

GRAPE PRESS

Summer 2016

The Quarterly Newsletter of the VIRGINIA VINEYARDS ASSOCIATION

Vol. 32 No. 2



SUMMER SOCIAL

One of the highlights of the Virginia Vineyard Association's Summer Technical Meeting and Summer Social in early June was a wine reception hosted by Veritas Vineyard & Winery in a new vineyard – Bold Mountain – that offers sweeping views of the Rockfish Valley. For more on the meeting, see pages 2 and 10.



Chris Garsson

President's Corner

Managing Labor Shortages

By Tom Kelly
Kelly Vineyard Services

Following the chilly temperatures of early April, the month of May was quite wet in most parts of Virginia. As May passed, June showed itself to be unseasonably warm, so with soils saturated and temperatures high, growth in the vineyard took off at an accelerated pace.

This has left many vineyard managers (myself included) scrambling to find the labor necessary to completing the canopy management work that is critical to fending off disease in the vineyard this time of year. This situation highlights one of the biggest challenges facing us today – how to satisfy the labor needs of a rapidly expanding grape industry in the Commonwealth.

As the current grape shortage continues, there is more and more interest in planting new vineyards to satisfy the needs of new and existing wineries. But with the current labor resources already stretched thin, where will we find the qualified people to work these new plantings?

Several local community colleges offer workforce development courses to train new viticulturists, but these programs are primarily focused on developing management level personnel.

See *PRESIDENT* on page 2

INSIDE

Regional Reports

Contending with a hard freeze over the winter, unseasonable warmth and a late frost.

PAGE 4

Dropping fruit

Jim Law discusses the benefits of cluster thinning and provides a blueprint for when and how to remove grapes.

PAGE 8

Fighting GLRaVs

Approaches to ridding vines of the mealybugs that serve as vectors for grapevine leafroll-associated virus.

PAGE 8

Educational Tour

Sign up for an educational summer visit to Central Va. vineyards.

PAGE 11

Getting to the Bottom Of Herbicide Damage

By Paul Ancil
Sans Soucy Vineyards

This has been a very eventful start to a new season for all farmers, no matter what they grow — grapes, peaches, berries, you name it. We have all dealt with the “Easter” freeze (times 2), hail, and at my location, 9.2 inches of rain during the month of May alone.

I also had quite a few vines succumb to winter kill, something I usually don't have to worry about down here in the Southern sector of Virginia.

But rather than regurgitating boring details, I thought I would share with you my recent experience with herbicide applications conducted by the local electric utility company.

A little over a year ago, my County Extension Agent

suggested that I invite the local VDACS inspector for pesticide application to come out to my vineyard and conduct a courtesy inspection of my spray program, records, etc.

I pride myself on being current and careful when it comes to any chemical applications on my property. Chemicals are expensive. I don't waste them. My drinking water comes from the same soil in which I grow my grapes. I take the subject seriously.

So my initial reaction was less than warm to the idea of a government inspector on my property.

But my county extension agent assured me that our local VDACS inspector is an ally to farmers, not the enemy. So I agreed and invited Richard Jones, my VDACS

See *SOUTHERN* on page 7

VVA BOARD

2016

President

Tom Kelly

tom@kellyvineyardservices.com

Vice President

Jim Benefiel

jwbenefiel@aol.com

Treasurer

Kay Thompson

kaythompson@gmail.com

Secretary

Aimee Henkle

aimee@lostcreekwinery.com

Advisor

Dr. Tony K. Wolf

vitis@vt.edu

Business Manager

Tracy Kirkman

vavineyardsassoc@gmail.com

Grape Press Editors/Production

Bob Garsson

rgarsson@gmail.com

Chris Garsson

cgarsson@gmail.com

VVA Mailing Address

P.O. Box 168

Waterford, Va. 20197

vavineyardsassoc@gmail.com

Special thanks to:

Paul Anctil, Tremain Hatch, Taylor Jones,

Paul Krop, Jim Law, Mizuho Nita,

Ben Rowe, Dean Triplett



**VIRGINIA
VINEYARDS
ASSOCIATION**

PRESIDENT'S CORNER (cont.)

PRESIDENT, from page 1

While knowledgeable, well-trained, and experienced vineyard managers are key to the success of any vineyard enterprise, so also is a pool of well trained and efficient “boots-on-the-ground” laborers to perform the canopy management tasks essential to producing premium quality fruit in our challenging Continental climate.

Most of us have come to rely on the small bands of seasonal/temporary workers for tasks such as shoot thinning and positioning, leaf removal, dormant pruning and even harvesting.

But with immigration regulations at the forefront of political debate and with other industries such as the landscaping and building trades — most of whom can offer year-round positions and more competitive wages — threatening this already over stretched resource, temporary workers would seem to be on the way to becoming an endangered species.

Finding Workers

So, where are we to find the people to work our vineyards?

The H-2A worker visa program is one option that would seem to offer some promise. H-2A offers the benefit of employing several season laborers who, once trained, are usually available to return to your vineyard year after year. This is an enormous benefit to employers in not having to continually re-train new workers.

H-2A employers are required to provide housing and transportation for their workers, but because the hourly wage required through the program is substantially less than that of most resident workers, the hourly cost of employing a temporary worker though H-2A is not vastly disproportionate to the current hourly cost of utilizing “migrant” laborers or even that of putting someone on the payroll.

