CFAES

OHIO GRAPE-WINE ELECTRONIC NEWSLETTER

Edited by: Dr. Maria Smith

June / 2020

Photo: Nest and eggs of a Northern Cardinal in the vines. Photo credit: Diane Kinney

IN THIS ISSUE:

OSU COVID-19 June 2020 Updates

OSU continues to evaluate the risks of COVID-19 as the circumstances evolve. In June, the university announced a continuation of employee travel restrictions from July 6 until December 31. Our team will remain available to remotely consult with you via phone, email, and Zoom until further notice.

With regards to in-person Extension programming, we are awaiting updated guidance from CFAES administration. As we learn more, we will adapt as best we can in order to continue to serve stakeholder needs.

Thank you all for your patience as we continue navigating 2020 and stay well.

-Maria and the OSU V&E team

Statewide update: June 2020

By: Maria Smith, HCS-OSU

Persistent warm temperatures through June

Despite an uncharacteristic cold snap through the first half of May, Mother Nature flipped her “on” switch to summer and has kept it on ever since. Despite average temperatures between 65-75°F and (generally) sunny conditions that have persisted through June, we have continued seeing some effects on delayed phenology caused by a month of cold weather and recovery to freeze injury. At this point, however, we have largely recovered to near normal GDD accumulation for this time of year (**Fig. 1**; **see: Wooster Vineyard Update p. 4**).

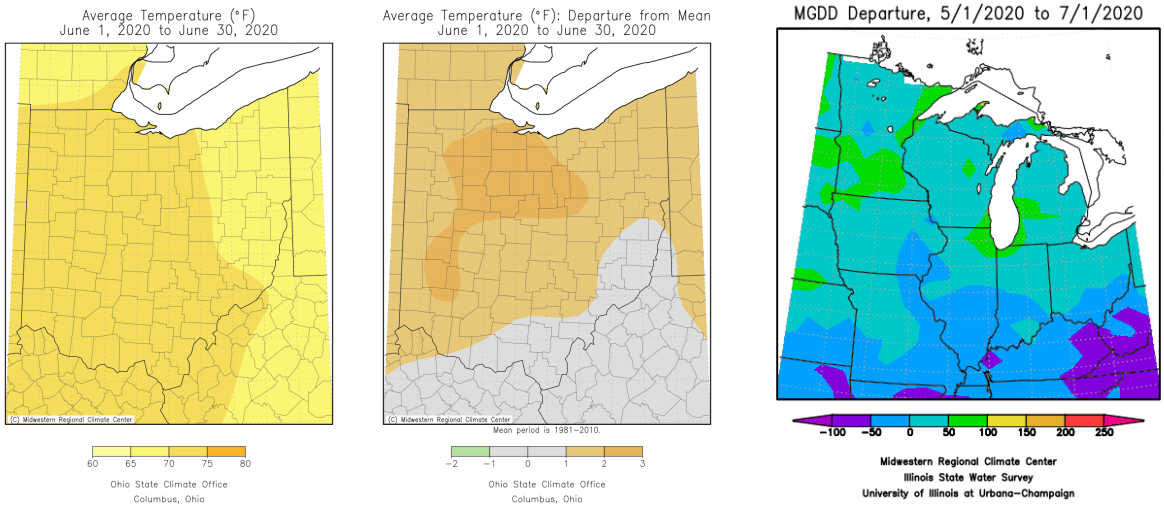


***Figure 1**. Mean temperature (left) from 1 June to 30 June 2020, deviation of the mean temperature from the 30-year average (center), Regional modified GDD departure from 1 May 2020 to 1 July 2020 (right). Maps retrieved from https://climate.osu.edu/climate-tools/climate-maps-ohio and https://mrcc.illinois.edu/cliwatch/watch.htm#.*

June precipitation patterns

Following high precipitation in the late winter and early spring, conditions have dried out for all but the most southeastern portions of the state (**Fig. 2**). In general, precipitation events have come sporadically in the form of quick-passing, but heavy, thunderstorms. Thankfully, Ohio missed the brunt of the major precipitation through the Midwest from Tropical Storm Cristobal in early June (**Fig. 2**).

