Portland Winemakers Club

May 2024

"Bob's Blurb"

The next meeting is the earliest possible 3rd Wednesday this month, May 15, and will be a Bordeaux-style member wine tasting. I have been in Oregon a long time, so I am not a big Bordeaux drinker compared to my early wine-drinking experience in California. I do make something every few years because once in a while a big bold tannic red seems like the right wine for the occasion. I am looking forward to the tasting!
In the winery this month, my 2023 Pinot Gris which has been sitting quietly at 1.0 specific gravity, for the past 2 months was still too sweet. I added yeast hulls, I stirred up the lees, … nothing for 2 months. So I finally rehydrated some EC-1118 yeast, acclimated it to the wine, and pitched it into the fermenter. The specific gravity appears to have started moving downwards again. Hopefully, in a couple more weeks it will finish fermenting. Then it will be racking and settling time. I think it already had its cold stabilization because it was out in the cold pole barn all winter. Waiting for it to finish to see if it will be balanced, or will I need to make an acid adjustment. Also getting ready to bottle Grenache Rose. Now if the sun starts showing up I will be well prepared for Summer.
Regards, Bob

NOTE: The email address for the Portland Winemakers Club has been changed to kbstinger2@gmail.com Please use this address when contacting the club Secretary. Thx

2024 Monthly Events

January 17th,
Discuss plans and ideas for 2024

January 26st,
Gala

February 14th,
Speaker: Dr. Rich DeScenzo from ETS Labs, "Indigenous yeast fermentation observations". NOTE: This is in place of our normal Feb. 21st meeting.

March 20th,
Tasting & judging, members barrel samples.

April 17th,
Tips and tricks and demo night.

May 15th,
Tasting & judging, member produced Bordeaux Reds

June 19th,
Tasting & judging, members produced all Whites, Rose' & sparkling

July - No meeting
Annual Picnic, Day TBD $10 ea. fee

August 21st,
Tasting & judging, member produced other Reds & fruit wines

September 18th,
Speaker: Geologist Dr. Scott Burns, "Tasting Terrior in the Pacific Northwest"

October 16th,
Tasting & judging, member produced Pinot Noir

November 20th,
Crush Talk

December 11th,
Elections, Planning for Next Year

Wine-related tours may be scheduled on non-meeting days.

Upcoming events / Save the date

The next PWC meeting is scheduled for Wednesday, May 15th in the basement of the Aloha Grange starting at 7:00 pm. This will be tasting & judging of member-produced Bordeaux Reds and Bordeaux red blends. Red Bordeaux varietals are Cabernet Sauvignon, Merlot, Cabernet Franc, Petit Verdot, Malbec, Carmenere, or any blend containing 2 or more of these 6 grapes. Please bring two (2) bottles of each wine to be tasted. **Everyone will need to bring two glasses to this meeting**

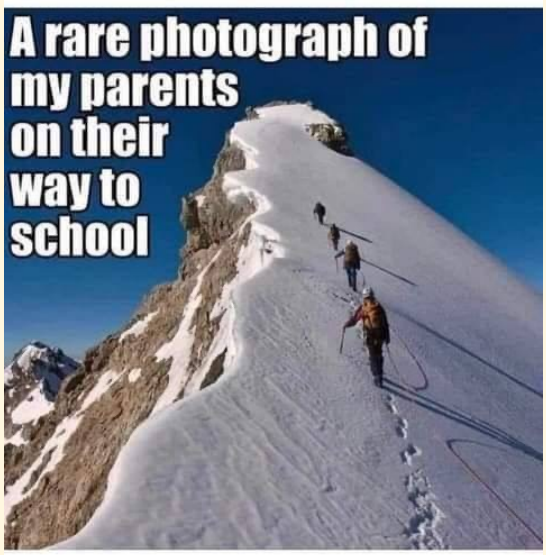
NOTE: There will be a pot-luck table for those who wish to participate. Bring a dish to share. If you would rather not participate feel free to bring your own snacks.
NOTE: Bring a bottle of wine to put into a trading pool. Everyone who brings a bottle draws a number to pick from the wine trading pool. Numbers get picked until the pool is empty.

- Take time to visit the PWC website: portlandwinemakersclub.com where there are Newsletters archived back to 2007.
- Also, visit our public group Facebook page: "Portland Winemakers Club" facebook.com Give it a look, join the discussions, and enter some posts of your own.

