

# GRAPE PRESS

Spring 2017

The Quarterly Newsletter of the VIRGINIA VINEYARDS ASSOCIATION

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## GROWER OF THE YEAR



Ruth Saunders of Silver Creek Orchards, the WA's 2017 Grower of the Year, discusses the challenges and opportunities that come with grape production.

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Chris Garsson

President's Corner

## Playing The Long Game

By Nate Walsh  
*Walsh Family Wine*

Midway through this year's Winter Technical Meeting, I had the pleasure of trying two distinct wines which stand, among a handful of others, as foundational forerunners of Virginia wine: a 1985 Montdomaine Cabernet Sauvignon and a 1984 Shenandoah Vineyards Chambourcin.

The wines surprised me. Both not only held up to their age but showed an intrigue and subtle vibrancy that challenged what I thought I knew about 30-year-old Virginia reds. These wines were something special.

The age of "modern" Virginia viticulture is approaching 40 years, and, with the continuous and oftentimes rapid growth of wineries and wine sales in Virginia, our grape and winegrowing has developed into a vibrant yet challenging industry with a set of strengths and weaknesses unique to our region and our emerging place amongst the world of wine. We have capable and accomplished industry leaders working to address

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## Replanting: It's Inevitable

Viticulture in Virginia may leave you no choice

By Jim Law  
*Linden Vineyards*

One challenge of Virginia viticulture is winter damage and the resulting vine loss. The winter of 2014 was especially tough on young vines. In many cases the decline and eventual loss was agonizingly slow. We are still having to pull and replant a not-so-insignificant number of vines.

Additionally, between 2010 and 2012 we had vine losses of up to 2 percent a year in our Chardonnay due to North American

Grapevine Yellows. I mention this only because circumstances seem to have made me an unwilling vine replant expert. I would like to share some of my experiences.

### Replant or Start Over

After the winter of 2014, it took me too long to make the decision to start over with some blocks rather than replant missing vines. Vineyard blocks four years old and younger took a big hit with anywhere from 20 to 60 percent vine loss. Unfortunately, they didn't all

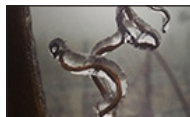
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**Tracy Kirkman**

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:**

Bill Freitag, Karl Hamsch,

Paul Krop, Jim Law,

Mizuho Nita, Ben Rowe,

Christine Wells Vrooman



**VIRGINIA  
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## PRESIDENT'S CORNER (cont.)

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these challenges. I sometimes worry, though, that while we continuously adapt to the changing landscape, we lose sight of the long game.

Today, we struggle for acreage. We need more. We're nearly salivating for it. We need to expand our vineyards and plant new ones. But let's not let the rush of demand obscure the fact that what we need is not merely acreage, but quality acreage. It won't work any other way.

### **Quality Acreage**

Any seasoned grower can attest to the vast difference between managing Chardonnay on a warm rocky hillside to Cab Sauv in a wet swale. Any winemaker, customer, and even accountant can attest to it, too. And I don't mean premium winegrowing — all grapegrowing is easier and more economically sustainable on appropriate sites.

This should be common sense, but it's often hard to dissuade new growers from planting for reasons they cannot see or do not understand. Ultimately, the difficulties of that concave Cab Sauv swale will trickle down and decrease, year after year, the viability of the grapegrowing operation itself.

Wine and grapegrowing, as in all of agriculture, is a low-margin game. We've got to have the deck stacked in our favor. The lowland, cradling one brutal frost every seven years, can make the entire difference.

We have vastly variable sites, leading to variable wine quality, and often, to variable opinions of the industry as a whole. We have great sites, we have poor sites, and we mostly have sites we've yet to understand.

In some ways it can't be helped: this is a sign of our relatively young age as an industry. But in many cases, a lack of individual determination, competition, and market demand, all of which should be insisting that we locate and nurture premium vineyards, has often led to some indifference, allowing our great sites and great wines to float astray, homogenizing with the good and average.

Let's not let that happen. We have vastly variable sites, yes, so while on the one hand we strive to improve the efficiency and health of our sites as a whole, let's not forget to locate, develop, and celebrate the truly great ones.

Why wouldn't we?

We should recognize that in the realm of Virginia agriculture we have it quite good.

### **Valuable Resources**

We have a supportive state government, mostly supportive local governments and significant research and grant funds. We are also supported by regional industry resources that other sectors ought to be (and are) jealous of: Virginia Cooperative Extension, Virginia Wine Board, Virginia Wine Marketing Office, Virginia Wineries Association, and Virginia Wine Council.

In addition, we benefit from new programs such as the Wine Research Exchange, as well as great regional "wine trail" marketing associations which organize and empower communities of growers and wineries.

Finally, and most importantly, we have a backbone of experienced growers, consultants, and winemakers who can be credited with creating and shaping our current collective wisdom, who have stoically shoot thinned, leaf pulled, and harvested their way through each wet spring, drought summer, and hurricane fall.

These growers are our colleagues, and, I would argue, more readily offer advice and perspective than is available in other agricultural industries.

It would be a mistake to overlook the fact that hardly any other agricultural entity in Virginia enjoys such substantial industry participation and support, not to mention the press, accolades, and occasional five-course wine dinner to remind us of how, for the most part, people enjoy and celebrate what we're doing. Your peach-growing neighbor rarely gets visits from The Washington Post, and it's not because what he's doing is any less important.

These resources exist to help us succeed, and to help us address challenges and build on success. They have been assembled by a group of dedicated, forward-thinking leaders who have led the industry from its early incarnations to what it is today.

Which is what those two 30-year-old bottles of wine got me thinking about. A 1985 Cab Sauv and a 1984 Chambourcin. Both not only holding up, but, much to my surprise, compelling, thought-provoking, and even thrilling. Great wines.