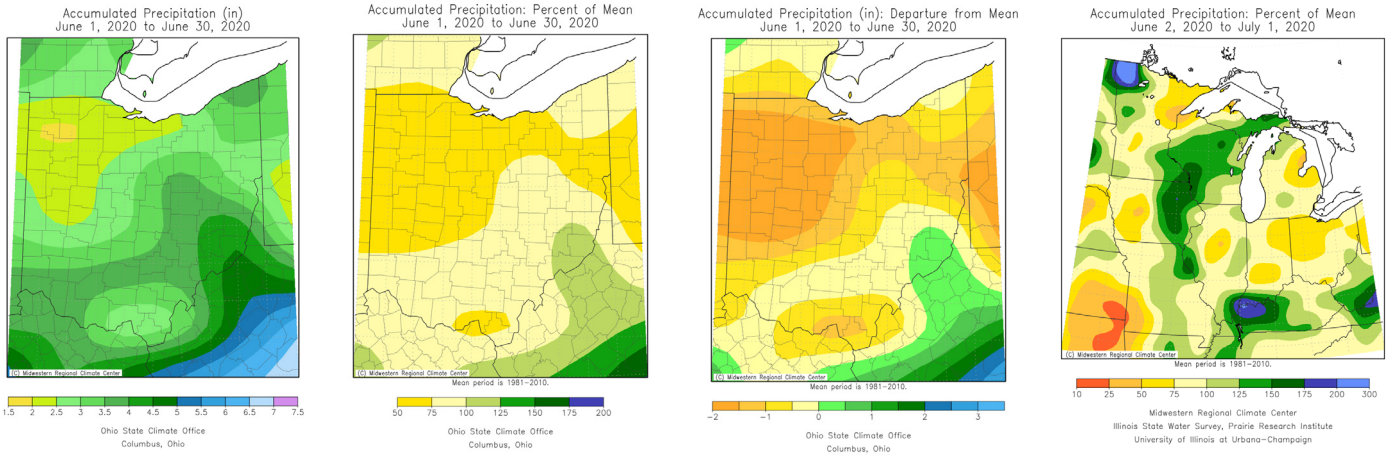


***Figure 2**. Accumulated precipitation (left) from 1 June to 30 June 2020, percent of the mean precipitation from the 30-year average (left-center), precipitation deviation from the 30-year average (right-center), Regional percent precipitation departure from 2 June 2020 to 1 July 2020. Maps retrieved from https://climate.osu.edu/climate-tools/climate-maps-ohio and https://mrcc.illinois.edu/cliwatch/*

Statewide update June (continued)

Weather impacts on canopy and disease management

Canopy management. Because of the rapid shoot growth during the early part of the season, canopy management can be challenging to keep pace with - shoot thinning, shoot positioning, and fruit zone leaf removal, in theory, should have all been performed by the early onset of fruit-set (Fig. 3). However, with only about 5 to 6 weeks between freezing conditions and fruit-set this season, that's a tall order. Is all lost if you're behind?

Nope! It can mean that shoot thinning and positioning may become more difficult as the base of the shoot becomes woody and tendrils begin to tangle, but an open canopy can still be achieved using pruning shears and gentle handling of growing shoot tips.

With fruit zone leaf removal, the ideal time to perform it is right around fruit-set. If you are planning to defoliate when berries are beyond pea-size, take extra care to **avoid excessive sunlight exposure**, and therefore **berry sunburn**, by conservatively removing only on the shaded (this is usually east-facing) side of the canopy and only those leaves that surround the clusters (**Fig. 3**).

Figure 3*. Defoliation at fruit-set, note the characteristic 90° angle of the bunch from the stem that helps mark this growth stage (left), example berry sunburn (center), defoliation of shaded canopy side (right)*

Disease management: Compared to the 2019 season, disease pressure has overall been lower during the early part of the growing season due to drier and lower humidity conditions. However, several reports of *Phomopsis* popped up in early June and, in the past week, *Anthracnose* (**Fig. 4**). For more information on distinguishing these diseases, their life cycles and symptoms, please visit https://u.osu.edu/fruitpathology/grapes/.

Although we're moving out of the critical period for flower and fruit infections, we still have a ways to go before the season wraps. Continue paying attention to changes in weather patterns conducive for downy and powdery mildew, as well as late-season bunch rots as we approach veraison into harvest.