April Meeting Minutes

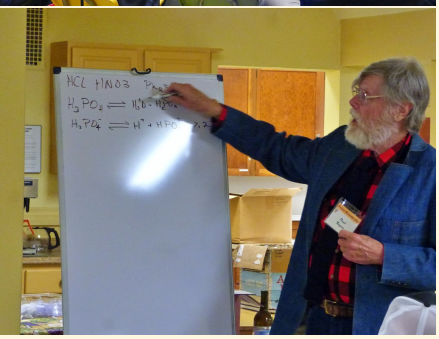
Members present: about 27

- It should be mentioned that there is a new email address for the PWC Secretary (Ken Stinger). kbstinger2@gmail.com. It is also listed on the last page of the newsletter.
- The PWC is going to sponsor the Amateur wine competition this August at the Washington County Fair. This will be a one-year trial run. The Secretary will send an information sheet by email.
- Paul Natale talked about the morning seminar on May 1st at Crush2Cellar on **Oak Infusion Tools. A Fresh Perspective on Oak in Luxury Winemaking**
- There was some discussion about the availability of Paul Natale's Pinot Noir grapes this Fall.
- The May tasting will be Bordeaux Reds.



In April, the subject of our meeting was “Tips & Tricks”. Here are a few photos of our presenters at work.

The meeting members listen to presenter Paul Rogers



Paul Rogers gave a short course on the behavior of buffered weak acids in wine solutions. Our wine is a "mosh pit" of various weak "fruit acids”.

Sorry Barb, the secretary failed to take your picture.

Barb Thomson described and demonstrated the use of a test kit to indicate the completion of Malolactic fermentation. Kits are available for around $80-$100.

Rob Marr set up to measure SO2 in a wine sample using his Vinmetrica 300. This instrument can also measure MLF, pH/TA, ABV, residual sugar, DO, and YAN as well as other tests.

Bob Hatt talked about his new Sentia solution analyzer he picked up at a recent wine conference. The Sentia measures SO2, malic acid, acetic acid, TA, fructose and glucose with more tests being developed.

SO_2 Stratification: What It Is and the Implications for Winemaking

JUNE 19, 202

Coming across SO_2 Stratification

When developing our new free SO_2 measurement technology, the FS1, we ran thousands of comparative measurements across dozens of wineries. We started to notice replicate measurements, sampled from the same barrel and analyzed in the same wine lab, coming back with different free SO_2 results. This only seemed to happen when the two samples were drawn from the barrel separately. If one larger sample was drawn from the barrel and split into two for duplicate analysis, the results came back the same. We started taking samples at different depths in the barrel and noticed that some barrels had a 25 ppm difference based on depth, and some had no difference.

Experiment: Setup & Results

To investigate this in more detail, we examined the distribution of free SO_2 in oak barrels after a sulfite addition in a winery. The aim was to understand how sulfite concentrations develop throughout the barrel over time.