If our winegrowers were capable of such wines over 30 years ago, without the support, experience, and resources that we have now, then how, 30 years in the future, will we rate what we're doing today?



**NATE WALSH**

► **EASTERN VA.:** “Leaf removal timing is still a tough subject for me.”

By Paul Krop  
Good Luck Cellars

As this winter passes into the books, we look back at temps that went no lower than the low teens, and there were not many of those.

Of course, we did have that 12-inch snowstorm in early January (the 6th and the 7th), which was accompanied by high winds and drifts up to 18 inches here in the Northern Neck. The storm was mostly coastal and didn't have much effect on points farther west.

Since then, we've seen some ups and some downs, but temps have mostly been above normal. Our pruning (some double, some single, depending on variety) is 75 percent done.

No bud swell yet, at least not as of mid-March, but plenty of sap's already flowing. Buddbreak (usually our Chardonnay) is

likely to be about two weeks early.

On Jan. 24, we attended the pruning seminar led by Dr. Tony Wolf, Chris Hill, and Tremain Hatch at Honah Lee Vineyard, near Gordonsville. It was enjoyable and instructive to get some different opinions and compare notes with some who have been at this much longer than we have.

Especially interesting was a vineyard block of Viognier on 12-by-5 spacing which produces five to six tons per acre by using a “solar collector”-type system of training as described by Chris Hill and Janette Smith. And, as it requires only a VSP trellis, it keeps it simple for us and our field people.

The VVA Winter Technical Meeting in C-ville Feb. 23 to 25 had some valuable take-homes.

Tremain's Vineyard Financial Calculator was a good review of the inputs to the bottom line in making the right fiscal decisions. Size does still matter, and as

Richard Smart said to the VVA a few years back, you Virginians need to grow the size of your vineyards/wineries if you're ever going to be competitive!

Early trunk disease protection principles are always important, as reviewed by Jonathan Kaplan of Sacramento State University. We tend to forget that these diseases don't show up for 10 years after inoculation. Then, when vine decline shows its ugly (and premature) head, it's too late to do much.

Proper cut angles at pruning and painting the larger cuts is still *nota bene*. Topsin still seems to be a good recommendation.

The discussion of low-dose antifungal applications by Mizuho Nita and Tony Wolf was interesting. In some species (Norton was the winner) it appears adequate for control.

However, most species in our climate wouldn't fare so well with low-dose applications.

Of course, any discussion of antifungals provides a good reminder that proper dosing per acre, timing with weather events, proper pH of materials, and rotation of sprays to prevent development of resistance are all important.

Leaf removal timing is still a tough subject for me. With our 12 varietals, when it comes to the benefits of pre-bloom and early bloom, we'll probably stick with removal around berry set.

We might try early bloom only on our Vignoles, with their tight clusters, to reduce cluster compactness.

We'll approach the expected yield loss with caution, realizing that all species will behave differently, and leaf pullers will have different skills.

This latter concern segues to my last point, which is manpower (womanpower) and thus our decision to buy a power hedger, tractor-mounted.

Using our gas-powered hedger in the past has been very tiring for the strongest of field workers and is inherently dangerous. We don't need to make the hand surgeons any busier!

We'll also use a mechanical leaf puller later in the season, cautiously, when the clusters are a bit more mature and can avoid stripping off clusters we don't want to lose.

Look forward to seeing you at the Summer Technical. Many thanks for a great winter VVA meeting. Always something to learn and opportunities to see both old and new friends.

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## ▶ CENTRAL VA.: “It’s no surprise that operators had both eyes on the thermometer.”

By **Bob Garsson**  
VVA Communications Chair

**O**n the ride into Charlottesville for the Virginia Vineyard Association’s winter technical meeting, flowering trees and forsythia could be seen in full bloom. And that was during the last week of February.

With days of temperatures in the high 60s and even 70s during a time that should be subject to the depths of winter, it’s no surprise that central Virginia vineyard operators had both eyes on the thermometer — except when they were looking at the forecasts.

Jeff Sanders of Glass House Winery said his main concern at the beginning of March was budbreak.

“We have bud swell and weeping vines, so the sap is running,” he said then. “Now a very cold night, say below 23 degrees Fahrenheit, will likely cause damage, but we hope for nights in the 25-to-30-degree range to slow down budbreak.”

Jeff said that what he is doing “is what we do every year, which is to delay pruning” for as long as possible. “And when we prune, we leave long canes so that the tips that bud out first are what we will ultimately snip off.”

“We will hold off on pruning the couple of varieties we spur prune until the last second,” he added.

### New Approaches

The prospect for early budbreak and late frost is a concern for many vineyard managers, and those issues were addressed at the VVA’s Winter Technical Meeting by Michela Centinari of Penn State University.

She discussed two new approaches in particular (in addition to traditional practices such as delayed pruning): Amigo oil, which can be used to delay budbreak, and KDL, which may lower the freezing point of vine cells.

Both approaches seem promising. Carrington King of King Family Vineyards and Bill Tonkins from Veritas Vineyard and Winery both said they are now using Amigo oil.

“I am grateful for this cold snap,” Bill said in mid-March. “I’m

hoping it keeps budbreak in check because spring has run away with us. I have also sprayed Amigo oil on the Chardonnay at Ivy Creek in the hope to delay budbreak in that frost-prone area. This follows the evidence we saw at the Winter Technical Meeting.”

By mid-March, Carrington said, bud swell in the Merlot and Chardonnay was evident, although the vines had thankfully not budded out. “We have applied an 8 percent solution of Amigo oil in many blocks as a trial to see if we can delay budbreak by a few days,” he said.