However, as with any Federal program, H-2A is highly regulated and so the mountain of paperwork required for applying to and maintaining workers through this program is daunting.

Fortunately there are “for-hire” firms available to handle most of this red tape if one desires.

H-2A is not without its drawbacks and is almost certainly not for everyone for it places many requirements on employers and subjects participants to rather

stringent regulatory demands, such as regular inspection of facilities and payroll records. For more information about H-2A programs, I suggest reaching out to your local Farm Placement Specialist through the Virginia Employment Commission at www.vec.virginia.gov.

Mechanization

As mentioned in a previous issue of the Grape Press (Winter 2014), mechanization of certain vineyard operation may also offer some resolution to our labor issues.

There are few things that we do in the vineyard that cannot be mechanized, and machines run by a single skilled operator can often do the work of several laborers in a fraction of the time and per-acre cost.

But mechanization is not for everyone. The small grower — those under 10

acres (this is most of us) — will find the cost of these machines somewhat alarming and the return on investment for, say a mechanical hedger, may simply be too far out to justify the cash outlay.

Additionally, many of these machines are quite heavy and run on hydraulic power that requires minimum GPM flow rates.

Both of these conditions mean that they generally need to be mounted on larger, heavier tractors that can also be quite expensive.

Co-operative purchasing of machinery may be an option for a group of small growers but comes with a different set of challenges to overcome.

In particular, you and your co-operative partners will often need the same machine at the same time. Who gets priority? If the machine breaks down, who is responsible for fixing it? How will you transport it from site to site?

Many growers of premium quality grapes may also feel that the quality of work done by machines is sub-standard compared to that of a well-trained worker. This can be very true depending on the type of operation being performed and the design of the machine being used to perform that operation.

In larger vineyards, some variability in the quality of the work can be averaged out over the whole of the crop but in smaller vineyard blocks with smaller crops, the same variability will be far more noticeable



TOM KELLY

See PRESIDENT on page 3

PRESIDENT from page 2

and may have substantial impacts on quality.

All of this just goes to show that there are no easy answers to our current and impending labor issues. Certainly, larger vineyards will have an easier time by utilizing the possibilities offered by H-2A and mechanization.

Smaller vineyards and especially those in remote locations will likely find it harder and harder to get the work done in a timely fashion.

Training Laborers

Developing a statewide pool of trained, reliable laborers will be a difficult task and one that the VVA will be working on for years to come.

This is not to say that the VVA should put itself in the position of providing such labor, but it could perhaps develop a centralized data base of available labor

crews to help put vineyard managers in touch with crew leaders or to help facilitate labor sharing amongst members.

Additionally, VVA-organized training days could be held regionally to help train new and existing workers.

These day-long seminars, similar in nature to the pruning and IPM workshops held by VCE, might provide focused, task-specific training in a multitude of disciplines including canopy management techniques, pesticide safety (Worker Protection Standards), basic equipment maintenance, and so on in a bi-lingual format.

This is all a bit of “thinking-out-loud” on my part, but shows it the range possible ways the VVA can help deal with the issue of vineyard labor.

Another issue of imminent importance to our industry as we seek to increase vineyard acreage statewide, is that of sourcing “clean” virus free plant material. While we consider the various ways of incentivizing

new vineyard planting and of maximizing the potential of our current acreage, we must not overlook the importance of making sure all these vineyards are viable for the long term.

A Focus on Clean Plant Material

Even if you only want to replace a few missing vines in your own vineyard, wouldn't you like to know that in doing so you're not introducing some catastrophic pathogen into an otherwise healthy vineyard?

This was the focus of our recent 2016 Summer Technical Meeting held at Veritas Vineyards last month.

The meeting featured an impressive lineup of expert speakers from both the worlds of academia and production.

The program opened with an informative presentation by Dr. Tony Wolf on, “The Clean Plant Network and The Status of FPS Efforts to Obtain and Propagate Clean Germplasm.”

Next was a presentation by Josh Puckett of UC Davis on the efforts to establish and supply clean grape material followed by a talk from James Stamp of Stamp Associates Viticulture, Inc. on how to identify and secure quality plants.

We then heard from representatives from two premier production nurseries, Vintage and Double A, on steps they are taking to deliver clean plants to their customers. Finally, we heard about ways of keeping vineyards free of viruses and disease from Dr. Mizuho Nita of Virginia Cooperative Extension Services.

After lunch, the focus shifted to discussions about the recent freeze events and ways of improving the Virginia Commercial Grape Report.

All of this was followed by a mountaintop vineyard tour and wine reception and then a delicious BBQ dinner all presented by our host, Bill Tonkins, and the wonderful staff at Veritas Vineyards.

The perfect end to an amazingly informative and fun day!

As always, we thank all those responsible for such an impressive day, including our host, our speakers and our vendors.

But special thanks must go out to Dr. Tony Wolf whose enormous efforts, unparalleled knowledge and wide array of contacts throughout the larger national and international viticulture industry make this and all of the VVA technical meetings what they are — the best in the East!

Thank you Tony and thank all of you who attended the meeting. It is you who make our industry great.

Until next time...

It is never necessary to enter an ALBRIGI tank to clean it!



ALBRIGI
TECNOLOGIE

- The leading manufacturer of stainless steel tanks for the wine industry for the past 30 years.
- Made from the finest, mirror-polished stainless steel, specifically designed for wine making

GUARANTEED FOR 25 YEARS!

Ask about Picture Tanks!

