

**Portland  
Winemakers  
Club**



# Portland Winemakers Club

January 2021  
"Bill's Meanderings"

## Monthly Events

**January, 2021**

Annual Gala **CANCELLED**

**January 20th, 2021**

Crush Talk & Planning

**ZOOM VIRTUAL MEETING**

**February 17th, 2021**

To be determined

**ZOOM VIRTUAL MEETING**

**March, 17th, 2021**

To be determined

**ZOOM VIRTUAL MEETING**

**April 21st, 2021**

To be determined

**ZOOM VIRTUAL MEETING**

**May 19th, 2021**

To be determined

**ZOOM VIRTUAL MEETING**

**June 16th, 2021**

To be determined

**July, Annual Picnic**

**CANCELLED**

**July 21st, 2021**

To be determined

**August 18th, 2021**

To be determined

**September, 15th, 2021**

To be determined

**October 20th, 2021**

To be determined

**November 17th, 2021**

Crush Talk

**December 15th, 2021**

Elections, Planning for Next Year,  
More Crush Talk

**NOTE:** Tours, Gala & picnic dates  
& times may vary.



Happy Holidays from the Golden Pagoda and Cycle Shop

Well hopefully everyone has made it through the holidays safe and healthy and looking forward to the new year. Our last club zoom meeting was pretty much filled with elections and covering what we hope to accomplish in upcoming meetings. One thing for sure is we will make a concerted effort to provide speakers more often but until the Covid issues get resolved we are not looking at meetings or events until mid to late summer. If vaccinations increase or the virus itself diminishes enough to where we can revisit this we will.

So in the meantime be safe, do wine work, and start making plans for this vintage.

**Bill ...**

**Drink Responsibly.  
Drive Responsibly.**

## Upcoming events / Save the date

**Club Meeting:** The next meeting is scheduled for January 13th, "Zoom" sign in will be at 6:45 pm. This will be available on any device that can connect to the internet and has a camera and speaker capability such as a computer, iPad or smart phone etc. Jon Kahrs will again be the moderator. We will provide further sign in information and other details by e-mail prior to the meeting.

Agenda: Planning for Next Year, More Crush Talk. Sometimes we have a speaker sign into the Zoom meeting with us. We will let you know by separate e-mail if that happens.

[Website: http://portlandwinemakersclub.com/](http://portlandwinemakersclub.com/)

## December Zoom Meeting Minutes

Present: 19

• It's that time of year again. We conducted our club elections and the following members were elected (or re-elected) to be our club officers and committee chairs for 2021.

President: Bill Brown

Secretary: Ken Stinger

Treasurer: Barb Thomson /Jim Ourada

Committee Chairs:

Tasting – Paul Sowray / Barb Stinger

Grape Purchase Program: Bob Hatt / Al Glasby

Education / Speakers: Rufus Knapp

Tours: Damon Lopez

Competitions: Paul Boyechko / Michael Harvey

Social Events: Marilyn Brown / Mindy Bush

Zoom Administrator: Jon Kahrs

Webmaster: Alice Bonham

- Bill Brown doesn't see us returning to the Grange Hall for meetings before July or August.
- If anyone has ideas or knows of someone who would make us a good speaker, especially for our remaining zoom meetings, please forward their name and contact info to Bill Brown &/or Rufus Knapp for follow up.
- Holding a club Picnic in July is probably not in the cards but having one later on in the Summer may be a possibility.
- In 2020 the club made a large quantity purchase of Nebbiolo grapes from Red Mountain AVA. Hopefully we will hold a club wide Nebbiolo tasting in a year or two. Bob Hatt would like to repeat this again in 2021 with another grape type so think about this and give Bob Hatt your suggestions and commitment. Bob will send out a survey soon.