Figure 4*. Example of Phomopsis lesions on shoots (left), Example of Anthracnose fruit infection (right).*

OARDC-Wooster June vineyard update

By: Diane Kinney and Imed Dami, HCS-OSU

Our on-site restrictions remain in place due to the COVID-19 pandemic. We have resumed limited field and greenhouse work upon approval from the Dean of our College, but common practices continue to have some delays.

Grape Phenology

All of our grape varieties hit 50% bloom by June 22nd (see Table below). Most varieties averaged 6-7 days later than 2019 which was also a late year. Cabernet franc bloomed over 2 weeks later than in 2019. The delay in bloom can be attributed to a delay in GDD accumulation. Also, flowers are originating from secondary shoots which had developed later due to the spring frost back in May.

***Table 1**. 2019 and 2020 bloom dates and corresponding GDD of varieties grown at the research vineyard in Wooster.*

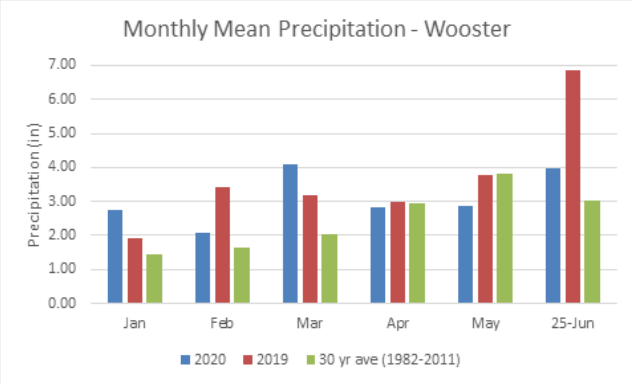
	2019			2020		
Variety	50% bloom	GDD 1-Jan to bloom	GDD 1-Apr to bloom	50% bloom	GDD 1-Jan to bloom	GDD 1-Apr to bloom
Frontenac	2-Jun	533	518	8-Jun	536	485
La Crescent	2-Jun	533	518	8-Jun	536	485
Marquette	3-Jun	538	523	10-Jun	578	527
Regent				15-Jun	661	610
Aromella	11-Jun	665	649	16-Jun	667	626
Chambourcin	11-Jun	665	649	17-Jun	695	644
Riesling	16-Jun	730	715	17-Jun	695	644
Cabernet franc	4-Jun	548	533	19-Jun	733	682
Chardonnay	4-Jun	696	681	22-Jun	802	751
Sauvignon blanc				22-Jun	802	751

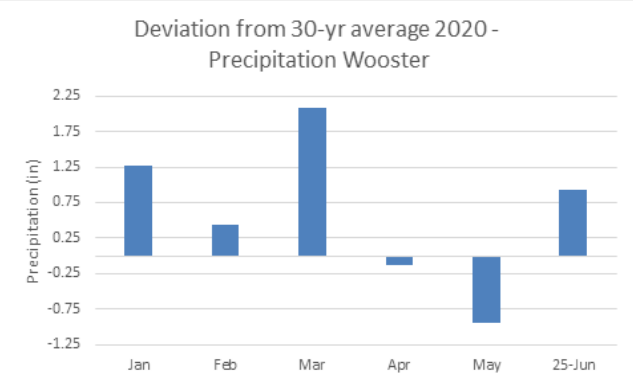
Weather

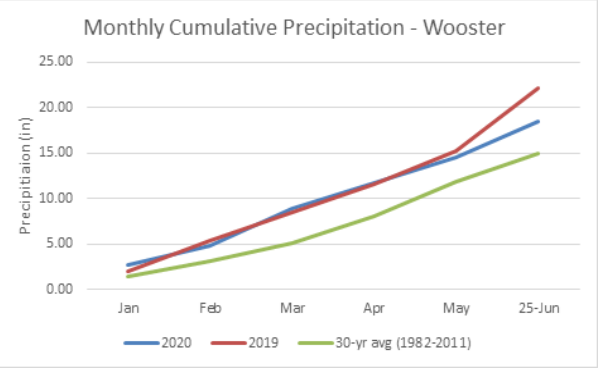
Fortunately, we are not repeating monthly precipitation of 2019. For the second quarter of the year we are almost exactly on track with the 30-yr avg (9.65” for 2020 vs 9.79”). But, due to the 3.8” overage in the first quarter, we still find ourselves ahead in rain by 3.7”.