Carrington said that King Family’s latest plantings brought the vineyard’s total acreage up to just under 50 acres, and “we have our fingers crossed that this week of cold temps will hold off budbreak for another 10 days.”

### Up in the Air

However, he noted that frost has come as late in the season as May 22, and so he’s glad that they installed a new wind machine to cover as many as seven acres of vines.

“We plan to use helicopters on our other blocks if needed,” Carrington added. “As far as trying new methods to improve efficiency this year we have been using Pellanc Fixion vine-tying tools for tying down cane-pruned vines and have found they are well worth the investment.”

The additional acres have brought with them the necessity of mechanizing as much as possible, and so King Family has added a Pellanc leaf remover to the tractor shed, which they hope will help them in removing leaves a bit earlier this growing season.

Ankida Ridge’s Christine Wells Vrooman said at mid-March that her vines’ buds were “all still tucked away in

their protective fuzzy blankets, for which we are so grateful.”

She reported a morning of hoar frost — a frequent occurrence around her previous home in upstate New York, but something she has seen only three times in 30 years in Virginia. In addition to hoar frost, she observed (and photographed) vine tendrils coated in ice.

Budbreak, added Jeff Sanders, will now undoubtedly be early, though how early is an open question. In the meantime, he added, “We feel like it is a tightrope from now through the end of frost season.”



Christine Wells Vrooman

**Ice coats a tendril at Ankida Ridge Vineyards in Amherst County in March.**

# Herbicide Drift Can Happen to You

By Jim Benefiel  
Vice President, VVA

About a year and half ago, I wrote an article for Grape Press advising growers to be pro-active in talking to their chemical suppliers about the hazards of herbicides around grapevines. I suggested you take a map of your vineyard to your supplier to show him your vineyard location (I did) and leave a copy of the article citing grapevines' sensitivity to selected herbicides (I did).

Despite my precautions, my vineyard was hit by herbicide drift last year. The loss was eventually calculated at six tons. However, I was able to recover most of the revenue loss from the event. Here's what I did, and maybe it will work for you, if (unfortunately) your vineyard is hit by a neighbor's herbicide.

About the first week of June, I noticed that some of my vines were showing deformed leaves.

Wandering the vineyard, I noticed that the worst incidence came from one edge. After about a week, I noticed that some of the clusters were aborting, and that thistles in the property across the fence line were dying. Each of these events indicated to me that I had been the subject of herbicide drift.

## Documenting Damage

I immediately began taking pictures and even videos (via cell phone) with commentary of the extent of the damage. I brushed up on herbicide damage. I met with the landowner, who acknowledged that the subject field had been herbicided, and gave me the name of the applicator.

Then, I called in the Virginia Tech Extension experts and collected samples in their presence, both of thistles at the fence line and of leaf tissue in the vineyard, which I immediately handed over to them, so that they became the custodians of the samples.

In addition to those steps, I contacted my chemical supplier, and filed a claim with the VDACS Office of Pesticide Control. Lastly, I notified my winery customers of the blocks affected. When pressed, I hazarded a guess as to the ultimate impact (on yield, but not quality).

After that, I contacted the applicator — a well-known community supplier of agricultural products. At my request, they produced records showing that the subject field had been treated with herbicide during the last week in May.

I met with the applicator's Incident



Courtesy of Jim Benefiel

**A block of vines at Benevino Vineyards is just starting to show the effects of herbicide spray drift. Jim lost six tons of grapes, but documented everything and was able to recover most of the revenue loss.**

Manager. Yes, they are large enough to have an Incident Manager, and they incur enough of these incidents that they self-insure. The spraying was conducted under acceptable conditions on the label of the product (wind speed, temperature, humidity).

We walked the vineyard, and I showed them the pictures I had started taking, and advised that I would be following these with updates at regular intervals. None of the conversations were belligerent. I was merely establishing and maintaining an open channel of communication for whatever the evidence would show.

In the interim, I walked the property with the VDACS pesticide investigator assigned to my case, and I took the advice of my chemical supplier by performing two foliar nutritional sprays. This was done with the hope that the vines would sufficiently ripen the fruit remaining in the affected portion of the vineyard — approximately three acres evidenced some form of damage.

The samples that came back from Virginia Tech's lab showed both the thistles and the grapevines had 2,4-D (auxin) concentrations, suspected by both them and my chemical supplier, and confirmed by the applicator. This herbicide is used widely to control broadleaf weeds, while minimizing any effect on grasses.

The neighbor's field was pasture. Though the sprays were conducted under acceptable conditions, the fact that the applicator was very well-established and had long been in

the community may have helped my case. It appeared that the ester formulation of the 2,4-D had volatilized the day AFTER the application when temperatures rose, and drifted into our vineyard. I provided the applicator with this information, and continued to update them monthly.

At veraison, I first noted that new well-formed leaves were emerging from many of the affected vines. I began sampling berries, and found that the grapes at the affected end were up to 2.5 brix below the grapes at the other end.

Fortunately (and perhaps, because of the foliar nutrition spray), I had sufficient time to harvest that the brix of the affected grapes caught up with that of the unaffected grapes. However, with the aborting of clusters, I knew I would not make up the yield difference.

## Tracking Yields

I advised the pesticide applicator that I would keep track separately of the yields from the two halves of the block — one half was adjacent to the fence line and the other half was at the opposite end.

I have been keeping records of yields by row for about 10 years now, and shared my records and my intended 2016 calculations with the applicator, which, by the way, deducted from my lost revenue the cost of labor that I would not incur from picking.

Shortly after harvest (the damage extended

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## IN THE VINEYARD

*HERBICIDE, from page 5*

to two varieties), I filed my “case” with the applicator. Within a day, I was informed that a check was authorized for the full amount of my claim, and the check arrived a few days later.