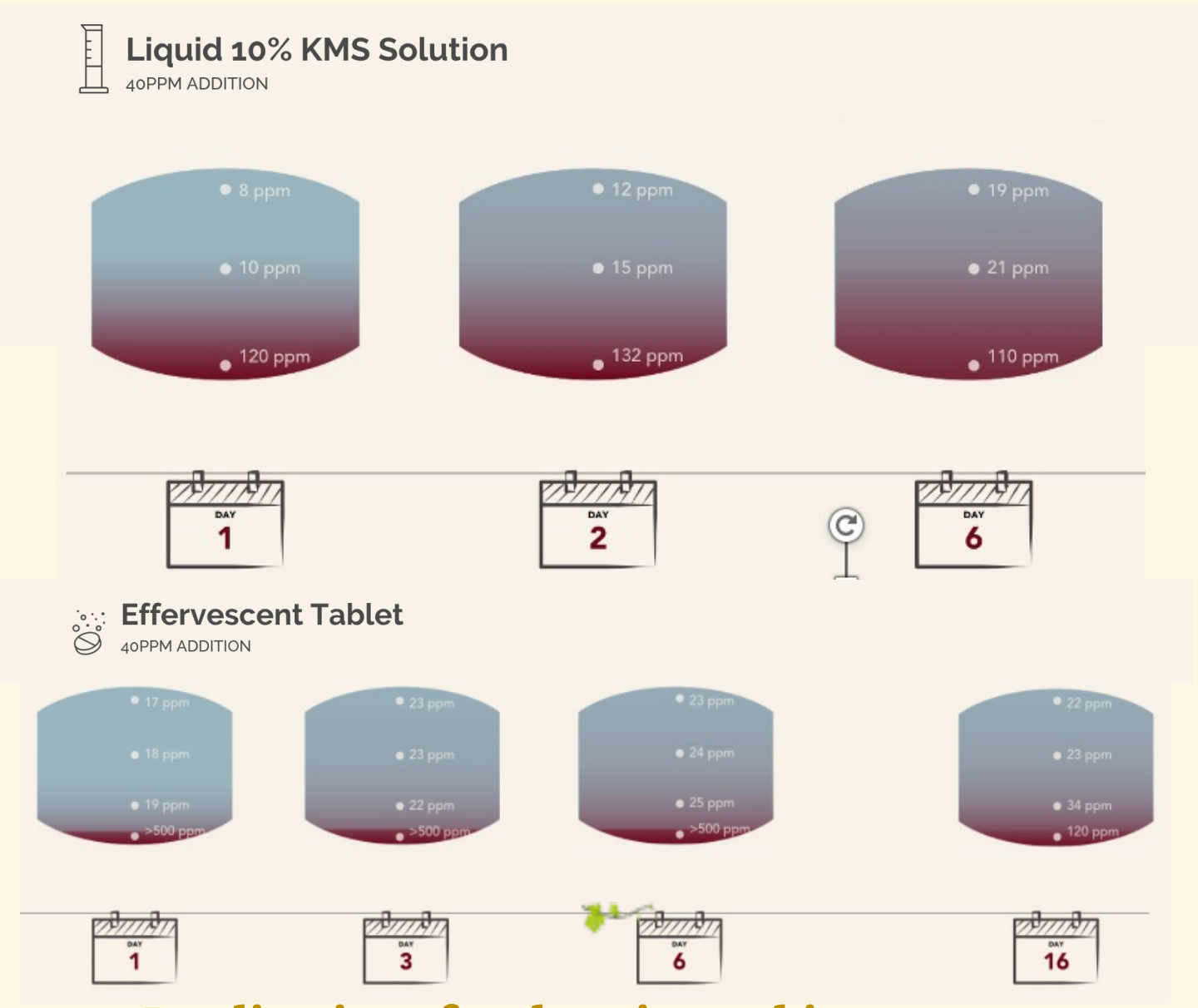
Experiment details:

•Oak barrels (228 L American Oak) were used and instrumented with taps at seven different locations inside the barrel.
•Samples were drawn from these locations to measure free SO_2 concentration using the aeration-oxidation method.
•Two common methods of sulfite additions were considered: addition by aqueous KMS solution and addition with pre-dosed effervescent KMS tablets.
•A 40 mg/L free SO_2 addition was made to each barrel, using an artificial wine matrix with pH = 3.4 and a constant temperature of 18°C.
•The barrels were not stirred, topped, or moved during the experiment.

Results:

•Samples were taken at different time intervals to track the development of free SO_2 concentration distribution.
•The two figures below show the spatial free SO_2 concentration distributions at one hour and six days after the respective sulfite additions.
•Stratification of sulfite addition remained significant after six days for both methods.
•In the aqueous KMS solution addition, most of the sulfites remained in the lower quarter of the barrel after one hour.
•The effervescent tablet method distributed about half of the sulfites vertically within one hour, but the other half remained concentrated at the bottom surface.

•After six days, 21 mg/L of the aqueous KMS addition and 24 mg/L of the tablet addition reached the centroid of the barrel.
•The majority of the remaining sulfite addition was concentrated at the bottom of the barrel in both cases.



Implications for the winemaking process

•The depth at which a sample is drawn from a barrel can affect the measurement of free SO_2 concentration.
•There is no definitive answer to the "correct" depth for sampling, but consistency between barrels is crucial for accurate comparisons.
•Sampling near the center or biased towards the top captures a more conservative measurement.
•If a barrel shows an unexpected free SO_2 concentration, resampling at a different depth can help determine if it is caused by stratification or if the barrel is an outlier.
•Stirring the barrel after a sulfite addition can homogenize the distribution but also increases free SO_2 consumption and introduces other factors.
•The decision to stir should be based on winemaking goals.