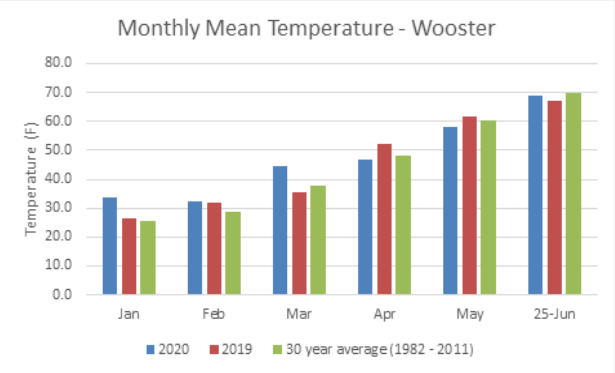
Temperatures continue with the spring trend of being on track, if not a tad behind the 30-year averages for the quarter. This translates into 200 GDD units below the cumulative average for June (2020 GDD = 875 vs 30- year GDD = 1073).

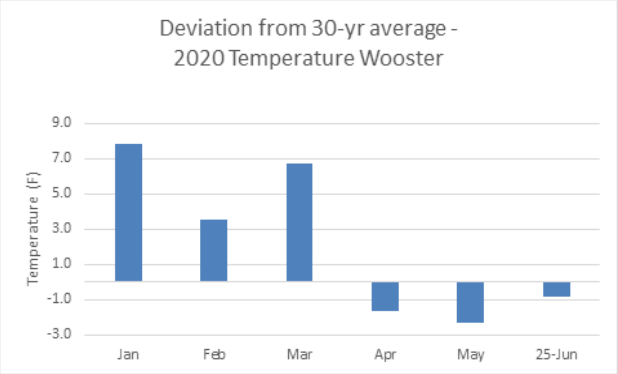
OARDC-Wooster update (cont.)

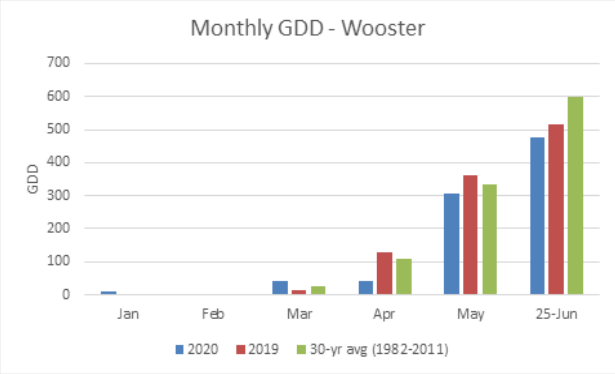


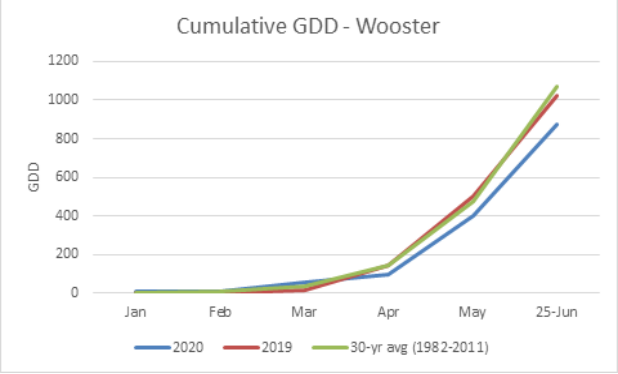












Cultural Practices

To date, we have applied five insecticide/fungicide sprays to the vines. We are preparing now for the Japanese Beetles to appear any day, but all vines are clean and healthy at this point. We have been busy with canopy management (suckering, shoot positioning) as well as training young vines. Leaf pulling is a bit delayed as our fruit (as of June 26th) is yet to reach the pea sized stage of maturity. Cluster thinning, starting at pea-size berry stage, is our next canopy management practice.

