



Virginia Cooperative Extension

Virginia Tech • Virginia State University

VITICULTURE NOTES Vol. 29, October 2014

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<http://www.arec.vaes.vt.edu/alson-h-smith/grapes/viticulture/index.html>

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I. Vintage 2014 observations:

Our exceptionally dry September and early October weather in the northern Shenandoah Valley came to an abrupt end with nearly 4 inches of rain totaled between 10 and 14 October. Despite the rain, the Cabernet Sauvignon and Petit Manseng that were still out in our own vineyard tolerated the weather well. Our “rootbag” Cabernet Sauvignon vines were harvested on 2 October with 22 Brix, 2.40 pH and 0.65 TA. Half of the Petit Manseng was harvested late last week at 29 Brix, 3.01 pH and 0.80 TA. Knowing rain was coming, and having past experienced significant botrytis incidence on rain-soaked, ripe Cabernet in our vineyard, I hauled the sprayer to the vineyard one more time and put on a spray of Elevate fungicide (0-day PHI). I left a portion of the vineyard unsprayed just to see if an unsprayed control resulted in obvious differences in botrytis incidence. We harvested the remaining Cabernet on 20 October and the botrytis levels were less than one percent in sprayed vs. unsprayed sections – no perceptible difference.

I do appreciate the various observations that growers have shared with me about the season, and I’ll touch on a few of those here. There are more in-depth observations shared in the most recent Virginia Vineyards Association’s “Grape Press” which can be found [here](#). In our own vineyard, bunch stem necrosis (BSN) was again a very notable problem on the Cabernet Sauvignon, and again particularly on the more vigorous, non-root-restricted vines (see October 2013 Viticulture Notes). I think that a better understanding of the causes of BSN could be obtained by looking at weather conditions during the previous season’s period of early cluster development (at or shortly after bloom). Another disorder, bud necrosis, was also very obvious this year with the low fruitfulness observed on Viognier in many vineyards. Bud necrosis (BN) is decidedly a disorder that starts in the first year of development (2013), around bloom, and is manifest as poor fruitfulness in the following year (2014). What causes BN? We don’t specifically know, and therefore can’t provide recommendations on management of it. What we did learn from our research a number of years ago was that the incidence of BN was inversely correlated with bud carbohydrate levels: the lower the carbohydrate level, the greater the incidence of BN (the interested reader can pursue the literature of Vasudevan and Wolf on this (e.g., *Vitis* 37(4),189-190 (1998)). We do know that extended periods of cloudy weather, particularly in the pre-bloom period when vines are normally reaching a nadir of storage reserves, can depress carbohydrate levels. In apples, a comparable physiologic stress results in increased fruitlet drop, or increased sensitivity to chemical thinners. Speculation at this point, but we had a pretty rainy period during bloom/fruit set

again this year (2014), so it will be interesting to see if the pattern of high BN incidence is repeated now/next year (go out and cut some buds – you can assess BN levels at any time now. See http://www.virginiavineyardsassociation.com/wp-content/uploads/2011/07/May-June_2011_Vit-Notes.pdf

How about the stalling of ripening this season, particularly in Merlot? Had a number of growers comment on this around early September. Crop hit about 20 Brix and then just didn't move. One question from the field was typical: "I've heard about sugar accumulation problems in Merlot and Chardonnay this year from a lot of the growers I've spoken to. Flavors are good, but brix is low at harvest. Seen this before? Any idea what's behind it?"

I do see it every year to an extent, but it did seem more prevalent this year, particularly in central Virginia. The slowing of sugar accumulation above about 20 Brix is not uncommon. A complete stalling for weeks is. Reasons can range from protracted periods of cool, cloudy weather, damage to the canopy from mites, mildew, nutrient deficiency, or other factors, heavy crop loads, drought, and very humid weather which reduces the vapor pressure deficit between grape berries and the atmosphere. Some of the above factors may also increase the resistance to xylem backflow that would limit water transport back into the shoot during late stages of berry ripening. Relative fruit chemistry in our own vineyard was similar to what I heard from many growers: good but not exceptionally high Brix, higher than average titratable acidity, and a correspondingly lower pH. It is an odd year when Cabernet franc is picked ahead of Merlot and even, in cases, Chardonnay.

Our growing season (Winchester) has been very similar to 2013, 2012, and 2009, although the September-October period of 2009 was drier (2.8" of rain) than 2014 has been thus far (3.9"). See the following table.

Average growing season (April – October) temperature (GST), rainfall, and growing degree days (GDD) (mean daily summation above 50F for April – October period) for Winchester and Charlottesville, VA, 2009 – 2014.