Why was I successful in getting compensation for the vineyard damage? Perhaps a range of reasons:

- ▶ I was dealing with a well-established applicator who understood herbicide drift.

- ▶ I involved many experts and advisors, rather than coming to my own conclusions, and “forcing” them on the applicator.

- ▶ I took pictures and videos of the affected portion of the vineyard as the season progressed.

- ▶ I had kept extensive production records for many years to show historical production.

- ▶ Early on, I shared with the applicator the method I would use to calculate ultimate damage.

- ▶ I kept the applicator informed regularly of developments in the vineyard.

What was less than satisfying about the experience? Short of not having to undergo this at all, the major frustration was VDACS. The inspector was not allowed to take samples from the neighbor’s property (even by reaching through the fence; i.e., without trespassing on that property).

The report arrived well after all other measures had been employed, and the report stated that even though the records showed that the neighbor had sprayed an herbicide about a week before I noted the damage, any one of dozens of applications within perhaps five miles of my vineyard (the proposed range of volatilized ester-form of 2,4-D) could have been the culprit.

My response to this finding was that if the herbicide can drift five miles, why is it allowed since there are other formulas with minimal drift? Though it’s not the inspector’s role to propose limitations, I wasn’t given the name of anyone in VDACS who could.

My discussions with the applicator were much more satisfying than those with VDACS. I have offered to give a presentation

to registered applicators (the people) employed by the commercial applicator (the organization) about herbicide concerns for vineyards and other sensitive crops, and have suggested that, since the ester form of 2,4-D is subject to volatilization, perhaps the organization should suspend spraying clients’ properties with the ester form, and offer only the amine form. The organization is considering both my suggestions. (As an aside, another neighbor has used the amine form of 2,4-D on his adjacent orchards and fencerows for many of the 15 years I have been growing grapevines, without incident.)

What would I suggest you take away from my experience? Don’t think that herbicide drift can’t happen to you. Do your planning, and be prepared if it does happen. Follow through on hunches, developing evidence to support your case. Use reasonable methods to estimate damage. And keep everybody informed along the way. Here is an article for your reference: <http://extension.psu.edu/plants/green-industry/news/2014/amines-or-esters-which-should-you-use>.

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# Replants Require Special Handling

*REPLANT, from page 1*

die right away. In fact, we are still replanting, three years after the event.

Merlot was particularly hard hit. We began to replant two blocks, but after the growing season of 2014, it became evident that vine death would continue. These two blocks are now Petit Verdot and Cabernet Franc. Other Merlot blocks fared well enough to continue with an aggressive replant program.

## Logistics

Over the past few years it has been difficult to estimate the number of replacement vines needed. In many cases, vines that looked healthy did not bud out in the spring. I now order about 50 percent more replant vines than I think I need and then maintain a small nursery here at Hardscrabble.

In May, after the replanting is complete, any extra vines are root pruned down to 1 inch in length and then planted in well-tilled soil at a shallow depth (all this for easier digging in the fall or spring).

All vines are dug up after one year. Any longer than that and the roots are too extensive to use. The nursery is close to a water source (irrigation) and a vineyard block (ease of spraying when passing by with the tractor). Recently we have started to do some fall replanting only because we have time then. We use the vines from our own nursery, as they would be overwintering outside anyway.

## The Stepchild Syndrome

Replants are destined to a tough life. They rarely get a chance at healthy, strong growth and are usually worked too hard too early resulting in consistently weak vines. Over the years I've developed a protocol to address this.

## Planting Strategies

After harvest we dig out dead vines. This is more time consuming than the actual replanting, especially in older blocks. In March, I walk each block and tag the location of the missing vines with surveyor's tape. I prefer biodegradable tape, otherwise the vineyard starts looking like a real estate agent's open house.

In our old vine blocks where the distance between vines is six feet, we replant two vines at four-foot spacing for vines on VSP and three vines at three-foot spacing for the remaining Lyre blocks (most of Hardscrabble's Lyre has been removed).



Courtesy of Jim Law

**Linden Vineyards orders extra vines for replanting and keeps them for a season in this nursery.**

Asking a replant to fill in six feet of canopy on our soils won't happen. If we have the time we will add some compost to each hole. Anything to give these vines a boost. They'll need it.

## Slow Growth

The biggest challenge with replants is their very slow growth and our unintentional overcropping. Because of the competition from older siblings it takes two to four years longer for these vines to reach any kind of croppable maturity. The older the original vineyard, the longer replants take to get established.

The best way to address this is in pruning. Year after year, these vines are cut back hard. Before any block is pruned, I walk it row by row and personally prune every replant.

For the first three or four years, the vine is headed back. No canes are tied down to the fruiting wire.

I've observed a common scenario where a weak, young vine has two canes laid down and the vine is allowed to crop as if it were a mature vine. The vine quickly becomes exhausted and stunted. The vine is never able to reach maturity.

Even with aggressive pruning, young replants can easily become overcropped. Another one of my jobs is to walk the vineyard in June and remove clusters from replants. This is perhaps too time consuming

(especially during our busiest vineyard month). I've been somewhat successful in training my staff to do this while leaf pulling, but multi-tasking in the vineyard is rarely 100 percent successful.

## Picking Dilemma

Eventually, with time and patience there will be a crop. This presents the next problem. Young vine grapes ripen as much as 10 days earlier than old vines. When logistically feasible we pick the young vines ahead of the older vines. This is slow going. Often two or three of us will walk the vineyard with shoulder strap apple-picking bags. These grapes are then combined with a younger block that we are picking that day.

## Inconvenient Truth

In the 1980's and 1990's, winters were consistently colder. Below zero Fahrenheit was common. Bud mortality was our great concern.

