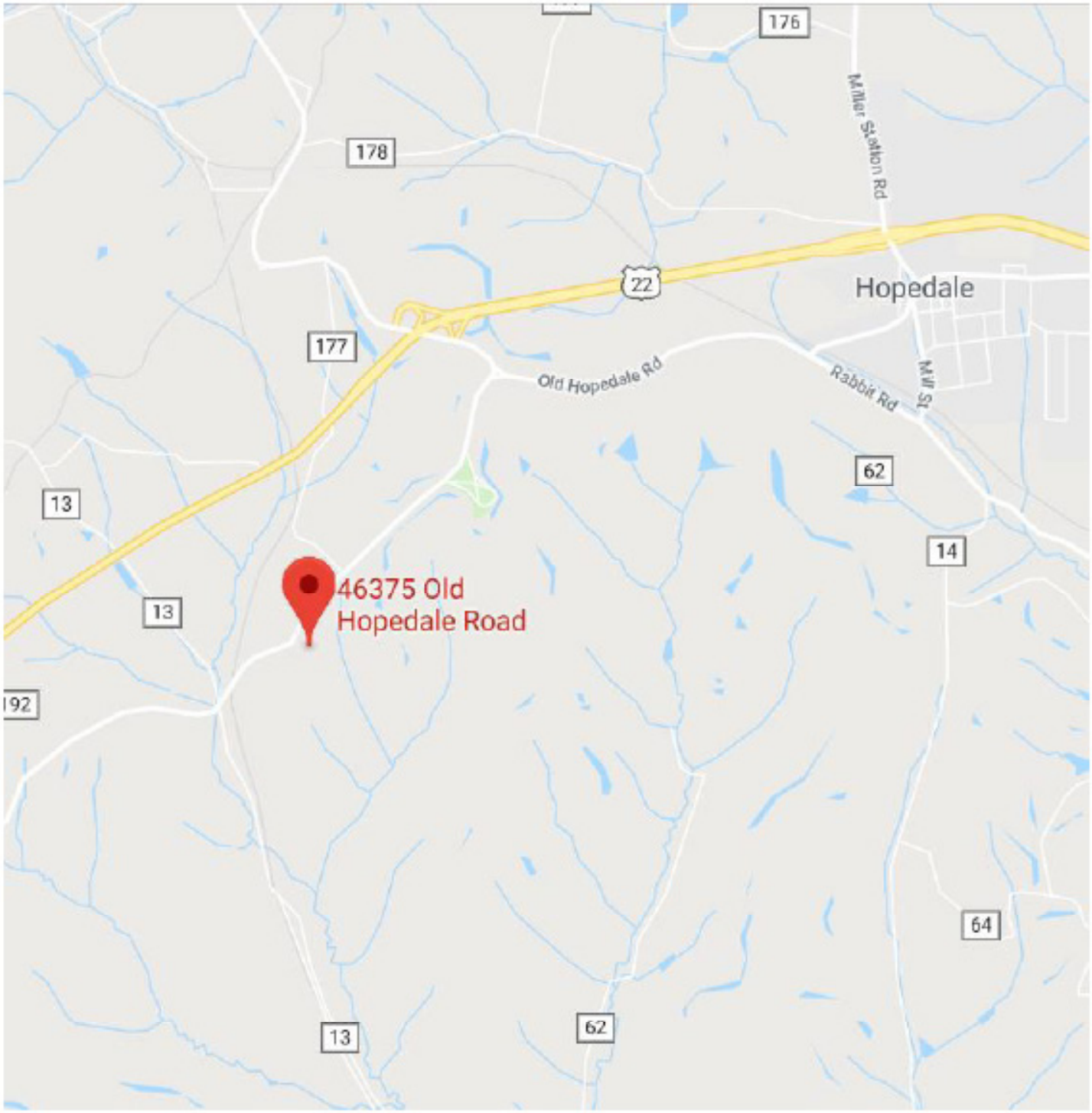


Driving from Steubenville: Head west on Route 22 towards Cadiz, take the exit for OH-151 W (Jewett/Scio). Turn left at the stop sign, then turn left onto Old Hopedale Road. Drive one mile on Old Hopedale Road – destination will be on the left.