For information on sizes and styles available
Visit www.spectrellising.com • Call 800-237-4594

SPEC TRELLISING

When Quality Counts

► **NO. VIRGINIA:** “We had dodged two frost events.”

By Dean Triplett
Greenstone Vineyard

Mid-June found us at the late post-bloom stage in most of our varieties here at Greenstone Vineyard. Growth in all varieties here is rampant and glorious – you wouldn’t have known that on the morning of April 6th and then again on the 10th, we had dodged two frost events.

Very frigid weather was predicted for the entire region. We got down to 26 and 31 degrees respectively on those two dates here in my vineyard.

Many growers took all manner of measures to try and ward off damage. Helicopters were sent up in some vineyards, while in others, hay bales were burned. Some folks tried spraying various products that purport to help vines survive frost events.

In my case, I went to bed with my figures firmly crossed hoping elevation, plus the fact that the majority of my vines hadn’t really started pushing buds very much, would work sufficient magic.

As it turned out, the only damage I experienced involved some leaves on one-year-old replants that had burst buds earlier than the mature vines. And even here, I didn’t see any young vines that had all the leaves completely burnt.

Of note, some of my three-year-old Merlot vines, which had cordons at five feet and shoots extended an inch or more, showed no signs of damage. From what I’ve heard from growers here in the north, especially east of the Blue Ridge, most everyone got through the events with little to no serious damage.

The only area that I heard had significant damage in Northern Virginia was in the Shenandoah Valley. After talking to growers at the summer technical meeting in Charlottesville, however, Central Virginia and the Eastern Shore did not seem to fare as well.

We went from what seemed like a prolonged chilly, rainy season in the first three weeks of May to full blown summer. From the last week of May to this writing on June 16 — with the exception of a beautiful three-day stretch from June 8-10, we’ve seen temperatures mostly in the mid to upper 80’s, but with a few days in the low 90’s.

Along with the warm temps and fairly

dry conditions, we’ve seen quite a bit of wind as well. Fortunately, I’ve been able to maintain a pretty strict spray program and the vines are looking quite clean. In my case I’ve put down 8 sprays which is one more than normal for me for this time of year.

Some growers I’ve spoken with have seen small amounts of Phomopsis, Downy and a little bit of Black Rot, but most folks seem to be in pretty good shape. Climbing Cutworms and other early season critter problems didn’t seem to be serious this spring either.

The hot, relatively dry weather of the bloom period has many of us thinking fruit set should be fairly heavy.

While we won’t know for a while yet, so far most of us are cautiously optimistic. I’ve received the following from some

of my fellow growers:

◇◇◇◇

Bill Freitag of Toll Gate Farm, told me on June 9 that, “it certainly was a hand-wringer of a spring for us.

“Once past the two frost events of early April, the vineyard came to life with a vengeance driven by the all the rain that followed. I took some measurements of temperature during the April frosts with a dual probed digital thermometer at a mid-vineyard location. Not surprisingly, one probe placed at the irrigation line (about 8 inches off the ground) and the other probe on the top catch wire (about 6 feet above the ground) showed differences of 5.5 degrees, with the upper probe being

See NO. VIRGINIA on page 5

WINCHESTER EQUIPMENT COMPANY
Agricultural, Construction, Material Handling Equipment

cima Since 1957 **Rinieri**

**Introducing a new partnership between
BDi Machinery and Winchester Equipment.**

▶ NO. VIRGINIA

NO. VIRGINIA, from page 4

the warmer of the two on those two cold nights.

"I had no real bud burst at that time, but everything was swollen and a lot of color was showing. So, despite mid-20 degree readings, we escaped serious damage. As growth began, the inflorescence appeared to be intact. Now that June is busting out all over, I have everything in bloom (actually just about finished) and I seem to have a different problem: my Cab Franc and Pinot Gris blocks have sprouted three fruit clusters on shoots in about 30 percent of those blocks. Never saw that before. Go figure.

"We finished our replanting program with 125 vines of various flavors to fill in the last holes in the canopy. The lay-down of new cordons has been very rewarding, at least at this stage. I finally have my wire covered again except for the latest batch of new plants.

The one major disappointment was that Vintage Nursery has stopped taking small orders. The just-finished Summer Tech meeting was encouraging in that those more local (New York) nurseries like Double A have active clean vine programs under way. So those of us needing a few vines could still get quality from well-established nurseries.

◇◇◇◇

Mitch and Betsy Russ of Russ Mountain Vineyard sent me a note on May 31st, saying "so far, so good," adding that they had not had any frost issues.

"Our lowest temp after bud break was about 35 or 36 degrees. No sign of Phomopsis or Downey. We had a few leaves with a few spots of Black Rot, but it seems to have resolved. We've sprayed six times thus far with the last spray a pre-bloom nutrient mix of Coron, Utilize, and Megafol, plus Mancozeb and Sulfur. This is new to us and comes from Mike Newland and Mark Fedor.

"We did note a peculiar pinkish lesion on a few leaves. We sent pictures off to Mizuho. We'll let you know what he says. We're just starting to see a little very early bloom on our clone 343 Merlot but not on the clone 181. The 343 is usually a little ahead of the 181."