Today, the winters are warmer, but with widely fluctuating temperature swings. Vine response is expressed by vascular damage, graft union failure, crown gall and vine death. This seems to be especially true with vines younger than five years old.

We need to get a handle on how to address this problem, but in the meantime, managing replants will be a part of Virginia's unique viticulture.

# An Early-Season Fungicide Primer

By Mizuho Nita

*Grape Pathologist, Virginia Tech*

As many of you are aware, fungicide resistance has been a common issue for all of us who grow wine grapes. For Virginia, Dr. Anton Baudoin's group identified QoI resistance among both powdery and downy mildew pathogens. Also, his lab has been finding several fungicide resistance issues with Botrytis in recent years.

Moreover, our lab has been working on QoI resistance among ripe rot pathogens, and we've found that about 25 percent of our samples of 300-plus isolates were resistant to the QoI fungicide.

Fungicide resistance risks among some older materials such as Mancozeb, Captan, copper, and sulfur are relatively low because they have multiple modes of action to control fungal pathogens.

(Mode of action, or MOA, is the way the chemical kills and/or disables activities of the target organism.)

On the other hand, newer materials target a single gene or the gene function of the target pathogens. There are advantages to this narrow mode of action, such as safety for non-target organisms (including us), and better absorption by plants due to the smaller-size molecules of these newer materials.

However, due to the narrow target, pathogens can overcome the activity of the chemical relatively quickly.

Here are general recommendations for fungicide resistance management:

► Stay on top of cultural management: If your vines are located in shaded areas or if the shoots are too dense, these conditions promote fungal activities. Then, the effect of any fungicides will be compromised.

► Protect your vines: Unlike insect pests, fungal diseases in our environment are better managed by protecting vines prior to infections. Once they establish their foothold in the vines, it will be very difficult to manage.

► Use the appropriate material for the

pest: Misuses of fungicide can lead to unnecessary applications. Also, the more the pathogen populations are exposed to the mode of action, the higher the risk of fungicide resistance.

► Use the recommended rate of the material: Do not use a lower rate than listed on the label.

With fungal diseases in our area, often more than one application is required. So, mix a higher risk (that is, newer) chemical with a relatively low-risk fungicide, and rotate the mode of action between treatments.

Some examples for tank-mix partners are:

- Black rot: Mancozeb or Ziram
- Downy mildew: Mancozeb, copper, Captan, or Ziram
- Powdery mildew: sulfur
- Botrytis: Captan or copper (both are poor-to-fair materials for Botrytis, but I think they

are good mixing partners)

► Ripe rot and bitter rot: Mancozeb or copper

In order to rotate fungicides properly, you need to learn more about the mode of action.

For fungicide, the Fungicide Resistance Action Committee ([www.frac.info](http://www.frac.info)) classifies fungicide into different modes of action groups.

Please check the FRAC group for your fungicide and rotate these groups.

Even if the product names or active ingredients are different, if two products share the same FRAC group, you are not rotating.

More information is available from the Insecticide Resistance Action Committee (IRAC), at [www.irac-online.org](http://www.irac-online.org), and the Weed Science Society of America (WSSA), at <http://www.wssa.net>.

For more specific information on the rotation of modes of action, as well as general recommendations in grape disease, insect, and weed management, please refer to the Virginia Cooperative Extension's pest management guides.

The hot-off-the-press 2017 editions are available at:

► <https://pubs.ext.vt.edu/456/456-017/456-017.html>, for the commercial edition

► <https://pubs.ext.vt.edu/456/456-018/456-018.html>, for the home garden.

You can find the links to pest management guides in my blog: <http://grapepathology.blogspot.com/> under "Resources."

Stay on top of cultural management: If your vines are located in shaded areas or if the shoots are too dense, these conditions promote fungal activities.

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# Why Loving Cup Went Organic

By Karl Hamsch

*Loving Cup Vineyard & Winery*

During my presentation at the VVA's Winter Technical Meeting, I was asked a question that I only partially answered. The question was, "If being fully-organic is so hard, then why do it?" The answer I gave was, "We all have challenges on our farms. These are the challenges we've chosen for ourselves." This is only part of the answer. Here is the rest (it starts at the beginning):

After several years of making wine from fruit from my parents' large no-spray garden, we decided to supplement it with 100 grapevines. Our initial plan was to plant a Hungarian vinifera variety. After I gave it some thought, though, I realized I would be spraying materials I didn't know with a backpack sprayer, and most likely coating myself and my clothes with them. That winter my wife became pregnant, so I became even more adamant about "not bringing my work home with me."

We had almost given up on the project when we remembered that we were acquaintances with Chris Hill. We asked him if it were possible to grow grapes without synthetics, and he suggested we look at disease-resistant hybrids. So that's what we did; we compiled all the research we could find on hybrids, soft-sprays, and IPM.

A month later, we presented him with a fat binder: our vineyard proposal. After digesting it, he said, "I don't think it's going to work, but if you want to go down that road, I'll go down it with you."

At the time, we did not have any thought of organic certification. We were only practically trying to grow 100 grapevines without buying a cab tractor and vineyard sprayer.

But as you all know, it doesn't take long before grapevines get into your head, and almost immediately after planting the first 100, we began planning a commercial vineyard. We were advised that, if we had any inkling of certifying the vineyard, we should treat it that way from the beginning. So that's what we did.

There were several times in our first

few years that we seriously considered abandoning the endeavor, particularly as it became clear how difficult it was. But the rigidity of the organic-certification process discourages waffling: you are either "in it to win it" or you're out. And we weren't going to be out. So we've stuck with it.

So that's the story of how we ended up growing grapes organically.

Removed from this story are musings about personal philosophies of social and environmental responsibility, or about the potential marketing advantage of organic — thoughts either tangentially or directly impactful on the path we took.