Vintage	Avg. GST (°F)		Rain, Apr-Oct (inches)		Rain, Sep-Oct (inches)		GDD (°F)	
	Winch.	C'Ville	Winch.	C'ville	Winch.	C'Ville	Winch.	C'Ville
2009	65	66	18	27	2.8	6.6	3284	3392
2010	70	71	10	17	3.8	7.6	4258	4416
2011	67	70	21	32	6.9	12.9	3822	4248
2012	66	70	20	24	6.0	6.7	3452	4230
2013	65	67	20	28	5.1	4.2	3258	3606
2014 (preliminary)	66	68	18	25	3.9	4.5	3214	3614

There were exceptions, but wildlife such as deer, bear, squirrels and raccoons did not seem to be as prevalent this year as they were last. Some of this might relate to lower wildlife density (e.g. squirrels),

but some is likely related to more abundant, alternative food sources. And maybe growers are collectively doing a better job at providing a disincentive for wildlife depredation after hearing two different lectures from Dr. Jim Parkhurst. Whatever the reason(s), the reduction in pressure this season was a welcome change from 2013.

There were plenty of observations of cold injury and crown gall in vineyards from northern Virginia into the western Piedmont and into southwest Virginia. The more cold-tender varieties fared worst, but even some of what we consider to be “hardy” vinifera varieties, such as Riesling, sustained appreciable cold injury. We will have a special session on dealing with cold-injured vines at the VVA’s winter technical meeting in early February 2015. Incidentally, I did learn from one grower that they were successful in obtaining some financial compensation for cold damaged vines through the USDA Farm Service Agency’s Tree Assistance Program (TAP). We provided information on this program in a Viticulture Notes supplement earlier this year. [Click here](#) to explore the USDA Farm Service Agency’s TAP program.

Although many wine growers have commented that the season was running a bit later than usual, the overwhelming sense that I’ve taken from our own vineyard and speaking with others is that fruit quality, including flavors and aromas, are above average this year.

IV. Upcoming Meetings

➤ **5-6 November 2014**

Southeastern Grape and Wine Symposium

Surry Community College, Dobson, NC

Surry Community College is hosting its 3rd Annual Southeastern United Grape and Wine Symposium on Nov. 5th and 6th. The symposium will cover a number of topics related to viticulture, enology, and marketing. Here is a link to the symposium home page where you can register for the event, <http://symposium.surry.edu/> and learn more about it.

According to its organizers, the Symposium offers the opportunity to improve your knowledge, increase your technical skills, and network with colleagues.

➤ **20 November 2014**

Introduction to mid-Atlantic wine grape production

Virginia Tech’s AHS Jr. AREC

Winchester, VA (Frederick County)

Team-taught program designed for those either exploring grape production or recently engaged in wine grape production. On-site registration will occur from 8:00 to 8:30 am.

Program

8:30 am: Introduction and market opportunities
Tony Wolf, Virginia Tech

9:00 am: Vineyard business planning considerations and Vineyard Calculator – predicted cash flows
Tremain Hatch, Virginia Tech

- 10:15 am: Lender's perspective on vineyard enterprises
Marilyn Adams, Farm Credit of the Virginias
- 10:45 am: Vineyard site evaluation and environmental challenges
Mark Sutphin, VCE
- 11:30 am: Mapping soil variation and geomorphology to improve vineyard design and performance
Alex Blackburn, Blackburn Consulting Services, LLC
- Noon: Lunch
Walk to vineyard to discuss vineyard design
- 2:15 pm: Variety/clone/rootstock considerations for the mid-Atlantic
Tony Wolf
- 2:45 pm: Fundamentals of vine management
Tremain Hatch
- 3:15 pm: Fundamentals of grape integrated disease management
Mizuho Nita, Virginia Tech
- 4:00 pm: Sustainable Vineyard Management
Beth Sastre, VCE
- 4:15 pm: New Growers Perspective on Successes and Failures
Karl Hamsch, Loving Cup Vineyard and Winery
- 5:00 pm: Adjourn

Registration: Registration is \$50/person which will also cover lunch. Pre-registration must be received by 17 November (see next page for registration information). Workshop will have outdoor component, prepare to be outside rain or shine.

Directions: The AHS Jr. AREC is located in Frederick County, VA (<http://www.arec.vaes.vt.edu/alson-h-smith/>). Directions to the AREC from I-81 can be found here: <http://www.arec.vaes.vt.edu/alson-h-smith/contact/index.html>

Please plan to arrive before 8:15 am on 20 November. We will proceed in high gear starting promptly at 8:30 am.

20 November 2014

Introduction to mid-Atlantic wine grape production

Virginia Tech's AHS Jr. AREC
Winchester, VA (Frederick County)

REGISTRATION

Print this page, complete the following information, and send a check for \$50 per registrant, payable to Virginia Tech Foundation to:

Grape Workshop
Virginia Tech
595 Laurel Grove Rd.
Winchester VA 22602

Number attending: _____ X \$50 = \$ _____

Name(s): _____

Mailing address: _____

Email address: _____

Phone Number: _____

Please direct questions to Tremain Hatch thatch@vt.edu, (540) 869-2560 ext. 11

If you are a person with a disability and desire any assistive devices, services or other accommodations to participate in this activity, please contact Tremain Hatch, AHS Jr. AREC at (540) 869-2560 ext. 11 during business hours of 8 a.m. and 4 p.m. to discuss accommodations 5 days prior to the event.

*TDD number is [\(800\) 828-1120](tel:8008281120).



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