2019 Ohio Wine Grape Production and Pricing Index

Dr. Maria Smith, Viticulture Outreach Specialist, Horticulture and Crop Science, The Ohio State University.

This survey was conducted in accordance with The Ohio State University, Institutional Review Board protocol #2020E0314. Funding for this survey was provided by the Ohio Grape Industries Committee.

Over the past 10 years, the Ohio wine industry has grown from 124 to over 330 licensed wine manufacturers in 2020. As the wine industry continues to grow, grape supply must rise in order to meet winery demands. A major challenge towards achieving this goal is ensuring profitability for wine grape production. As a commodity, grapes have high start-up costs, several years from planting until productive bearing, annual vineyard labor and supply costs, and high risks of crop loss that limit profitability. Therefore, grape prices should reflect not only the available supply and demand but also production costs.

Between 06 Apr 2020 and 15 May 2020, an online Qualtrics survey was distributed to grape producers across Ohio. In this survey, growers were asked about their 2019 planted and bearing wine grape acreage, yield (tons), cost ($ per ton or gallon), if wine grapes were directly sold or processed and sold, and plans for increasing acreage in 2020. The survey results below aim to provide an overview of grape production and pricing for the 2019 season and improve the multi-year grape production and pricing trends in Ohio.

Survey response summary

Thirty-three participants (n = 33) responded to the 2019 survey, a 17.5% decline from the previous year. The participants represented vineyards (39.4%) and A2 permitted estate wineries (60.6%). Respondents reported individual vineyard sizes between 1 to 5 and > 50 planted acres. Vineyard acreage was recorded for 23 Ohio counties, up from 18 last year (**Fig. 1**).

Production, yield, and pricing

Production (acreage): The sum of total vineyard acreage reported by n = 33 participants was between a low of 198 acres and a maximum of 475 acres, with an average individual vineyard size of 13.3 acres. The average size, however, was skewed by 8 vineyards greater than 11 to 15 acres. The median reported vineyard size is smaller at 3 acres (n = 21).

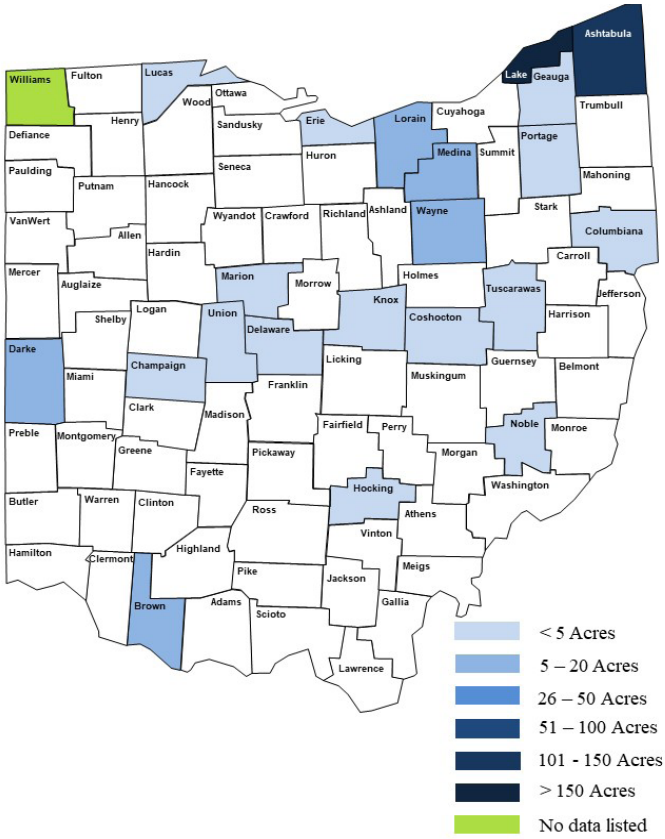


Fig. 1 *Distribution of reported grape acreage among 23 Ohio counties. Acreage was summed across the total number of survey participants that reported for each county.*

Bearing acreage accounted for 83.4% of the total planted acreage reported by n = 26 participants. Seven participants (n = 7) did not report additional information related to bearing acreage. In total, 42 different cultivars were reported across 139.3 planted vineyard acres, 6 of which were table grapes (**Fig. 2, Table 1**). The wine grape cultivars represented native (*V. labrusca*), interspecific hybrid ('hybrid'), and *V. vinifera* ('vinifera') species. Native grapes comprised the majority of reported acreage (39.7%), followed by vinifera (31.0%), and hybrids (27.8%; **Fig. 2**). This is a major depar-

ture from the 2018 survey, where native and hybrid grape cultivars represented 60.9% and 11.4% of the total bearing acreage, respectively.