You see, it is a challenge telling our story in our tasting room, or in front of a room of grape growers, in a way that doesn't

draw troublesome contrasts between our vineyard and the vineyards of our friends — contrasts that could be misunderstood. Every grower we know is a conscientious steward of the environment,

and we frequently share this with our customers.

Folks assume that we chose an organic path because of our distaste for the alternative. But that is not how we thought about it then, nor think about it now. We chose a path NOT because it was different, but regardless that it was different.

So when I was asked the question, "why organic," rather than give a long, complicated answer that could be misunderstood, I tiptoed around it. I feared that a full and careless answer would betray my deep admiration for the conventional vineyards in our state. I hope that you'll forgive my temporary dodge of the question and accept my thanks for allowing me to share the technical aspects of our operation.

*The "Green Gambol" column for Grape Press focuses on organic grape growing. Karl Hamsch, the vineyard manager at Loving Cup Vineyard in Albemarle County, is a member of the VVA, an unabashed fan of sweet wines, and a Ravenclaw transitioning to a Hufflepuff. Loving Cup is a rarity in Virginia — both its vineyard and winery are certified organic.*

## Green Gambol

# A Roadmap to Sustainability

By Bill Freitag

*Toll Gate Farm & Vineyards*

During the recent and successful Winter Technical Meeting, we learned a lot of specifics about sustainability and its several forms of practice. Karl Hamsch provided his experience with organic wine farming. Dr. Annemiek Schilder discussed the use of compost teas which are often associated with organic farming methods. Tony Wolf gave us a retrospective look at some low-input farming experiments accomplished in Southeast Va.

We also heard from Ed Boyce on his efforts concerning sustainable winegrowing at Black Ankle Vineyards in Maryland. These presentations gave us excellent insight into this very diverse universe and highlighted the difficulties of successful farming of our very finicky vines using various techniques to limit ecological burdens.

The Virginia Vineyards Association's in-house sustainability tool is called the Virginia Sustainable Winegrowers Self-Assessment Guide (VSWAG). The VVA developed this tool several years ago with the philosophy that sustainability in its broadest sense has three dimensions:

- ▶ Environmentally sound care of the land we farm;
- ▶ Social equitability that shows concern for our community and neighbors;
- ▶ And last, but not least, economic feasibility that assures sufficient profits to keep us in business.

No, going organic is not planned as of now, but it does present conventional techniques to meet the three points above.

## The Purpose of the VSWAG

Speaking now particularly to the people in the New Growers session, I want to point you to this tool which was born out of the recognition for the need to keep pace with the shift in the consumer marketplace toward "green" products and sustainable land stewardship. The guide is designed to help growers:

- ▶ Succeed in growing high-quality fruit that is marketable;
- ▶ Explain concepts important to sustainable wine grape production;
- ▶ Assess current vineyard practices; and
- ▶ Identify components of vineyard operations where improvement will lead to increased sustainability.

The New Growers Workshop at the Winter Technical Meeting provided a "deep dive" into the

*See SUSTAINABLE on page 10*

## IN THE VINEYARD

*SUSTAINABLE, from page 9*

financial and operational requirements when considering planting a new vineyard. The first section of the VSWAG (see below) focuses on these crucial initial steps in planning and then executing the installation of those first vines.

You're provided with 21 key elements that reflect the material presented in the workshop as a guide or reminder as you begin your journey into building and operating your vineyard.

It is a single easy-to-use source of research-vetted Best Management Practices (BMP) covering critical areas of successful vineyard management. VSWAG has six major topic areas: Pre-Plant Considerations; Managing the Vine, the Canopy, and Crop Load; Site Management; Pest Management; Pesticide Safety and Management; and Grower/Employee Education.

Overall, the VSWAG is designed to allow for self-assessment of how well we're doing against 119 BMPs spread across the six major activities. It provides two primary functions that should help each of us to grow better grapes. It helps growers enhance their performance

by providing a single easy-to-use source of research-vetted BMPs covering the critical areas of operating successful vineyards and providing feedback to individual users on how they compare to your contemporaries while maintaining anonymity.

For our established growers, particularly those with established VSWAG accounts, I encourage you to look at Managing the Vine, the Canopy and Crop Load, particularly the Vine Training section for assistance in pruning during our present situation with warm weather and the danger it holds for our 2017 crop.

### A Reminder

The workbook was designed to be used on a continuing basis, not just a onetime shot. As you modify your practices, you should update your score.

Those of you who created score sheets for last year will find your old workbooks on the tool exactly as you left them. We reset the tool each Jan. 15 for statistical purposes, but leave your scores as they are. To update your scores in the new year, you simply click on the score you want. You can select your existing score

from last year or a new one. There is no need for you to first select the "edit icon." I'd like to encourage all of you who filled in partial responses last year to complete the entire self-evaluation in the coming 2017 season.

### Some Statistics

We currently have 95 registered Virginia users. Additionally, we have 85 out-of-state (and foreign) users who are not included in our statistics. When you complete your workbook I hope you print your certificate of completion and display it prominently

To get more information and background about the tool, visit the VVA website to see the tool under the Sustainability Tab (<http://vswag.virginiavineyardsassociation.com/login>). The tool is largely intuitive to use and there are numerous aids to assist you, if needed, under the tool's Help tab.

Get started on this year's review of how well you're performing against this set of standards to help you in achieving an excellent and profitable harvest. I know you're knee-deep into pruning, and the VSWAG has many recommendations on getting it done right.



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## A Q&A with the Virginia Vineyards Association's 2017 Grower of the Year

**R**uth Saunders, the 2017 Virginia Vineyards Association Grower of the Year, began planting grapes with her husband, John, in 1999, and over the years, they gradually expanded their vineyards at Silver Creek Orchards in Nelson County to 71 acres. Now one of the largest independent growers in the state, they supply grapes to more than a dozen wineries around the Commonwealth, including several that were selected for this year's Governor's Cup case.