◇◇◇◇

Nate Walsh provided an update May 24 from Sunset Hills Vineyard and 50 West

Vineyards:

"Overall, we are currently at an average of about 6" shoot growth, although this week especially shoots are rapidly expanding. The freeze and near-frost events did not do any significant damage at our sites. In the Shenandoah Valley, budbreak and growth are more uneven than usual, which we attribute to those events, and we do see trunk splitting here and there. However, all things considered, we feel very lucky. All varieties carry a high percentage of potentially fruitful shoots, particularly Viognier, which is very exciting.

"May rains have helped spread phomopsis, and spray timing has been crucial and hard to coordinate due to weather.

"This year, 50 West Vineyards planted a new 1.5-acre site to Albarino, and another 1.5 acres to Sauvignon Blanc. Sunset Hills made adjustments to some blocks – replacing Merlot with Cabernet Franc and Viognier with Vidal Blanc. (Sent on May 24th).

◇◇◇◇

Todd Henkle of The Vineyards and Winery at Lost Creek said on June 1 that his vines "weathered the April freeze events surprisingly well. Bud had broken only on our Chardonnay block, and only on half the block at that. We didn't have the ability to mitigate the temperature at all, so we resorted to spraying some foliar nutrients prior to the events in order to boost vine immunity. In all, looks like cluster volume is healthy in the Chardonnay.

"The excessive rains have us scrambling with our spray program. We already have applied two more sprays than at this same time last year. So far we seem to be on top of things, with the exception of a little phomopsis in the Chardonnay.

"The cool weather that has accompanied the rain has suppressed our canopy growth."

◇◇◇◇

Katell Griaud, consultant for Casanel Vineyards and Winery and Slater Run Vineyards (a new vineyard in Upperville), provided this report on May 26:

"I can say from what I've seen at Casanel is that they haven't been touched much by the frost, maybe a few buds in the Chardonnay but overall the vineyard looks great right now. Just a lot of rain and so maybe more sprays than last year as the

same time (although spring in Virginia is always very watery).

For Slater Run, overall the vineyard looks great too. I would say more buds in the Chard were touched by the frost, but there is still some fruit there. Their situation is a little different toward frost: their vineyard and especially Chard and Pinot is situated at a lower elevation than Casanel and I do believe there is a "cuvette" situation where cold air is staying and filling that "cuvette."

"I wonder if Casanel doesn't actually enjoy a better situation with all the houses around that might kind of provide a "warmer" situation. Slater Run is also spraying maybe a little more than last year at the same period (mostly manzate). They planted about 6 new acres of the same varietals (Chard, Merlot, Cab Franc, Cabernet Sauvignon, Petit Verdot) a few weeks ago, and we added a little bit of Sauvignon Blanc (which might be a struggle but we really wanted to try as the owners and myself like this wine).

"The new site, I think, has a better elevation than the existing vineyard and not in a "cuvette" situation with a better air-flow. They prepared the soil very well and added some lime. They are also adding lime in pellets in the existing vineyard to try to lower the pH for harvest and have a better pH/brix balance."

One grower I spoke with recently has had an issue with vine damage due to Rely application. Apparently the workers putting down the spray used more than double the recommended rate by accident and the spray came in contact with green vine tissue. I've seen vine injury due to accidental contact with Roundup before but never Rely.

Since so many of us have many workers in our operations at different times it's imperative that we read labels fully and communicate with our vineyard workers accordingly. Mistakes are easy to make and Lord knows I've made more than my fair share. And as I get older I don't rely on my feeble brain to remember application rates. My mantra these days is always, LOOK IT UP! That's why God gave us labels.

As always I want to thank my fellow growers for their input for this report. And as usual I'm behind in the vineyard and need to get my tail in gear and go out into the vines and plod along.

EASTERN VIRGINIA: Chardonnay loss “will likely be around 75 percent.”

By Paul Krop
Good Luck Cellars

Bud break among our grape varieties occurred about a week early compared to 2015, perhaps due to the above-average temperatures of February and March. However, those warm days were quickly followed by two late-frost events. Most of us in the Commonwealth experienced a low of 28 degrees early morning April 6 and 31 degrees on April 10.

We were hit hardest with shoot damage in Chardonnay, Cab Franc and less so in Chardonal and Traminette. Our losses in Chardonnay will likely be around 75 percent. Some secondary shoots are setting fruit, but scant.

The next untoward event involved some heavy periods of rain during bloom, which further reduced fruit set. That said, the heavy rain of April and May helped our new plantings from 2014, 2015 and 2016 get off to a good start. Now we're onto the busy

work of shoot positioning, leaf pulling and some shoot removal (while dealing with the poor fruit set in some areas). The Richmond reporting station recorded 9.8 inches of rain in May, the wettest ever. We're sixty miles ENE of Richmond, 90 feet above sea level, 2.5 miles west of Chesapeake Bay.

So far, we've kept DM, PM, BR and phomopsis at bay, but time will tell. We've done oil spray in March and six other antifungal mixes. We recently saw our first Japanese beetles of the season, which matches the timing of their invasion a year ago, plus or minus a week.

I noted last year that by June 19, their infestation had become heavy, especially near wood lines. At that time last year, I had to begin spraying with carbaryl. Good news is that many of these treed areas have been reduced since last year, allowing for better air flow and sunlight.

Temperatures so far this year show us to be behind in cooling degree days compared to an average year, but those very warm days in

February and March, I believe, are what led to the somewhat earlier bud breaks and thus the later frost damage.