What did Roman wine taste like? Much better than previously thought, according to new research

by Dimitri Van Limbergen

The dolia defossa wine cellar of Villa Regina (Boscoreale)

From a modern, scientific perspective, the wine Romans drank is often seen as an inconsistent, poorly made, and thoroughly unpleasant beverage. It is alleged that Roman winemakers had to mask their products' flaws by adding spices, herbs, and other ingredients to the freshly pressed grape juice, which is known as "must."

However, our research has shown this may not have been the case: A recent study of earthenware vessels used in wine fermentation—both ancient and contemporary —has challenged traditional views on the taste and quality of Roman wine, some of which may even have rivaled the fine wines of today

Many of the longstanding misconceptions surrounding Roman wine come from a lack of insight into one of the most characteristic features of Roman winemaking: fermentation in clay jars or dolia. Huge wine cellars filled with hundreds of these vessels have been found all over the Roman world, but until we began our study no one had looked closely at their role in ancient wine production.

In our research, we compared Roman dolia with traditional Georgian production vessels, called qvevri, which are still in use today. This traditional process was given protected status by UNESCO in 2013, and the similarities between Georgian and Roman winemaking procedures, along with archaeology and ancient texts, point to wines with comparable tastes and aromas. The results of our study were published in January 2024 in the journal Antiquity.

Porous eggs buried in the ground

Unlike the metal or concrete containers used in modern winemaking, clay jars are porous, meaning the wine is exposed to air during fermentation. This contact, however, is limited by coating the interior of the vessels with an impermeable substance. The Romans used pitch from pine resin, while nowadays, in Georgia, neutral beeswax is applied. This controlled air contact makes for great wines, typically with grassy, nutty, and dried fruit flavors.

The shape of the vessel is also important. Its rounded, egg-like form causes the fermenting must to move around, which in turn leads to more balanced and rich wines. At the same time, its narrow base prevents grape solids that sink to the bottom from having too much contact with the maturing wine, keeping harsh and unpleasant flavors from appearing.

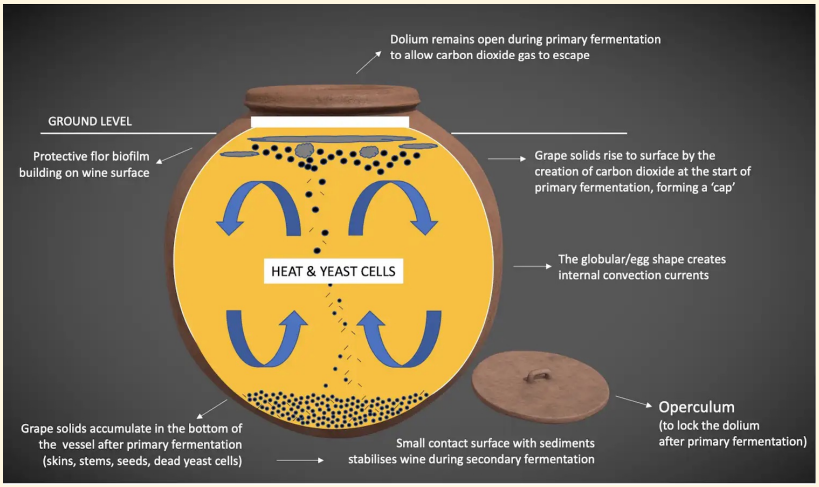


Illustration of the fermentation process in qvevri and dolia

By burying the vessels in the ground, winemakers can control temperature and provide a stable environment for wine to ferment and mature during its many months inside the jars. Temperatures in modern qvevri commonly range from 13° C to 28°C. This is ideal for malolactic fermentation, which turns sharp malic acids into softer lactic acids, often giving today's white wines macerated in clay jars caramel and nutty tones.

Macerated wines

Modern wine is typically grouped into whites, rosés, and reds. To produce these styles, whites get little or no contact with the grape skins, while rosés get just enough to receive a soft pinkish color. Longer macerations are reserved for reds.

In clay jar winemaking, however, white wines regularly undergo long macerations with the grape solids (skins, seeds, and so on). This gives beautiful dark yellow, amber-colored wines, today commonly known as "orange wines". This wine—increasingly popular today—is similar to descriptions of some of the most prized wines in antiquity.

Protective yeast: the miracle of flor

Buried clay jars encourage the formation of yeasts on the surface of the fermenting must. Many of these are what we call "flor" yeasts, a thick white foam layer that protects the wine from contact with the air. Ancient Greek and Roman texts are filled with descriptions of such surface yeasts in wines.

Flor produces several chemicals, including sotolon, which gives the wine a spicy taste.