Megan Seibel, assistant Secretary of Agriculture and Forestry, presented the grower award to Ruth at the VVA's annual Winter Technical Meeting on Feb. 24, noting that Ruth "truly exemplifies hard work in this industry, and is brazen enough to implement new ideas, learn from mistakes, and share resulting successes with others."

Megan, who with her family owns Mountain View Farm & Vineyard in Botetourt County, said Ruth "has dedicated true

commitment over the years to (the VVA) and other associations that support our industry."

Ruth has been involved with the VVA since she became a part of the industry. She served on the original Research and Education Committee, reviewing research grant proposals prior to their submission to the Virginia Wine Board for funding. She was also the VVA grower representative on the Wine Board for eight years and served as director of the Virginia State Horticulture Society.

The Saunders have deep roots in Virginia's agriculture industry. Their families have operated several hundred acres of farmland in Nelson County for generations, also raising cattle and growing some two dozen varieties of apples. They have three children — two daughters studying at Virginia Tech and a son who is a senior at Nelson County High School.

In early March, Ruth took time to talk to Grape Press about her experiences as an independent grower.

**Q:** *You're one of the largest independent grape growers in Virginia today, but I know that you started from scratch in 1999. Can you tell us how you got interested in wine grapes?*

**Ruth:** Virginia Tech had a grant to identify sites that would be suitable for wine grapes, and one day we saw a researcher walking around our farm, checking soils, elevations and so forth. So we asked him what he was doing, and that was our introduction to the Virginia vineyard business.

After that, we started talking to other people about grapes, and our local extension agent put together a van tour of some of the vineyards in the state.

We went on it and did some research and started talking to a lot of people.

**Q:** *Your business up to that point was apples, right?*

Yes. The apple industry at that time was on the bottom of the curve. We were losing money on apples, so we needed to diversify. We talked to people in California and elsewhere out west about planting grapes behind apple trees, pushing out apple trees. We needed to do something just to utilize the land and produce some income. We found out it is not an issue to put grapes behind apples, so we said, "Well, we'll plant grapes."



Photos by Chris Garsson

**From left, Megan Seibel, Assistant Virginia Secretary of Agriculture and Forestry; Ruth Saunders, 2017 VVA Grower of the Year; and Basil I. Gooden, Virginia Secretary of Agriculture and Forestry, at the VVA's annual winter technical meeting in Charlottesville on Feb. 24.**

**Q:** *So, how did you get started? Who did you talk to?*

One of the most important people we dealt with was Sharon Horton. We looked at her vineyard and she said we should hire Chris Hill. Chris kind of gave us some ideas on what we needed to plant. Sharon really liked that Dijon clone of Chardonnay, so we planted clone 96, about four-and-a-half acres. We planted four to six acres

every year after that, with the exception of one year.

It's so expensive to put in a vineyard. We didn't want to put in 20 to 30 acres at a time, so we plugged along, four to five acres a year. It's been an education for us. We had a commercial orchard that used trellises and exactly the same type of equipment used for grapes. We use the same sprayers, the same bush hogs, so it was a kind of parallel transition for us. We didn't have to make a big investment because we already had the equipment.

**Q:** *What's your favorite grape variety?*

Our favorite to grow is Petit Manseng. It's a consistent producer for us. It's got great hang time, and in years where you get a lot of rain and a lot of rot, it seems to hold up pretty well. It's very versatile. We have wineries we sell to that make a very dry wine and we pick at 21 brix for them. And we have

wineries that make a sweet wine, and they pick at 26 brix. It's just a very versatile grape. We only have about four-and-a-half acres now, so we're actually planting some more. It is very grower friendly.

**Q:** *What else do you like?*

See GROWER on page 12

# Q&A

*GROWER, from page 11*

We really like Petit Verdot, too. That one wants to overproduce, so we have to hold that baby back. We can ripen it pretty well here on our site.

**Q:** *How many varieties do you grow?*

Nine. Chardonnay is the largest. We also grow Cabernet Franc, Merlot, Cabernet Sauvignon, Traminette, Chambourcin, Viognier, Petit Manseng and Petit Verdot.

**Q:** *How have you done with the Viognier?*

For the last four or five years, we've had pretty good luck with Viognier. We've learned to leave more spurs than we need. They produce more buds, and then we go back and drop fruit. It's challenging. It's not as easy to grow as Petit Manseng, but I think we've gotten the hang of it. Chris Hill was here last week, checked some buds and said they look pretty good. So unless we get some more bad weather, I think we'll do pretty well. You have a love-hate relationship with that variety.

**Q:** *Any varieties that haven't done so well?*

Yes, we do not like Traminette. That's probably my least favorite. We signed a long-term contract with a winery years ago and planted about six acres. It's just a nightmare. It grows like a horse. We were led to believe you could spray it less, but we spend just as much time, if not more, in the vineyard, training the vines, leaf pulling, hedging, and the price per ton is considerably less than other varieties that we grow.

**Q:** *What's your favorite to drink?*

Oh, gosh, there's not many I don't like. I love the Meritages that the wineries put together. We work with 14, 15 different wineries, and they are all so great to work with. They always give us a couple of bottles of their wine to taste. It's amazing how we can grow one block of fruit and it can go to three or four wineries, picked on the same day, and each winery will make a totally different wine from that same fruit.

And we love to taste the differences in those wines. We go each year to the wineries we sell grapes to and taste the wines, talk about what they want us to do that's different, and we'll taste the exact same variety picked on the exact same day and the differences are just amazing.