Driving from Cadiz: Head east on Route 22 towards Steubenville, turn right onto County Road 13/Unionvale-Kenwood Road/Upper Clearfork Road. Turn left at the stop sign, then turn left onto Old Hopedale Road – destination will be on the right.

DIGITAL VITICULTURE Nelson J.Shaulis Symposium

New Tools for Precision Management

AMERICAN SOCIETY FOR ENOLOGY AND VITICULTURE
Eastern Section

Hobart and William Smith Colleges, Geneva, NY

July 16-18, 2019

Shaulis Symposium at ASEV-ES focuses on Digital Viticulture.

Contact: Tim Martinson tem2@cornell.edu 315-787-2448

Geneva, NY. A special vineyard tour and symposium entitled "Digital Viticulture: New Tools for Precision Management" will be featured as part of the annual American Society for Viticulture and Enology- Eastern Section (ASEV-ES) conference at Hobart and William Smith Colleges in Geneva, NY on July 16 through July 18.

Nelson Shaulis

The two-day program and vineyard tour will bring together suppliers, researchers, and growers to explore the tools and concepts of precision viticulture. New technologies, such as inexpensive sensors, digital imaging, geographical information systems, and precision machinery are converging to make precision viticulture possible. This field tour and symposium will focus on tools, concepts, and platforms for putting it all together to manage vineyards.

"Nelson Shaulis and others developed principles of vine physiology that form the basis of modern viticulture over the past 50 years", said Tim Martinson, Senior extension associate with Cornell University. "Yet growers have lacked the tools to apply these principles on a vine by vine basis until now. New precision ag technologies are finally making it possible to vary management within a vineyard to achieve management goals."

