

**Vinews**  
**Viticulture Information News, Week of 31 August 2015**  
**Columbia, MO**



**Evaluating grape samples for maturity**



There are a number of factors to consider when evaluating grapes for maturity. The science part of quantifying Brix, titratable acidity, and pH is straightforward since it provides a real number. Starting to track these numbers on a consistent schedule at veraison or some other selected time point can help pinpoint a harvest date. However, there are many other characteristics of the grape that should be evaluated to assess maturity. Much of this comes down to blending science and art together to provide an overall assessment of grape maturity. Many of the fruit derived flavors and aromas do not correspond with preconceived or expected acid and brix ranges. Some years, a cultivar may express full flavor and aromas and the brix levels is 18 whereas in another year fruit derived flavors and aromas are not expressed until 23 brix or higher.

There are many seasoned veteran winemakers and viticulturalists that have honed their skills over time assessing varietal aromas and flavors. I am sure many new growers have heard the term great wine starts in the vineyard or great wine begins in the vineyard. When you really think about this deeply, the fruit of the variety you are growing should be expressing aromas and flavors that are characteristic of the wine varietal. This requires that you continually sample the fruit over a period of time to assess the flavors and aromas of the fruit. Can you sample some Norton grapes and taste a range of flavors over time? Unripe fruit expressing herbaceous notes and over time more fruit flavors develop that begin to turn "jammy". You really need to calibrate your senses and this only happens if you regularly sample fruit.

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Taste sampling fruit is an art that involves learning some skills. In the vineyard it involves selecting random fruit which can be difficult since our eyes seem to drift to the ripest cluster and ripest berries. Therefore it is best to have a sampling methodology. For example, select berries from the shoulder front and back of the cluster, berries from the mid-cluster front and back. Take samples from each side of a row since sun duration may be a factor. Also try to be representative of the whole block. Consider grid sampling which could involve sampling every 10 rows and every 10th plant in the row. The main point in random sampling is once you have established a procedure be consistent in using that sampling procedure every time.

With your random sample in hand, now it is time to taste. Place a few berries in your mouth and gently squeeze them between your tongue and the roof of your mouth to release the juice. This will release the pulp and seeds from the skin. You will experience the sweetness (brix) and acidity and over time you will be able to calibrate your palate to what the laboratory numbers tell you. Next you want to remove the seeds from your mouth and evaluate their color. The coloration of the seeds provides another assessment of the grapes maturity. If the seeds are green, then they are immature, green to tan seeds and tan to brown seeds are maturing, and brown seeds are mature. Immature seeds will release more tannins than mature seeds, but the tannins from immature seeds are not desirable. Lastly, macerate the skins which will release tannins from the skins. Tannins will be astringent if the berries are unripe and the level of astringency will decline as the grape berries attain maturity.

In addition as grape growers you have to evaluate other risks on when to harvest. This past week I received a call from Northwest Missouri where they have been receiving steady rains on a weekly basis in some areas. The brix levels are simply not moving and on tight clustered cultivars such as Vignoles and the summer rots are taking hold. Balancing environmental conditions, pest pressures, and crop maturity becomes a whole lot more complicated. As you come across these struggles consider having that conversation with your winemaker on how to best use the crop at hand while preserving the quality of the varietal.

This three day conference is taking place in Nebraska City, NE on November 11-13, 2015. The conference only takes place every three years and focuses on research and practices for growing wine grapes and making wine in cold-climates. This is the first time the conference has been in the United States.

[VitiNord Conference Schedule](#)

[VitiNord Conference Speakers](#)

[VitiNord Registration and Details](#)

[VitiNord Lied Lodge and Conference Center](#)  
2700 Sylvan Road, Nebraska City, NE 68410



## Peirce's Disease

Some readers may consider this repetitive. But I want to continually keep you aware of the symptoms of Pierce's Disease should it suddenly appear in your vineyard. Now more than ever as harvest season is upon us, we are spending more and more time in the vineyard. This provides more time to observe plants that are expressing symptoms that appear different from common pest pressures. If you notice grapevines expressing Pierce's Disease symptoms consider simply shooting a picture of the symptoms and second picture of the row number for your own memory storage. Send me the picture of the symptoms from your phone to my phone at 573-999-9728.