The coolest morning temperature at our location so far this year was +11 degrees F, versus +1 degree F, 2014, and +2 degrees F 2015. The last two summers suggest to us less late-season appearance of leaf reddening and vine decline or death than we had seen in the past with PD, perhaps due to those cold winters. Our hardest hit with PD before that was Petit Verdot, documented by VA Tech (thank you Mizuho and grad students). The negative side of those extreme lows was late season vine death we experienced in some varieties where they had already set fruit and they later died and we noted trunk splits due to extreme cold. In addition, we have now seen crown gall for the first time developing at graft sites which we had not seen before. (? Cold injury and entry of A.V.?)

That's all the news that's fit to print now in our 12th leaf and 5th year as commercial winemakers.



**PREMIER QUALITY FROM
NORTH AMERICA'S LEADING VINE NURSERY**

Leaders raise the bar in everything they do and that's why Vintage Nurseries continues to set the industry standards for vine cleanliness, improved irrigation methods and product selection. In the last year alone, Vintage has begun work on a new, state-of-the-art greenhouse facility, changed from wood to eco-friendly recycled plastic storage bins and callous boxes, and introduced new sanitization techniques.

From our 2010 Protocol mother blocks, to our advanced testing lab, the innovative new Vintage Root Sock and more, Vintage Nurseries strives to provide the cleanest, healthiest vines in the industry. It's how we lead. It's how we grow.

**ECO-FRIENDLY PLASTIC
STORAGE BINS**



**VINTAGE NURSERIES'
ADVANCED NEW TESTING LAB**

**PLASTIC CALLOUS BOXES
FOR VINE CLEANLINESS**



SERVING THE WINE, TABLE GRAPE, AND RAISIN INDUSTRIES



WASCO
661.758.4777

PASO ROBLES
805.237.8914

SANTA ROSA
707.542.5510

800.499.9019

VintageNurseries.com



► SOUTHERN VIRGINIA



Courtesy of Paul Anctil

Damaged vines near a utility pole are surrounded by healthy plants at Sans Soucy Vineyards.

SOUTHERN, from page 1

agent, out to my property. I received a good evaluation, and he made a couple of suggestions to make my record keeping easier.

Little did I know I would be calling him for help in May.

Every year our local electric utility company sends letters informing residents that they will be conducting herbicide clean up under and around the power grid. Every year I respond, telling them to stay away from my grapes.

Every year I see a truck equipped with a tank and fire-hose like sprayer pull up near a utility pole on my property, spray from the truck across my 6 foot fence and drive off.

I keep things very clean below the wires and around the poles so they really don't have much to do on my property.

This spring several vines near that utility pole were clearly hit by some kind of herbicide. I had enough, so I called Mr. Jones and asked him to come out and evaluate the damage. If I couldn't get the utility company to respect my property, maybe he could.

Mr. Jones took photographs of the damaged vines, samples of the soil, (results still pending), requested the records from the contractor that applied the herbicide, etc. Basically the same information that

you and I are required to maintain for our spray program.

According to their records, the chemicals they used are different from what I use to control weeds. So hopefully there is enough residue to prove the source chemical.

The contractor's records say it was applied by a man with a backpack sprayer. Really? I have a 6-foot high fence at that location.

I also clearly remember seeing the truck with the tank and spray gun in the vicinity of the pole. And most frustrating, the official records clearly indicate that my property is on the "no spray" list but it was ignored anyway!

My first letter of complaint to the electric utility company went unanswered. I asked Mr. Jones if he had a different contact person than the one I was using. He said I had the right person but would verify my information. Amazing, I got a reply the next day!

I sent a letter listing my damages which included not only replacing the vines, but the lost product from the vines for three growing seasons, labor, etc. Shortly after that I got a one-line response from the contractor saying my complaint and claim had been received, and they would get back to me.

So, the point of all this? By having my spray program reviewed and evaluated by VDACS I demonstrated to Mr. Jones that I strive to do things properly. I established credibility. He provided a service: free soil analysis. He filed and notified the Electric Coop of the situation.

If I don't get proper financial relief/recovery for my damages, he will be a very credible resource in court.

And my county extension agent was spot on. The VDACS pesticide inspection program can be a valuable resource.

Winemaking Consultant

www.winemakingconsultant.com

Thomas J. Payette

Over twenty-five years of winemaking in Virginia, Napa and East Coast

Multiple Governor's Cup Winner
2011 Wine Productivity Trophy
"1999 Winemaker of the Year"

Phone : 540.672.0387

winemakingconsultant@gmail.com

Winemaking solutions focusing on:

Winery and vineyard start-ups

Still and sparkling wines

General winery issues

Food Science Degree – Virginia Tech

When, How and Why To Remove Clusters

By Jim Law
Linden Vineyards

The 2015 vintage presented us with the most perfect Merlot grapes I have ever experienced. Cool, dry days allowed us to pick at our leisure. Skin tannins ripened synchronistically with flavors and chemistry. One could easily fantasize about the resulting wine.

As we were winding down the Merlot harvest, I had almost forgotten about the “Merlot half row” planted in a Chardonnay block years ago after a lightning strike in the 1980s took out part of a Chardonnay row. I had decided to plant Merlot experimentally.

Aaron and I threw a dozen lugs in the back of the truck, and with great anticipation started finishing the Merlot harvest. It took about 30 seconds to realize that we had a problem.

Masses of clusters were intertwined, requiring us to physically force them apart, thus breaking berries. There were lots of pink berries lodged in the shaded sides of the clusters that never saw daylight. There was even some sour rot in a vintage where it hadn’t rained for weeks. Worse yet, the grapes had no flavor. They tasted like the table grapes one buys at the grocery store.