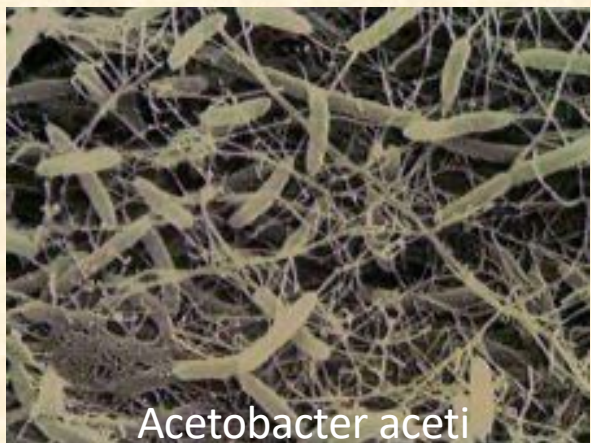
# Volatile Acidity in Wine

Richard Gawel

With all due respect, my long departed father Frank, used to make some pretty awful plonk. A quick jump over our back fence in Marion (what was then one of Adelaide's grape-growing suburbs) to 'borrow' some over-ripe, low acid, bird pecked Muscat Gordo fruit from the neighboring vintner. He would then beat a hasty retreat, never quite knowing, or particularly caring, whether that nearby blast was from the bird scare device or from Mr. Scarborough's trusty shotgun. He then eagerly crushed the grapes by hand before open fermenting them in a bucket. Non-interventionist winemaking it is now called. Once the ferment stopped bubbling, he would slosh the so called wine into a few goons (the last of which was always half empty) before storing them in the garden shed to mature.

Each and every flagon of his 'Private Bin' would be considered by the majority of us to be swill. They all reeked of vinegar and a few even had a distinctive smell of nail polish remover thrown in for good measure. They were awful, but were also a great example of one of the most common winemaking faults, volatile acidity or VA. How dear dad went about it was a classic case study on how not to make wine. Even as an amateur.

The formation of the vinegary characters were the result of the growth of acetic acid bacteria. There are a number of these, but the most destructive ones in wine are *Acetobacter aceti*, *A. pasteurianus*, and to a lesser extent, *Gluconobacter oxydans*. These bacteria are found on the surfaces of grapes (particularly *G. oxydans*), and the others are common residents on winery equipment and in used oak barrels. They all have one thing in common. They are aerobic bacteria, needing lots of oxygen to proliferate. They are microscopic single celled critters which have enzymes embedded in their cell walls. These enzymes work to oxidize alcohol into the **vinegary** smelling acetic acid. Other enzymes also convert alcohol, but this time through a complex set of reactions, into the '**solvent like**' compound ethyl acetate. In fact, alcohol is the primary energy source for most of the acetic acid bacteria.



Acetobacter aceti

So where do these bugs get their alcohol from? It can all start in the vineyard. When the grape is damaged by birds or after being infected with molds such as Botrytis, the juicy parts of the grape are exposed to the air. The grape skin is home to natural populations of yeasts which ferment the exposed juice producing alcohol. The Acetobacter's then use this alcohol to produce acetic acid. When you crush these sorts of grapes, the resultant juice will have a high viable population of Acetobacter, and also a higher than normal level of acetic acid. While the cell counts can be reduced by settling or clarifying the juice prior to fermentation, it is not a particularly good situation to be in if you intend to make a decent wine.

While starting off with healthy undamaged grapes is a good start to making wines with low VA, it is no guarantee. Most acetic infections occur in the winery. The bacteria enjoy living in wines that are both low in acidity and sulfur dioxide (sulfur dioxide is a common anti-microbial agent used in winemaking and it is least effective in low acid wines). But the key ingredient for their growth is oxygen. Oxygen is absorbed by wine every time it is racked (when the clear wine is taken off from the grungy bits that settle to the bottom of tanks and barrels), or transferred between storage containers. Oxygen is also slowly absorbed into the wine through the gaps between the staves in oak barrels. More damaging is when the level of wine in the barrel falls due to evaporation, and this lost wine is not regularly replaced. If not 'topped up' the lost wine will be replaced by air resulting in an ideal environment for acetic acid bacteria to grow. In fact, it is probably true that the most likely time for any wine to become acetic is during its barrel storage, either due to the barrel being ullaged, or its sulfur dioxide levels not being maintained, or both.

Minimizing oxygen pick-up combined with ensuring the wine has a good protective level of sulfur dioxide are the two most important winemaking strategies employed to avoid acetic acid build-up in wine. While sounding simple to do, there are some complicating factors. Oxygen is a necessary ingredient in the natural reactions which soften tannins and stabilize the color of red wines. Wine yeasts also find it difficult to undertake clean and completed ferments if the oxygen levels in the juice are very low. So in many wines, having close to absolute zero dissolved oxygen is not the answer.