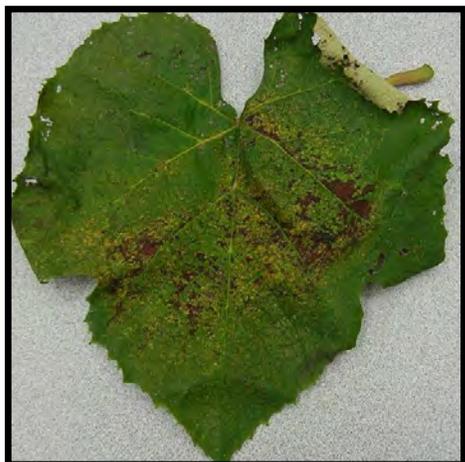


Leaf scorch is one of the symptoms of a grapevine infected with Pierce's Disease.

With the excessive heat conditions this week and the heat conditions a couple weeks ago the symptoms of Pierce's disease are likely to be more apparent. Pierce's Disease is caused by a bacteria that interrupts the vascular system of susceptible grape cultivars. The combination of limited soil moisture and high heat often result in the appearance of Pierce's Disease symptoms. If you notice leaf scorch (yellowing and browning of leaf margins) or whole shoots collapsing, or leaves that have fallen but the petioles remain attached to the shoot (matchstick appearance) then you may have Pierce's Disease.

See last weeks Vinews to submit a sample to the Mizzou Plant Diagnostics Clinic.

### Problems that showed up recently.



Diffuse Downy mildew. Morning dews likely have provided ample wetting periods for infections.



This has been reported on Catawba and Concord and likely is Black leaf a physiological disorder, or ozone damage, or potassium deficiency. Anyone else observing these symptoms?

**Pictography of Symptoms of Grape Vine Clearing Virus (GVCV).  
The grape cultivar is Chardonel.**



A GVCV infected leaf showing chlorosis along the main leaf veins. Notice that some leaves on a shoot may show GVCV symptoms on a shoot while other leaves appear non-symptomatic on the same shoot.



A GVCV infected leaf showing interveinal chlorosis and marginal chlorosis.



Leaves infected with GVCV often will be distorted compared to healthy leaves.



A GVCV infected leaf with symptoms on the top of the leaf (left) and displaying necrotic veins on the bottom of the leaf (right).

Phenology from Gasconade County



Chambourcin on  
August 31, 2015.  
Gasconade County



Vignoles on August  
31, 2015. Gascon-  
ade County

## Cumulative Growing Degree Days for the Seven Grape Growing Regions of Missouri from April 1 to August 31, 2015.

Region	Location by County	Growing Degree Days <sup>1</sup>		
		2015	2014	30 Year Average
Augusta	St. Charles	3005	2934	2936
Hermann	Gasconade	2855	2759	2812
Ozark Highland	Phelps	3149	3081	3039
Ozark Mountain	Lawrence	3059	2978	2977
Southeast	Ste. Genevieve	3133	3028	3007
Central	Boone	2903	2801	2907
Western	Ray	2832	2845	2842

<sup>1</sup>Growing degree days at base 50 from April 1 to August 31, 2015. Data compiled from Useful and Useable at <https://mygeohub.org/groups/u2u/tools>. Click on link below to determine growing degree days in your area.

**To determine the number of growing degree days accumulated in your area since April 1, click this link [Search for GDD at your location using this tool](#).**

Please scout your vineyards on a regularly scheduled basis in an effort to manage problem pests. This report contains information on scouting reports from specific locations and may not reflect pest problems in your vineyard. If you would like more information on IPM in grapes, please contact Dean Volenberg at 573-882-0476 or [volenbergd@missouri.edu](mailto:volenbergd@missouri.edu)