It also gives aromas of toasted bread, apples, roasted nuts, and curry. This is a sensory profile quite comparable to the herb fenugreek, which the Romans often added to grape must strengthen this desirable flavor.

Roman wines revisited

The Romans were well aware of many different techniques to master and alter the qualities of their wines. By varying the size, shape, and position of dolia, Roman winemakers were able to have great control over the end product, as Georgian winemakers do today.

Our research emphasizes the value of comparing ancient and modern wine production techniques. It not only debunks the alleged amateurish nature of Roman winemaking, but it also uncovers common traits in millennia-old winemaking techniques.

In some parts of Europe today, including France and Italy, modern winemakers are reviving these ancient methods to produce “new” clay jar wines. While such wines are often mistakenly termed “amphora wines” (amphorae were two-handled earthenware vessels used to transport wines and other liquids, not store them) they show the robustness of clay jar winemaking and the cyclical nature of wine history.

Crazy pH Shift

Q

I purchased Pinot Noir grapes from Santa Ynez, California. The crushed grapes readings at harvest were 3.35 pH and 24.5 °Brix. When the grapes arrived at our location we confirmed those readings and then put the crushed grapes in a cold room for four days. After the first day, the air conditioner (A/C) started to lose power and the room hit 70 °F (21 °C) for two days. By the time we discovered this fact, the natural yeast had taken off and reduced the must to 10 °Brix. At this point, we added Lalvin BRL97 to finish fermentation and moved it on to malolactic fermentation (MLF). Two weeks later we picked up Syrah grapes with a pH reading of 3.55, which we again confirmed locally. The A/C was working this time so we were able to use the traditional yeasts we use for Syrah while the must was still at 24 °Brix. After fermentation, we also put the Syrah through MLF. The pH of the Syrah was now 3.73. Unlike the Syrah, the Pinot pH has gone from 3.35 to 3.94. I checked my pH meter by checking against a cream of tartar solution (3.52) before testing the Syrah (3.73) and Pinot (3.94). I had consistent results on 3 different

occasions so I have to believe the readings are correct. Any thoughts as to what would have caused such a dramatic shift in the pH? The native yeast perhaps?
A
I applaud you for trying fresh winegrapes in your home winemaking, you're lucky that you are (relatively) close to a fine winegrape growing area like the Santa Ynez Valley. I grew up just down the California coast from there and one of my first harvests was at Curtis Winery in the area that at the time had its estate vineyards containing Pinot Noir and Syrah. My current company grows many acres of Pinot Noir in Santa Barbara County and it continues to be one of my favorite grapes to work with.

The data you report for your Syrah is extremely typical. Syrah tends to come in quite high pH after MLF is complete, so your 3.55 to 3.73 shift is entirely normal. I've seen Syrahs with a 3.55 starting pH register in the 3.90s after MLF so 3.73 isn't that high and is quite a good number. Your situation with your initially acid-balanced Pinot Noir (pH of 3.35 at 24.5 °Brix), in contrast, is indeed a strange one.

Having a starting pH of 3.35 in Santa Barbara Pinot Noir is entirely normal. However, such a quick shift from 3.35 to a pH of 3.94 (indicating a large deacidification) is not. From a starting point of 3.35, I'd expect a pH of about 3.45 or so after primary fermentation and maybe 3.60–3.65 after MLF was complete.

First of all, because you had an uncontrolled feral fermentation, which dropped your Brix from 24.5 to 10.0, I'm sure that your wine went through primary fermentation (sugar converted to alcohol and carbon dioxide) and secondary fermentation (malic acid converted to lactic acid and carbon dioxide) simultaneously. Many "wild" yeasts can also metabolize malic acid (and you likely had some) so it's entirely possible that by the time your primary fermentation was finished, technically so was your ML fermentation.

A good benchtop pH meter can reveal several aspects of grapes and fermentation that can go unnoticed by the casual winemaker.