Lastly poor bottling practices can also result in acetic wines. Filtration prior to bottling is known to reduce the number of viable acetic acid bacteria. Membrane filtration, in which the wine is passed through a filter which has holes smaller than the acetic acid bacteria themselves, is particularly effective. However once again, if the wine picks up excessive air when it is being bottled then there is a possibility of the wine spoiling after bottling.

So where did Frank go wrong? Almost in every way possible, but I'll let you think about a detailed answer yourself.

Incidentally, like all winemakers, professional or amateur, dad actually thought that his home made and (nearly) home grown Bosko was pretty smart. I didn't have the heart to tell him otherwise.



# Proper Wine Storage

Updated: Jul 4

Many wines will improve with time, even in the bottle. Young red wines can be overly harsh but with some time in the bottle a pleasant evolution will take place. Tannins will soften and become more approachable, aromas will evolve and become more complex, and an increase in texture on the tongue can occur. For this reason it makes sense to hold on to the more intense red wines for a few years. Most reds will age gracefully for five to seven years and some can improve for decades but only with the right storage conditions. Improperly storing a wine for years will result in an oxidative self destruction and the result can be especially heinous. Nail polish remover, vinegar, and sherry are some common descriptors you might think of when things go wrong.

Here are some general guidelines to get you started with wine storage.

## Bottle Orientation

If your bottle uses a cork enclosure, the proper orientation to store the wine is sideways. Natural cork can dry out over time and allow air to permeate into the wine. Storing a bottle on its side will keep the cork wet and assure that the bottle stays sealed. You can also store the wine upside down if you have one of those fancy pants racks. If you don't yet have a wine rack, you can use an empty wine box turned on the side. Think about getting a wine rack though...



## Temperature

Cool and consistent is the name of the game with wine storage temperature. The ideal temperature for wine storage is in the 55° to 60°F range. Every 10 degrees warmer will nearly double the rate of aging and make it difficult to hold on to a wine for many years. If you are planning to drink the wine in two or three years, then don't fret too much if you are closer to the 70°F range but make sure the temperature is consistent.

Fluctuation in temperature causes expansion and contraction of the wine and can slowly pump air in and out of the bottle and push wine up the edges of the cork. This leads to the dreaded oxidation and you don't want it. Keep your wine rack away from heater vents or radiators. If you have a basement, it is going to be your best bet for storage conditions in general.

\*NEVER forget your wine in the car on a hot day. Temperatures over 90°F can lead to what is referred to as "cooked wine" and turn the complex aromatics into smells of stewed fruit or raisins.

## Humidity

50 to 70% humidity will do the job for wine storage. The goal, once again is to keep the corks from drying out. The basement should fall within this window for most months of the year, unless you live on the north pole. For those of you living on or near the north pole (Kris Kringle), consider a humidifier if you have a wine collection of value. An inexpensive hygrometer will measure both temperature and humidity in the storage area.

## Light

Keep your wine rack out of direct sunlight. Most red wine bottles are dark green to shade the wine, so it doesn't have to be pitch dark in your storage area. Direct UV exposure can cause a breakdown of the compounds that make the wine so enjoyable.

## Vibration

Vibration can speed up the subtle chemical reactions caused during aging and can disturb any sediment that has fallen out of an older bottle. Don't put your wine rack on the top of your washing machine.

## To Age or not to Age

Not all wines are expected to improve with age. With the exception of a few Rieslings and Chardonnays, most white wines are intended to be drunk within one or two years and generally will not improve in the bottle. Sweet wines follow the same rules. Red wines that are low in tannin are meant to be drunk young but can still hang in there for a few years.

Big reds like Cabernet Sauvignon, Petite Sirah, and Zinfandel etc. can age very well for many years (5 to 15). Many French and Italian red wines are actually intended to be cellared for several years before drinking.

In general wines with good aging potential share the following characteristics.