This half row of Merlot was also the “forgotten row.” We had overlooked it during cluster thinning back in July. It confirmed for me just how much of a difference thinning makes on wine quality.

Over the years I have had many approaches to cluster thinning. As with most new growers I first tried the usual “one cluster per shoot” method. I soon realized that this made no sense as cluster sizes varied enormously along with shoot size and vine capacity.

I even attempted to leave a certain number of clusters per vine. In fact, I found that using numbers initially helped me make good wine, but it prevented me from making great wine.

To grow great wine, one has to respect the individuality of each vine and of each block. This requires an experienced staff that understands the goals and consequences not only of yields, but of cluster placement.

I find that the ideal time to drop clusters is at lag phase which is about 6 or 7 weeks

past bloom (mid to late July usually). At this time berries are less likely to compensate (enlarge) and the cluster architecture, position and size is evident.

Young vines or stressed vines may be thinned earlier than lag phase. We remove clusters in baby “non-bearing” vineyards before bloom to conserve energy. An additional “fine-tuning” green harvest for red-fruited varieties happens at about 90 percent veraison. Less than 5 percent of the crop (green/pink clusters) is removed at this time.

Our mantra in lag-phase thinning is “aeration.” Any nesting clusters or parts of clusters are removed so that one can easily identify one cluster from another. Ideally, no clusters touch one another.

Wings or shoulders may or may not be removed depending on cluster architecture, position and crowding. If wings are behind in maturity they will be dropped during the final red-grape, 90-percent veraison thinning.

Small clustered varieties such as Petit Manseng, Riesling, Sauvignon Blanc and some Chardonnay clones need very little thinning. We spend the most time thinning in Merlot, Cabernet Sauvignon, clone #4 Chardonnay, and Petit Verdot.

Cluster thinning is considered fine-tuning in terms of yield control. Yield goals should have been addressed earlier, during pruning and shoot thinning. If we find ourselves dropping a significant quantity of fruit, then we haven’t done a good job earlier in the season.

An exception might be in the case of late ripening Petit Verdot and Cabernet Sauvignon. Fifty percent veraison dates are recorded each year. If the current vintage is lagging way behind, there could be difficulties in getting these varieties fully ripe.

The decision could be made to drop more clusters so the vines can ripen a smaller crop faster. All these decisions are based on the history of each vineyard block.

In wet harvests, aeration thinning can have a significant impact on avoiding rot. In any vintage it will improve quality as a result of more synchronistic ripening. Additionally, picking is a lot easier and faster with less bruising and berry breaking.



Courtesy of Mizuho Nita

An up-close look at Gill’s mealybugs, which serve as a vector for viruses.

Update: Vine Viruses and Strategies

By Taylor Jones and Mizuho Nita
Virginia Tech

Among perennial crops worldwide, the greatest number of viruses (more than 60) have been detected in grapevines. A majority of these viruses are considered minor threats to production, in that they either display less economic significance or have limited geographical distribution. However, several viruses are considered a major threat due to high economic costs.

Examples are the grapevine leafroll complex, rugose wood complex, degeneration/decline disease complex, and fleck disease complex. Insect vectors transmit many of these diseases, and the most important one to consider is grapevine leafroll disease transmitted by mealybugs (Pseudococcidae) and scale insects (Coccidae).

These vectors have been found in multiple sites in Virginia and options for control are available. Recognizing the impacts of virus diseases, many grapevine-growing regions of the United States have implemented virus surveys and vector research to document the

See *VIRUSES* on page 9

Approaches to Fighting Mealybugs

VIRUSES, from page 8

presence and spread of viruses in vineyards. Until recently, very limited information has been available about grapevine viruses and associated vectors in Virginia vineyards.

A statewide survey of commercial vineyards in Virginia and surrounding states was conducted during the 2009 through 2014 seasons for the presence of 14 grapevine viruses:

- Grapevine leafroll-associated virus (GLRaV) -1, -2, -3, -4, -4 strain 5, -4 strain 9
- Grapevine rupestris stem pitting associated virus (GRSPaV)
- Grapevine virus A (GVA)
- Grapevine virus B (GVB)
- Grapevine fleck virus (GFkV)
- Tomato ringspot virus (ToRSV)
- Grapevine Pinot Gris virus (GpgV)
- Grapevine vein clearing virus (GVCV)
- Grapevine red blotch associated virus (GRBaV)

Random petiole samples were collected from different locations on a vine (e.g. petioles from random shoots on the vine all over the canopy, including the top, middle, bottom and edges) and pooled for testing from vineyards in Virginia and surrounding states.

Out of 722 grapevine samples, GLRaV-1, GLRaV-2, GLRaV-3, GLRaV-4, GLRaV-4 strain 5, GLRaV-4 strain 9, GRSPaV, GVA, GVB and GFkV were detected in 2, 9, 23, 0.8, 0.4, 0.4, 51, 4, 2, and 0.8%, respectively. Out of 574 grapevine samples tested so far, ToRSV was detected in 1.5% and GRBaV in 22%. No samples tested positive for GpgV or GVCV.

Given the large presence of GLRaV's, multiple field trials were conducted to examine the efficacy of foliarly applied insecticidal treatments to either prevent the spread of mealybugs and associated viruses within a field and/or reduce existing mealybugs population.