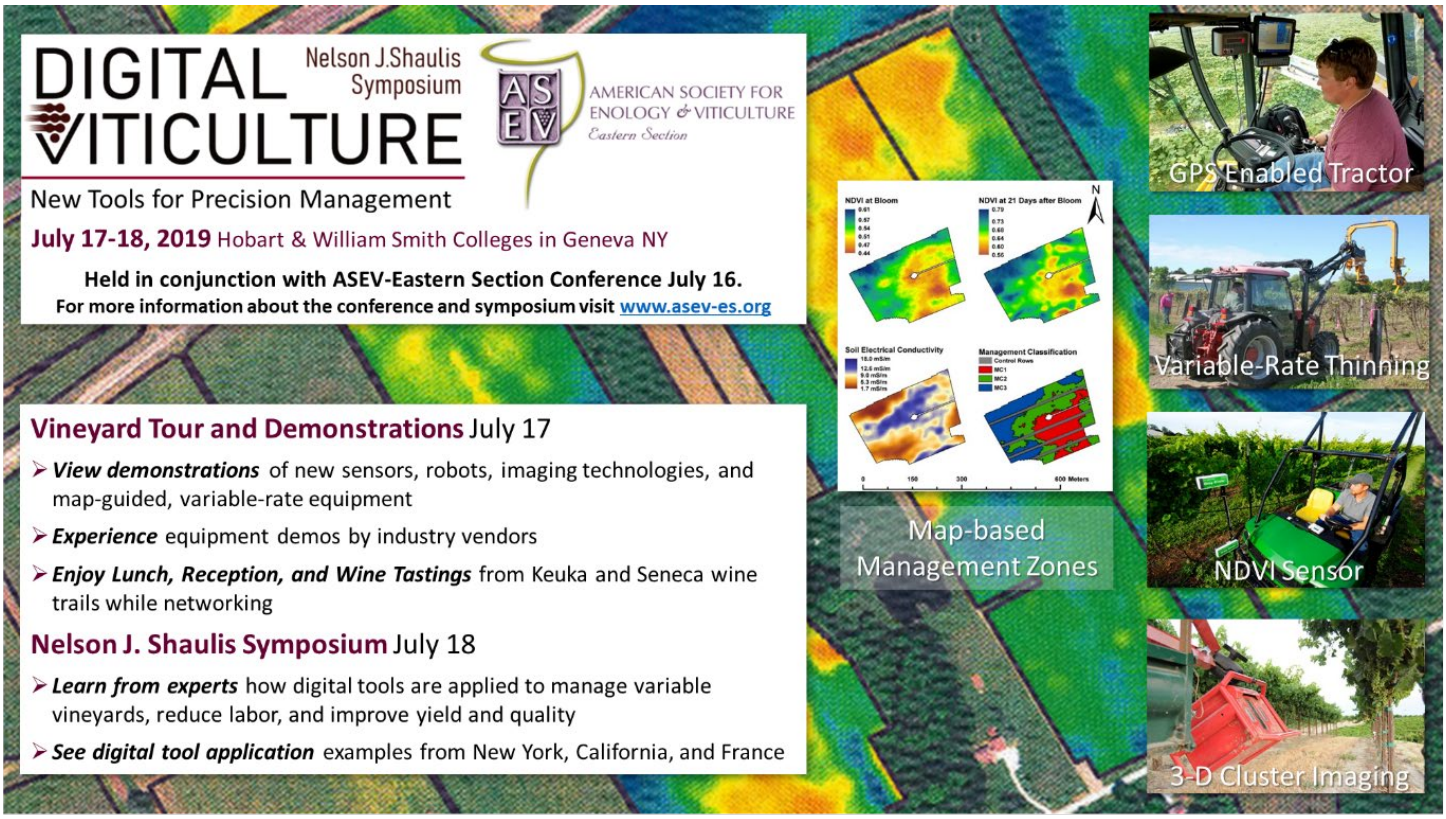
The ASEV-ES conference, featuring presentations on enology and viticulture from students and researchers of the Eastern Section, will take place on Tuesday, July 16. The conference includes lunch and Wines of the East reception.

The vineyard tour and demonstrations on Wednesday, July 17 will include variable-rate shoot thinning, mechanical crop estimation, yield monitors, sensors for measuring soil and canopy characteristics, UAV and tractor-mounted imaging systems, and tools for canopy management. The tour includes lunch and reception featuring regional wines.

The Shaulis Symposium on July 18 will focus on applying viticultural principles to address within-vineyard variability. Four sessions will cover the three-step process of implementing precision management: Measure, Model, and Manage. The symposium will include lunch and reception.

- Session 1: Physiology of vine balance and precision viticulture
- Session 2: Metrics for management: Sensors, drones, satellites, and analytical equipment
- Session 3: Models for management: Translating data to practical tools for deciding 'what I need to do and where'.
- Session 4: Examples of applied digital viticulture.

Registration options for each day are available. Conference, Vineyard Tour, and Symposium information is available at www.asev-es.org .



Dr. Nelson Shaulis and others developed principles of vine physiology that form the basis of modern viticulture. Yet growers have lacked the tools to apply these principles on a vine-by-vine basis to manage variable vineyards.

New technologies such as inexpensive sensors, digital imaging, geographical information systems, and precision machinery are converging to make precision viticulture possible. This field tour and symposium will focus on tools, concepts, and platforms for putting it all together for managing vineyards.

July 17 Field Day and Vineyard Tour: Demonstrations of *sensors, mapping technology, and variable-rate GIS-ready equipment* for vineyard management. Tour includes lunch and wine reception featuring regional wines.