Yield (tons): Participants reported yield for 29 wine grape cultivars (**Fig. 2, Table 1**). Total yield for 2019 was 382.9, a decrease from 507.1 tons reported in 2018. Of the total yield, 224.8 tons were sold (58.7%). It was assumed that the remaining yield (158.1) was used for estate wine making purposes. The highest percentage of yield-bearing cultivars were native grapes (68.0%), followed by vinifera (16.6%), and hybrids (15.4%).

Pricing ($ per ton): Price data was reported for 19 cultivars. The average price per ton was generally lowest for native cultivars, of which only Concord had a reported price, and highest for vinifera cultivars (**Table 1**).

The price per ton ranged between $263 (Concord) and $2675 per ton (Pinot noir; **Table 1**). The average price per ton was $263, $997, and $1191 for native, hybrid, and vinifera grapes, respectively. No data was reported for sales of juice or bulk wine for 2019.

2020 acreage expansion: 15% of participants (n = 5) indicated that they plan to expand planted acreage in 2019. Of those, 4 were vineyard owners and 1 was a vineyard and winery. New plantings were primarily from hybrid grape cultivars, including Frontenac, Frontenac gris, La Crescent, Noiret, Chambourcin, and Aromella. Table grapes listed for increased planting included Somerset and Everest.

Summary

While the number of respondents decreased year-over-year (2018 = 40, 2019 = 33), the diversity of counties represented increased (2018 = 18, 2019 = 23). Overall, approximately the same yield (tons) of grapes was reported for sale in 2018 (207.4 tons) and 2019 (224.8 tons).

The results of the 2019 survey represented approximately 20% of the total grape acreage (1500 acres) reported in the 2017 USDA-NASS/OGIC grape production survey that includes wine and juice/table grapes. Similar to 2018, only a subset of the Ohio grape industry is represented by this survey. Several factors likely played a role in the survey response rate including available time to complete the survey, knowledge of the survey distribution, and concerns for individual identification. Increasing survey response rates will be key to improving future data precision to aid in vineyard and winery budgeting and contracts.

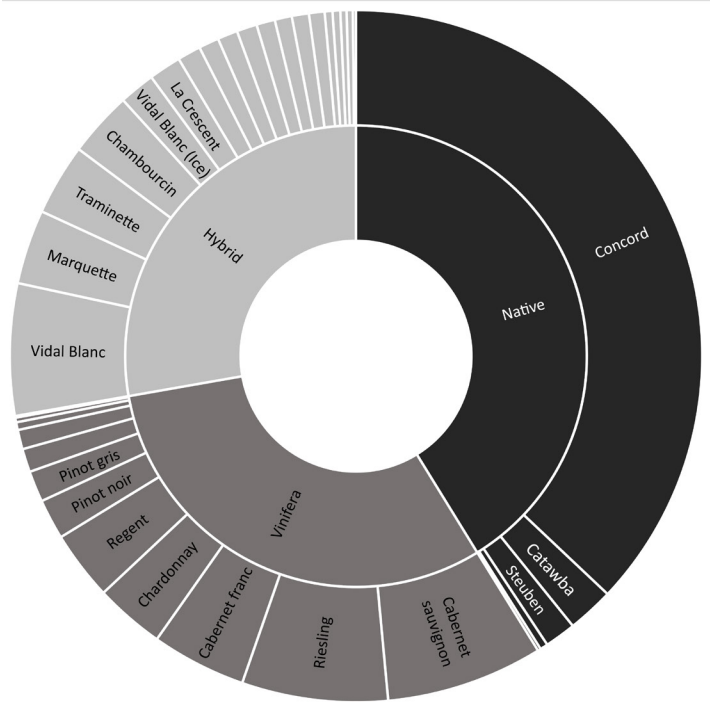


Fig. 2 *Proportion of total planted acreage of production by species category (inner circle), and proportion of total planted acreage by cultivar (outer circle).*