1. Moderate to High Tannin
2. Good Flavor Intensity
3. Adequate Alcohol (>13%)
4. Adequate Acid (pH=3.5-3.7)
5. No off flavors or flaws

## Summary

Without much effort, most people should be able to find a place worthy of storing wine. It is hard to beat a basement for those who have one. You can see that most aging related issues relate to keeping the cork intact. It is no surprise that even many premium wines are now using screw top enclosures, and expect to see more in the coming years.



# Oak Barrels and Oak Alternatives in Winemaking

**Winemakers have long been using oak** barrels for winemaking, but in recent decades oak alternatives become widely used with some advantages and disadvantages. The choice between oak barrels and oak alternatives depends on the winemaker and the situation. You might want to consider oak barrels, oak alternatives, or some combination of the two. Below you will find some guidance to help with your choice.

## Oak Barrels

We now have much more convenient means of storing large volumes of wine, yet wineries and winemakers continue to use oak barrels for their reds... why? Part of the answer is consumer appeal. People like to see stacks of barrels and it does give a winery some level of street cred. The main reason that oak barrels are used though is that they offer some benefits that are very difficult to replicate with oak alternatives and stainless tanks.

## Micro Oxidation

Wine barrels breathe and allow a minuscule amount of oxygen into wine. In small doses, oxygen stabilizes pigments directly after primary fermentation. As more time passes, oxygen encourages the polymerization of short chain tannins into long chain tannins. These long chain tannins contribute to a silky mouth feel, whereas short chain tannins are harsh and unforgiving. It is very difficult to replicate the micro-oxidation that occurs in a barrel without the use of very expensive MOx equipment. Even with this equipment, it is easy to introduce oxygen too quickly and ruin the wine.



Even old wine barrels that are not so oaky anymore will offer the benefit of micro-oxidation and can be quite useful if maintained properly.

### **Concentration**

Because a barrel is slightly porous, some wine will be lost to evaporation as it seeps into the pores of the wood and floats off into the air. Winemakers generally need to top up the barrel with wine every two to three weeks because of this phenomenon. To keep a 59 gallon barrel topped up through the year, you may need to set aside an additional 6 or 7 gallons of wine. This hardly sounds like a benefit of a barrel, but it is. This slow evaporation of wine concentrates the flavor compounds, tannin structure, and aromas of the final wine.

It is very difficult to replicate the effect without very expensive equipment or unconventional procedures. Large wineries can use reverse osmosis to achieve a similar result. At home you can remove some juice before primary fermentation to improve the skin to juice ratio (and make a rosé from that juice...). You can also achieve some level of concentration by chilling the finished wine until ice crystals form and racking the wine off the ice.

### **Oak Character**

This is the obvious benefit of oak. Oak can add flavors like vanilla, spice, coconut, chocolate and nut and more. The type of oak and the level of toast on the barrel can significantly effect the oak character imposed on the wine. A heavy toasted American oak will add a smoke and spice to the wine where a medium toasted French might add more vanilla. The process used to make the oak staves can also effect the flavor. American oak staves are generally sawed, while French oak is generally split.

### **Downsides of Oak Barrels**

A major downside to oak barrels is that they are expensive. A new 59 gallon oak barrel costs anywhere from \$500 to \$2000 and releases most of its oak in the first two years. Another inconvenience is the maintenance involved in a barrel. To store a barrel without wine, sulfur wicks need to be burned inside periodically or the barrel needs to be gassed with sulfur to reduce the risk of microbial contamination or mold growth. To avoid this, most winemakers will not empty one wine from a barrel until another wine is ready to replace it. This is more challenging with the small size barrels (<30 gal) as they impart oak dramatically faster and often the wine will need to be removed well before the next harvest.



### **Final Words**

Oak barrels are great but they are a large investment. If you are just getting started in winemaking, consider using oak alternatives for a couple years. You may be very happy with the results using alternatives and great wines can be made without the use of barrels. Once you have built some confidence with your wine.



## **Never Clean or Sanitize Wine Equipment With Chlorinated Products**

Often times new winemakers reach for bleach when cleaning or sanitizing their wine equipment. Chlorine based bleaches are very effective at eliminating microbes and bacteria, but that is not the issue. Chlorine is one of the two key contributors to the creation of 2,4,6-trichloroanisole (TCA), which is a major wine fault. When a wine has TCA present beyond the sensory threshold, it is referred to as "corked" and will give off undesirable musty aromas. Even commercial wineries occasionally have problems with corked wines.