**For grower Ruth Saunders of Silver Creek Orchards in Tyro, trellising vines like Petit Manseng, top, comes naturally, since their apple trees, above, are also on a trellis system.**

**Q:** *I know a lot of the Governor's Case wines came from your vineyard.*

Yes, we weren't aware of that, but it looks like we did have a few in there and that's a compliment to us.

**Q:** *How much more do you think you'll expand?*

I don't know. I guess labor is the biggest concern. It depends upon what happens. We do use the H2A system. I guess it depends upon what happens in the future with labor.

**Q:** *That seems to be the biggest problem a lot of vineyards are having.*

Yes, and because of the way our land lays, and our terrain, we cannot mechanize. We do a few things mechanically, but we struggle. We have terraced land. Our

vineyards are on a slope, and it's hard to work with some equipment when the vineyard is not flat. We are trying to mechanize as much as we can, but I know there are some areas we just can't mechanize in.

**Q:** *Tell me a little more about your vineyard.*

Our vineyard is not a solid block; it intermingles with our orchards and it goes from as low as 800 feet elevation and as high as maybe 1,300 feet. We put the hybrids on the low land and the vinifera on the high land. The majority of our fruit is trained to Smart Dyson Ballerina. Everything has a lot of vigor, and VSP just doesn't work. There's just too much vigor for VSP.

# Getting Technical



Michael Attanasi of the Winemakers Research Exchange leads a panel with Matthieu Finot, King Family Vineyards; Kevin Goolsby, Tarara Winery; and Tremain Hatch, Virginia Tech.

The VVA's 2017 Winter Technical Meeting kicked off Feb. 23 in Charlottesville with two afternoon sessions, one for new growers and one spotlighting the 2016 Governor's Case wines. The next two days were packed with information sessions on a variety of topics, from Grapevine Yellows to calculating vineyard costs.

The meeting, attended by 326 growers and industry reps, also provided an opportunity for participants to meet the 2017 VVA board members: Nate Walsh, president; Jim Benefiel, vice president; Ben Margulies, Secretary; Jessi Gatewood, Treasurer; and Carrington King and Skip Causey, the two new at-large board members.



Photos by Bob Garsson, Chris Garsson and Tracy Kirkman



The annual workshop is also a chance to catch up with growers from across the state. Past and present VVA presidents in attendance this year included, from left, Dean Triplett, Rock Stephens, new president Nate Walsh, outgoing president Tom Kelly, and Bill Tonkins.



Tremain Hatch of Virginia Tech conducted a well-attended New Growers Workshop, above, on Feb. 23. In a separate session, Michela Centinari, left, of Penn State University, discussed both traditional and new approaches to delaying budbreak, including the use of Amigo oil.

# Legislative Challenges and Threats Grow With Rising Profile of Va. Wine Industry

By Ben Rowe  
Virginia Wine Council

The 2016 legislative session has adjourned, and as we have seen in recent years, the session was punctuated by an increased number of threats to the Virginia wine industry and long-term battles that pose a risk to the rights of the Commonwealth's wineries, cideries, and vineyards. As the size, profile, and geographic footprint of the industry grows, you will continue to see increased threats and challenges to the way you do business. Below is a summary of the major pieces of legislation we worked on in 2017:

We successfully advanced a study by the Secretary of Agriculture and Forestry and his staff to examine the \$1.37 billion Virginia wine industry. The Virginia wine industry has experienced exponential growth in recent years, and, as a result, the industry's profile before legislators and localities has grown significantly.

This study will analyze the industry for the first time since 2006 and will:

- ▶ Review state and local noise and traffic regulations and the marketing of Virginia wines through events and activities;

- ▶ Consider findings of previous relevant studies on Virginia farm wineries; and
- ▶ Develop recommendations, as appropriate, for how the state can better foster the viability of Virginia farm wineries.

As the size, profile, and geographic footprint of the industry grows, you will continue to see increased threats and challenges to the way you do business.

At this time, we are building a coalition of stakeholders and meeting with the Secretary and staff to discuss an appropriate timeline for the study, to conclude in November.

The Virginia Wine Council also continued to promote and advocate the value of the farm winery and vineyards tax credit. Sen. Glen H. Sturtevant Jr., R-Richmond, introduced legislation (SB 1485) that would have placed a sunset date on this tax credit and many others without sunset dates.

The bill, which would have eventually ended the farm winery and vineyards tax credit, was passed-by indefinitely by the Senate Finance Committee and referred to the Joint Commission on Tax Preferences. This joint commission will review the farm winery and vineyard tax credit among others outside of session. The VWC will continue to advocate for the ongoing value of this tax credit to the industry.

The Council worked with Del. David Bulova, D-Fairfax, to develop a bill (HB 2433) that would make consistent the

language in the Virginia code pertaining to wine and cider, except where laws specific to cider are separately stated. This bill will clarify many sections of the Virginia code, prevent future regulatory confusion, and ensure Virginia's wine and cider producers continue to enjoy the benefits they have earned.

The Virginia Wine Council was also pleased to support legislation sponsored by Del. Matt Fariss, R-Rustburg, to provide an exemption for orchards and vineyards from the statewide burn ban between Feb. 15 and April 30.

This legislation, HB 1793, puts another tool in the box for producers to prevent frost and freeze damage by legally using controlled fires.

With another successful session behind us, we shift our focus to local issues, implementing the Secretary's study, monitoring budget items out-of-session, and working with our members for the next fight.

Please share this important update with your local economic development officials and those you know who are new to the industry.

Educating our elected officials and allies is key to maintaining momentum between legislative sessions. We encourage you to be in touch with the Virginia Wine Council at 804-726-6021 to be sure you understand the impact this may have on your farm winery.

As always, we thank you for your support of the Virginia Wine Council's efforts as we work on your behalf.

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