- Morning: Clearview Vineyards, Branchport, NY. *Focus on spatial crop load measurement, yield monitors, tractor-mounted NDVI sensors, mechanical yield estimation, brix mapping, GPS-enabled tractors*
- Afternoon: Anthony Road Vineyards, Seneca Lake, NY. *Focus on vinifera: Drones, Imaging systems including drones and cluster imaging systems, novel sensors, tools for canopy management.*

July 18 Nelson J. Shaulis Symposium: The symposium will focus on applying viticultural principles to address within-vineyard variability using the three-step process: MEASURE, MODEL, and MANAGE. Symposium includes lunch and reception

- Session 1: Physiology of vine balance and precision viticulture
- Session 2: Metrics for management: Sensors, drones, satellites, and analytical equipment
- Session 3: Models for management: Distilling a flood of data to practical tools to guide management decisions
- Session 4: Examples of "Digital Viticulture" from around the world.

Conference, Tour, and Symposium information at:

www.asev-es.org

Ohio Agricultural Research and Development Center (OARDC)
1680 Madison Ave.
Wooster, OH 44691

go.osu.edu/grapes

Name & Address	Phone	Email	Area of Expertise & Assistance Provided
Dr. Imed Dami, Professor & Viticulture State Specialist Horticulture & Crop Science 216 Gourley Hall - OARDC	330-263-3882	email: dami.1@osu.edu	Viticulture research and statewide extension & outreach programs.
Dr. Doug Doohan, Professor Horticulture & Crop Science 116 Gourley Hall - OARDC	330-202-3593	email: doohan.1@osu.edu	Vineyard weeds and control. Recommendation on herbicides.
Dr. Gary Gao, Professor & Small Fruit Specialist OSU South Centers 1864 Shyville Rd., Piketon, OH 45661 OSU Main Campus, Rm 256B, Howlet Hall, 2001 Fyffe Ct., Columbus, OH 43210	740-289-2071 Ext. 123 Fax: 740-289-4591	email: gao.2@osu.edu	Viticulture research and outreach in Southern Ohio.
Dr. Melanie Lewis Ivey, Asst. Professor Plant Pathology 224 Selby Hall - OARDC	330-263-3849	email. ivey.14@osu.edu	Grape diseases, diagnostics, and management. Recommendation on grape fungicides and biocontrols. Good agricultural practices and food safety recommendations.
Diane Kinnney, Research Assistant Horticulture & Crop Science 218 Gourley Hall - OARDC	330-263-3814	email: kinney.63@osu.edu	Vineyard and lab manager - viticulture program. Website manager for Buckeye Appellation website.
Andrew Kirk, AARS Station Manager Astabula Agricultural Research Station 2625 South Ridge Rd. Kingsville, OH 44048	440-224-0273	email: kirk.197@osu.edu	Viticulture research and outreach in northeastern Ohio.
Dr. Elizabeth Long, Asst. Professor Entomology 105 Thorne Hall - OARDC	330-202-3556	email: long.1541@osu.edu	Fruit and vegetable insect management.
Dr. Erdal Ozkan, Professor Food Agriculture & Biological Engineering 590 Woody Haes Drive Colubmus, OH 43210	614-292-3006	email: ozkan.2@osu.edu	Pesticide application technology. Sprayer calibration.
Patrick Pierquet, Research Associate Horticulture & Crop Science 220 Gourley Hall - OARDC	330-263-3879	email: pierquet.1@osu.edu	Wine cellar master. Enology research, micro-vinification, sensory evaluation, and laboratory analysis.
Dr. Maria Smith, Viticulture Outreach Specialist Horticulture & Crop Science 205 Gourley Hall - OARDC	330-263-3825	email: smith.12720@osu.edu	Maria is the primary contact for viticulture extension and outreach. Evaluation of site suitability for vineyard establishment and all aspects of commercial grape production.
Todd Steiner, Enology Program Manager & Outreach Horticulture & Crop Science 118 Gourley Hall - OARDC	330-263-3881	email: steiner.4@osu.edu	Todd is the primary contact for enology research and extension. Commerical wine productoin, sensory evaluation, laboratory analysis/setup and winery establishment.