Beyond chlorine, the second major contributor to the creation of TCA is mold. Mold is commonly found in oak and cork products, even if they have been heavily sanitized. Minuscule bits of mold can become trapped deep within the pores of wood based products. The molds by themselves are really not a huge problem but once chlorine is added, it's game over. Cork and oak suppliers have been continuously improving their processes to attempt to eliminate trace amounts of mold and remove chlorine from the manufacturing process but TCA is still a common problem in the industry. If TCA is not present in the corks when they arrive, but you introduce chlorine, then you are playing a dangerous game.

What makes TCA such a pain in the buttocks is that the sensory threshold is unbelievably low. At less than five nanograms per liter, a taster will begin to perceive the unwanted aromas of TCA. That's less than five billionths of a gram! The smallest amount of TCA could effectively contaminate your entire cellar. A couple grams of the stuff in pure form, could contaminate all the wine in North America. Needless to say, professional winemakers take TCA pretty seriously...

As an alternative to chlorine bleach, consider using sodium percarbonate based cleaners like B-Brite for heavy cleaning and acid based sanitizers like Star San as a final step in the cleaning and sanitizing process.

NOTE: Consider using municipal water that is run through an inexpensive recreation vehicle filter attached to a hose. These cost about \$15, can remove chlorine and other heavy metals and are good for approximately 1300 gallons before replacement. I keep about 8 – 10 gallons available for making cleaning solutions, sulfite and sodium hydroxide solutions etc. They may even provide enough chlorine free water for barrel cleaning. Ken



## Decanting Wine: The Science, The Myth and The Realty

Recently a wine club member called to reorder a case, an Italian Barbera from the Artisan Series. He asked if many people had reordered the wine, and I answered no. He said that he wasn't surprised. He and his wife had sat down to dinner and were unimpressed by the wine. A telephone call interrupted their meal for a half hour, and when they returned to the table and their glasses, they were astounded by the wine's transformation. The Barbera, which at first was banal, was now brimming with berry flavors and aromas and had a silky texture. What could possibly have happened during the half hour that the wine sat in the glass?

The simple answer is that the wine was allowed to "breathe."



Exposed to air for that half hour, it was able to release its flavors and aromas. The formal method for bringing about this transformation is to decant the wine before serving, transferring it from its original bottle into a decanter, although the process is not without controversy.

The undisputed advantage of decanting pertains to older wines that over time have thrown sediment in the bottle. Carefully transferring the wine to another container while the sediment remains in the original bottle separates the unpleasant sediment from the wine. Another undisputed aspect of decanting wine, whether old or young, is simply that a beautiful decanter made with clear glass is an esthetic pleasure that enhances both the wine and the table. The controversy centers around whether or not decanting wine and thus aerating it as it transfers from one container to another really benefits the taste, supposedly releasing aromas and fruit flavors and softening tannins through oxidation and evaporation. Most people in and out of the trade think it does although the science, at least what exists, says not or not exactly.

When winemakers taste professionally, they swirl wine in a glass and sniff it first before sipping, because we perceive only sweet sour, bitter, and salt with the taste buds on our tongues and every other flavor with the nerves in our noses. Swirling the wine sets its molecules in motion so that aromas can be more easily inhaled and then identified by our brains. Likewise, decanting a wine will set molecules in motion as does swirling it in a glass although some argue that exposing the wine to air over a prolonged period will dissipate delicate aromas, especially those of older wines. While aerating wine for at least a short period can noticeably improve flavor, making it smoother is debatable. The primary reason that winemakers age red wine in barrels is that wood is slightly porous and allows the wine to undergo a carefully controlled oxidation over many months. Oxygen promotes the polymerization of tannins, which links shorter molecules into chains that feel smoother on the tongue. In older wines, these chains will become heavy enough to actually fall out of solution and create sediment in the bottle. But the process occurs over many months or years, not within the hour that wine might be exposed to oxygen in a glass or a decanter.