That by itself, however, isn't quite enough to explain the precipitous acid drop in its entirety. I also suspect that your pH number of 3.35 reflected a high malic acid content, so that, naturally, when all of the malic acid was consumed, the pH shift reflected its absence and posted abnormally high. I've had this happen to me before; some vintages just seem to be "high malic" years (a function of climate and growing season) and some vineyards are also "high malic" vineyards, seeming to produce fruit with a higher than normal proportion of malic to tartaric and other acids. You could get a sense of this (if you buy this fruit again) by sending a juice sample to a lab for a pre-fermentation malic acid assay. I've got another suspicion about your feral fermentation organisms. Volatile acidity (acetic acid) is also produced by yeast and bacteria during primary and secondary fermentation, contributing slightly to the total acidity (TA) and pH of finished wines. While some wild yeast species (and cultured species as well) produce acetic acid, some like *Lachancea thermotolerans* consume it. If one of your wild yeast strains was a c acid consumer, it's possible that the normal amount of acetic acid produced during

produced during primary and secondary voracious acetic fermentation, contributing slightly to the total acidity (TA) and pH of finished wines. While some wild yeast species (and cultured species as well) produce acetic acid, some like *Lachancea thermotolerance* consume it. If one of your wild yeast strains was a c acid consumer, it's possible that the normal amount of acetic acid fermentation (it varies widely but could be 0.15–0.50 g/L), which would help keep pH low, wouldn't be present. It's hard to correlate between pH and TA in such a buffered solution and complex situation but if I had to guess I wouldn't be surprised if a complete disappearance of acetic acid could contribute to a pH shift upwards of 0.05–0.15 or so.

The minute you crush a grape, you're putting any organism that happens to be on the skins in contact with all of that tasty, sugary juice and fermentative chaos is the inevitable result.

So long story short, I agree with you, I think that the wild party the feral yeast threw in your grape bin did shift some things around. In the future, to knock down the activity of these rogue yeasts, and to make sure that your yeast of choice predictably conducts your fermentations, you may want to make sure the crushing winery adds around 30 ppm SO2 (total, not free) to your grapes. Keeping the grapes cold is also critical, as you've found when the A/C quits on you. I also recommend not waiting so long between the crushing and inoculating. The minute you crush a grape, you're putting any organism that happens to be on the skins in contact with all of that tasty, sugary juice and fermentative chaos is the inevitable result. A little bit of chaos in winemaking can be a good thing . . . but a little control is also advised.

Response by Alison Crowe.

Reference Library

(updated 4-5-2024)

Here is a list of hobby winemaking manuals and other materials in the Secretary's file. They are available for downloading by e-mail or via an internet transfer service. Some are downloadable from the source such as Scott Lab. All are in PDF format, e-mail Ken Stinger at kbstinger@frontier.com

Scott Lab 2024 Winemaking Handbook –13.3MB – 144 pages
Scott Lab 2024 - 2025 Cider Making Handbook – 6.2 MB – 96 pages
Scott Lab 2018-2019 Sparkling Handbook – 8 MB – 58 pages
Scott Lab 2022 Craft Distilling Handbook – 5.2 MB – 26 pages
Anchor 2021 – 2022 Enology Harvest Guide 2.6 MB - 104 pages
A Guide to Fining Wine, WA State University - 314 KB - 10 pages
Barrel Care Procedures - The Beverage People - 100 KB - 2 pages
Barrel Care Techniques - Pambianchi – 42 KB – 3 pages
Enartis Handbook – 5.1 MB - 124 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
Wine Flavors, Faults & Taints – 600 KB, 11 pages
Daniel Pambianchi wine calculator set – 13.5 MB, 10 calculators

Portland Winemakers Club
Leadership Team – 2024

President: **Bob Hatt** bobhatt2000@yahoo.com

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

Treasurer: **Barb Thomson** bt.grapevine@frontier.com
- Collect dues and fees, and update the membership list with the secretary.
- Pay bills

Secretary: **Ken Stinger** kbstinger2@gmail.com
- Communicate regularly about club activities and issues
- Monthly newsletter
- Keep an updated list of members, name tags, and other data

Chair of Education / Speakers **Paul Natale** paulnatale6@gmail.com
- Arrange for speakers & educational content for our meetings

Chair for Tastings: **Brian Bowles / Mike Sicard** bowles97229@gmail.com
msicard@willamettehvac.com
- Conduct club tastings
- Review and improve club tasting procedures

Chair of Winery / Vineyard Tours: **Andy Mocny.** acmocny@gmail.com
- Select wineries, vineyards, etc. to visit • Arrange tours
- Cover logistics (food and money)

Chair of Group Purchases: **Bob Thoenen / Tyson Smith**
bobthoenen@yahoo.com
tyson@tysonsmith.com

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

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

Chairs for Social Events: **Mindy Bush / Marilyn Brown**
mindybush@hotmail.com
- Gala /Picnic/parties brown.marilynjean@gmail.com

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