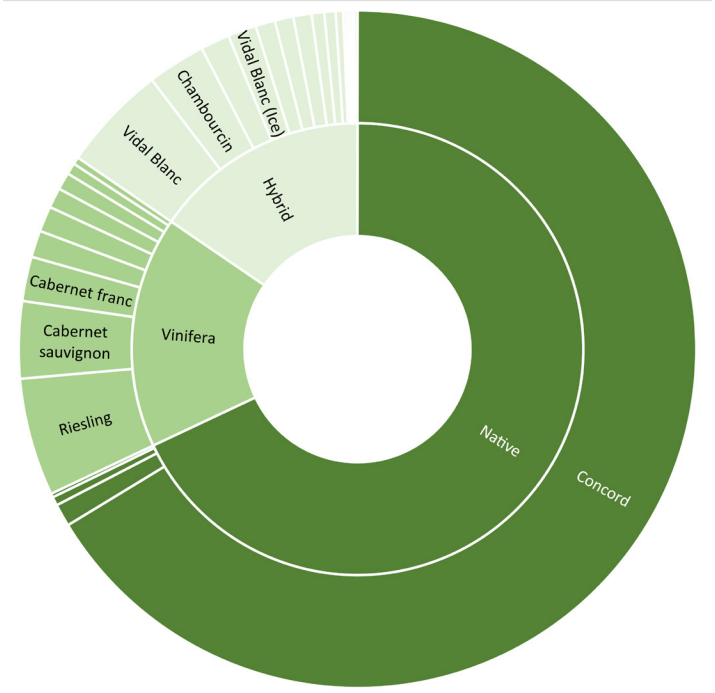


Fig. 3 *Proportion of total yield (tons) by species category (inner circle), and proportion of total yield by cultivar (outer circle).*

Table 1 *2019 Grape acreage, yield, and pricing by cultivar. Blank spaces indicate no data provided.*

Species group	Cultivar	Planted acres	Yield harvested (tons)	Yield sold (tons)	Average price per ton (USD)
Table	Campbell Early	0.2			
	Everest	0.4			
	Himrod	0.3			
	Jupiter	0.2			
	Marquis	0.2			
	Reliance	0.3			
Native	Catawba	3			
	Concord	51.1	244	176.5	263
	Niagara	0.2	0.7		
	Norton (Cyanthiana)	0.5	0.7		
	Steuben	2	4		
Hybrid	Aromella	1.45	0.14	0.14	1200
	Brianna	1	0.5		
	Cayuga white	0.2	0.5		
	Chambourcin	4.15	10.2	1.9	1100
	Chardonel	1.3			
	Corot noir	1.3	1	0.5	700
	Frontenac	2	5.6	0.4	950
	Frontenac gris	1.2			
	La Crescent	2.1	3.5	2.1	875
	Marechal Foch	0.5	3.2	3.2	850
	Marquette	4.8	5.1	3.1	975
	Noiret	1.3			
	Petite Pearl	1.1	0.4		
	Seyval blanc	1.2	3.3	3.3	1100
	St. Croix	0.5	2.2	2.2	950
	Traminette	4.6	0.5		
	Vidal blanc	8.5	18.6	3.5	1267
	Vidal blanc (ice wine)	2.25	5		
	Vignoles	1.1	0.5		
Vinifera	Cabernet franc	6.1	7.8	3	2000
	Cabernet sauvignon	10.1	13.5	5	2000
	Chardonnay	4.5	9	2	2000
	Dornfelder	1.25	9	2	2000
	Gewurtztraminer	0.5			
	Gruner veltliner	0.1			
	Merlot	1.5	2	1	2000
	Pinot gris	2	4.7		
	Pinot noir	2.6	3.6	2	2675
	Regent	1	3	3	2000
	Riesling	9.4	20.7	10	1250
	Sauvignon blanc	0.3			

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 past month (June), 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.
- The Grape Exchange (TGE) on the homepage and tab (latest posting on June 23).

Misc:

- 2019 Ohio Wine Grape Production and Pricing Index

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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. 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.
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.