But what can happen within an hour is that preservative sulfur compounds, added during the winemaking process, can evaporate. Yeasty components and carbon dioxide in white wine can also dissipate. Without these extraneous elements, intrinsic fruit flavors become more apparent. Red wine will also more quickly reach room temperature after decanting and feel smoother in the mouth than at lower temperatures.

So if you are not in the habit of decanting wine, should you start? I say yes, at least when you have the time and want to enjoy a given wine at its very best and especially if you think a wine is not as good as it should be.



## References

Here is a list of Hobby Winemaking Manuals and other materials in the Secretary's digital file available for downloading by e-mail or via an internet transfer service. All are PDF. E-mail Ken Stinger at [kbstinger@frontier.com](mailto:kbstinger@frontier.com)

**Scott Labs Winemaking Handbook - 21 mb - 59 pages**

**Scott Labs Cider Handbook - 24 mb - 49 pages**

**Scott Labs Sparkling Handbook - 8 mb - 58 pages**

**A guide to Fining Wine, WA State University - 314 kb - 10 pages**

**Barrel Care Procedures - 100 kb - 2 pages**

**Enartis Handbook - 4.8 mb - 108 pages**

**A Review Of Méthode Champenoise Production - 570 kb – 69 pages**

**Sacramento Winemakers Winemaking Manual - 300 kb - 34 pages**

**Sparkling Wine brief instructions - 20 kb - 3 pages**

**The Home Winemakers Manual - Lum Eisenman - 14 mb - 178 pages**

**MoreWine Guide to red winemaking - 1 mb - 74 pages**

**MoreWine Guide to white Winemaking - 985 kb - 92 pages**

**MoreWine Yeast and grape pairing - 258 kb - 9 pages**



# Portland Winemakers Club

## Leadership Team – 2021

President: **Bill Brown** [bbgoldieguy@gmail.com](mailto:bbgoldieguy@gmail.com)

- Establish leadership team
- Assure that objectives for the year are met
- Set up agenda and run meetings

Treasurer: **Barb Thomson / Jim Ourada** [bt.grapevine@frontier.com](mailto:bt.grapevine@frontier.com)  
[jmourada57@gmail.com](mailto:jmourada57@gmail.com)

- Collect dues and fees, update membership list with secretary.
- Pay bills

Secretary: **Ken Stinger** [kbstinger@frontier.com](mailto:kbstinger@frontier.com)

- Communicate regularly about club activities and issues
- Monthly newsletter
- Keep updated list of members, name tags and other data

Chair of Education / Speakers: **Rufus Knapp** [Rufus.Knapp@fei.com](mailto:Rufus.Knapp@fei.com)

- Arrange for speakers & educational content for our meetings

Chair for Tastings: **Paul Sowray / Barb Stinger** [davids1898@aol.com](mailto:davids1898@aol.com)  
[kbstinger@frontier.com](mailto:kbstinger@frontier.com)

- Conduct club tastings
- Review and improve club tasting procedures

Chair of Winery / Vineyard Tours: **Damon Lopez.** [dlopez5011@yahoo.com](mailto:dlopez5011@yahoo.com)

- Select wineries, vineyards etc. to visit
- Arrange tours
- Cover logistics (food and money)

Chair of Group Purchases: **Bob Hatt / Al Glasby.** [bobhatt2000@yahoo.com](mailto:bobhatt2000@yahoo.com)  
[alglasby@gmail.com](mailto:alglasby@gmail.com)

- Makes the arrangements to purchase, collect, and distribute
- Grape purchases
- Supplies – These should be passed to the President for distribution.

Chair of Competitions: **Paul Boyechko / Michael Harvey** [labmanpaul@hotmail.com](mailto:labmanpaul@hotmail.com)  
[mharvey767@gmail.com](mailto:mharvey767@gmail.com)

- Encourage club participation in all amateur competitions available. Make information known through Newsletter, e-mail and Facebook.

Chairs for Social Events : **Marilyn Brown & Mindy Bush** [brown.marilynjean@gmail.com](mailto:brown.marilynjean@gmail.com)  
\* Gala / Picnic / parties [mindybush@hotmail.com](mailto:mindybush@hotmail.com)

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