Reduction of existing population: At one commercial vineyard site in central Virginia, a single row of Chardonnay was examined for the effects of Acetamiprid (Assail 2 oz/A) and M-Pede (insecticidal soap) in the elimination of the mealybug vector during the 2013 and 2014 seasons. Insecticides were applied twice during the season, at bloom and two weeks after the first application. No significant differences ($P < 0.05$) were found between the treatments or the control.

A second field trial was conducted at a

separate vineyard in the same location from 2012-2014. Treatments were applied soon after bud break and at bloom. Dinotefuran (Scorpion, 0.292 L/ha), Dinotefuran (Movento 6 oz/A), β -cyfluthrin (Baythroid 3 oz/A), and low and high rates of Chlorpyrifos (Lorsban 1.6L/ha) were examined.

No significant differences were found in 2012. However, in 2013 and 2014, Scorpion, Lorsban and Movento-treated vines resulted in significantly lower mealybugs counts than the control or Baythroid treatments.

In all, Movento and high rate of Lorsban were the most effective treatments at eliminating the mealybug population. (Please note that the use of Lorsban as a foliar insecticide is NOT allowed as of 2016. This was a proof of concept experiment.)

Prevention of movement to new vines:

A research vineyard at the AHS Jr. AREC in Winchester containing healthy young vines interplanted with old, GLRaV-3 positive vines was used to examine the control of mealybugs using Dinotefuran (Movento 6 oz/A) and β -cyfluthrin (Baythroid 3 oz/A) and the resulting spread of GLRaV-3 to the healthy vines during the 2012, 2013, and 2014 seasons.

Applications were made at bud break and bloom. In all three seasons, control and Baythroid-treated vines maintained significantly higher populations of mealybugs ($P < 0.05$) than the Movento-treated vines. No evidence of mealybug movement to healthy, young vines was observed, but GLRaV-3 did spread to healthy vines regardless of treatment. Mealybugs were first found moving to new, healthy vines in 2013 and by the end of 2014, all vines were positive for

GLRaV-3, regardless of treatment.

Also, a plot of Merlot at the Winchester AREC was used to evaluate the efficacy of Dinotefuran (Movento 6 oz/A), β -cyfluthrin (Baythroid 3 oz/A), and low and high rates of Chlorpyrifos (Lorsban 1.6L/ha) to prevent the entry of GLRaV-3 into this vineyard.

The timing of application was at bud break and bloom. In all three years, no significant differences were found between treatments since mealybug numbers were consistently low each year.

However, by the end of the third year, panels of all treatments were infected with GLRaV-3, suggesting that although mealybug population was very small, these materials were not able to prevent the entry of GLRaV-3.

In summary, 12 of the 14 viruses tested for are present in Virginia with GLRaV-3, GRBaV and GRSPaV being the three most common in mid-Atlantic states.

With the high prevalence of virus-infected vines, integrated pest management is critical to prevent the further spread of these viruses.

Current results show promising control using new, systemic products such as Movento, and a broad contact insecticide (Baythroid in our case) did not suppress mealybug population.

However, even with effective treatment, GLRaV-3 can be spread to new vines because in order for the insecticide to be effective, the vector needs to feed on the vine and it takes several hours for insecticide to kill the vector.

Thus, it is important to monitor both virus and vector population in your vineyards, and when you decide to replant vines, protection by insecticide(s) has to be provided for both existing and new plantings.

WINCHESTER EQUIPMENT COMPANY

Agricultural, Construction, Material Handling Equipment

Since 1957

VINEYARD TRACTORS AND SPRAYERS

New Holland - Kubota - Durand Wayland

Tim Gano

Cell: (540) 533-5667

121 Indian Hollow Road Winchester, VA 22603

540-667-2244

www.winchesterequipment.com

Seeking Consensus on Industry Issues

By Ben Rowe
Virginia Wine Council

The 2016 Legislative Session presented a number of obstacles and challenges for the Virginia wine industry, and raised a number of questions about the rights and privileges provided under the farm winery license.

As the industry continues to grow and mature, so has our visibility to regulators and legislators. In an effort to stay ahead of the myriad issues facing our industry, the Virginia Wine Council (VWC) is working to foster discussion and build consensus among farm wineries and cideries, wineries and vineyards.

This summer, the VWC will hold a series of roundtable discussions across the Commonwealth. These events are intended to bring all members of the industry together for discussion, collaboration, and networking regarding four pivotal topics.

The first topic is a discussion of what it means to be a farm winery. We recognize that there are event venues masquerading as farm wineries to take advantage of the

benefits of a farm winery license. The question then, is do we, as an industry, need to further define a farm winery?

The second topic involves an analysis of contract winemaking, now that we are three years out from the legislation that codified the practice. We are discussing what is working, and what we can do as an industry to strengthen this tool to support Virginia wine.

The third topic is related to the development of the Virginia Vineyard & Orchard Grant Fund. During the 2016 session, legislative language was introduced to establish a grant fund for the development and expansion of Virginia vineyards and cider orchards. The legislation was then carried over to 2017, so this is your opportunity to discuss different approaches to craft stronger legislation to take back to the General Assembly for passage.

Lastly, we will discuss the relationship between farm wineries and on-site restaurants. Having a restaurant opens a farm winery to new lines of business decoupled from the winery license, but also exposes the winery to new levels of risk,

regulation, and regulatory scrutiny – is it worth it?

We have already completed our first successful roundtables at Barboursville Winery on May 26, and Lake Anna winery on June 21.

Additional events will take place July 14 at Rappahannock Cellars, Aug. 9 at Narmada Winery and finally Sept. 9 at Afton Mountain Vineyards.

At the conclusion of our final event, we will compile all of the feedback and suggestions and create a guidance document to share with the entire industry as we craft legislation for the 2017 legislative session.

As a farm winery or cidery, winery or vineyard representative, these events are your opportunity to discuss the aforementioned policy questions that affect you and the greater industry; to build connections with your colleagues; and to enjoy a networking lunch as well.

Please look for our upcoming event notices in the VWC newsletter and make plans to join us for at least one roundtable discussion to collaborate with your colleagues.

BUSINESS ROUNDUP

Ensuring Clean Plant Material

Whether you're planning on a small replacement block or have your eye on establishing an entirely new vineyard over the next few years, the advice offered at the VVA's Summer Technical Meeting last month brought home the necessity of doing your research to secure clean plant material.

Experts in the field — including Josh Puckett, the production manager at Foundation Plant Services, University of California, Davis — provided overviews on advances and issues in the ongoing effort to detect viruses such as grapevine leafroll-associated viruses, provide disease-free plants and offer certifications.

Representatives from two nurseries — **Double A Vineyards** and **Vintage Nurseries** — also discussed the measures their companies have taken and plan to take to ensure clean material.

Haymore Takes New State Post

Dr. Basil I. Gooden, state director for the U.S. Department of Agriculture, Rural Development, for the Commonwealth of Virginia, will succeed Todd Haymore



Vintage Nurseries, which is on track to test 75,000 grapevines in 2016, says it's the only nursery with its own in-house virus testing lab. The state-of-the-art facility is part of Vintage's aggressive program to provide clean, healthy material, which includes extensive testing and food-grade sanitation practices.

Courtesy of Vintage Nurseries

as Virginia Secretary of Agriculture and Forestry in September.

Gov. Terry McAuliffe announced last month the appointment of Haymore, a strong supporter of the Commonwealth's vineyard operators and wineries, to be the next Secretary of Commerce and Trade. Haymore succeeds Maurice Jones.

McAuliffe hailed Haymore for making the

agriculture and forestry sectors "innovative and robust sectors of the new Virginia economy."

Haymore has been a regular attendee at the Virginia Vineyard Association's annual winter technical meeting, making the presentation for the VVA's Grower of the Year award. He has served as Secretary of Agriculture since 2010.

Vineyard Field Trip

Visit innovative vineyards in Central Virginia

- ▶ **WHEN:** Aug. 10
- ▶ **WHERE:** Early Mountain, Loving Cup and Pollak vineyards, Carter Mountain Orchard
- ▶ **FEE:** \$75 per participant
- ▶ **REGISTRATION DUE:** July 22
- ▶ **CONTACT:** Tremain Hatch, thatch@vt.edu

The Virginia Cooperative Extension at Virginia Tech will sponsor a daylong tour that will showcase a range of vineyard operations, including a diversified fruit farm and certified organic vineyard.

This trip will offer educational vineyard walks and an opportunity to socialize with fellow grape growers. We will go directly to the vineyard and see vine training systems at about veraison. Growers will explain their operations and extension specialists will offer seasonal updates.

Group transportation for the entire day will be offered from North Gate Vineyard in Purcellville.

Participants may also meet at Early Mountain Vineyards in Madison — one of the vineyards we'll be visiting — if it's more convenient.

This is a rain or shine event with an outdoor component, so please dress appropriately.

Tentative Agenda

▶ 6:45 a.m.: Northgate Vineyards (16031 Hillsboro Rd., Purcellville, Va. 20132) for registration. The coach will depart promptly at 7 a.m.

If you're joining the group at Early Mountain Vineyards, please be there by 8:50 a.m.

▶ Early Mountain Vineyards (Intense Soil Modification). 6109 Wolftown-Hood Rd., Madison, Va. 22727

▶ Carter Mountain Orchard (Tree Fruit/Vineyard crossover)

Lunch (provided)

▶ Loving Cup Vineyard and Winery (Organic Grape Production)

▶ Pollak Vineyards (Vine Training Conversion and The Monticello Wine Trail Winemakers Research Exchange)

▶ 4:50 p.m. Return to Early Mountain Vineyards (drop-off)

▶ 6:45 p.m. Return to North Gate Vineyard

REGISTRATION FOR AUG. 10 VINEYARD FIELD TRIP

Contact Name: _____

Additional Attendees (Names): _____

Where will you join the tour? (check one)

- North Gate Vineyard Early Mountain Vineyards

Address: _____

Contact email (to be used for registration confirmation and schedule updates):

Phone: _____

Payment enclosed:

Number of attendees _____ x \$75/each = _____

Please make check payable to "The Virginia Tech Foundation" and mail this registration and check to:
Tremain Hatch, 595 Laurel Grove Road, Winchester, Va. 22601.

Support the VVA!

The Virginia Vineyards Association is a member-run organization, so we're only as good as our volunteers. We need your help in all aspects of our work.

As a start, consider volunteering for any of our committees:

- Communications
- Sustainability Workbook
 - Education
 - Legislative
 - Research

Participating in the VVA is one of the best ways to learn more about your fellow growers and the art and science of viticulture.

Interested?

Email us at VaVineyardsAssoc@gmail.com