Portland Winemakers Club

September 2021

"Bill's Meanderings"

Hope this finds everyone enjoying the nice weather and holidays. It's shaping up to be a nice fall for maturing of fruit and some fruit is already getting picked and fermented. Especially fruit from warmer regions like Southern Oregon and Eastern Washington. So gear up for those that have ordered fruit from these regions, you could get a call anytime. My backyard vineyard is getting closer, + or - 20 Brix with pH around 3.0 to 3.05. With these warm days and cooler nights, I expect those numbers will change in the right direction. At this point I see a harvest about one week ahead of last years smoke tainted one, around the last week of September for Pinot Noir.

We are temporarily going back to Zoom meetings and our next one on Sept 15th will have a guest. This meeting was scheduled to be an "Other Reds" tasting so a person that is familiar to some of us but unseen by many, Jim Jamison, will give us a talk on growing some of those other reds in Eastern Washington. So, join us on Wednesday the 15th at 6:45 PM. Ken will send out the Zoom notice in the coming week.

Cheers, and here's to a bountiful harvest and a successful crush!

Bill Brown

Monthly Events

January 2021
Annual Gala CANCELLED

January 20th, 2021
Speaker, Mike Smolak, Port
ZOOM VIRTUAL MEETING

February 17th, 2021
Speaker, Syncline, James Mantone, Rhone varietals
ZOOM VIRTUAL MEETING

March 17th
Speaker: Tyson Crowley from Crowley Winery, Pinot & Chardonnay
ZOOM VIRTUAL MEETING

April 21st, 2021
Speaker: Bobby Rowett winemaker for Mellen Meyer Sparkling Winery
ZOOM VIRTUAL MEETING

May 19th, 2021
To be determined
ZOOM VIRTUAL MEETING

June 16th, 2021
To be determined
ZOOM VIRTUAL MEETING

July 24th, 2021
Outdoor, contact meeting at Paul Natale's home; 2:00 to 5:00 pm.

August 21st, 2021, Annual Picnic, At the home of Craig & Mindy Bush. CANCELLED

August, no meeting

September 15th, 2021
Speaker: Jim Jamison, vineyards & winery owner from Tri-Cities.
ZOOM VIRTUAL MEETING

October 20th, 2021
To be determined

November 17th, 2021
Crush Talk

December 15th, 2021
Elections, Planning for Next Year, More Crush Talk

Drink Responsibly. Drive Responsibly.

Upcoming events / Save the date

The next PWC meeting is scheduled for September 15th, This will be a Zoom meeting starting at 7:00 pm, sign in about 6:45 pm. Our speaker will be Jim Jamison who grows grapes on several acres and makes his own wine in Washington's Tri-Cities area. Many of you are have received his grapes through the group purchase plan. More information will follow through e-mail.

PWC Website: http://portlandwinemakersclub.com/

Minutes from the August Meeting

(There was no meeting in August)

We have several members who entered the Winemaker Magazine International Amateur Wine Competition. The PWC winners are listed below. For the total winners list, go to: winemakermag.com

Winemaker Magazine International Amateur Wine Competition (1893 entries total)

Paul Boyechko	2019 Albariño	Bronze
Paul Boyechco	2018 Petit Verdot	Gold
Bob Hatt	2018 Red Blend, 40% Mourvedre, 30% Grenache, 30% Syrah	Gold
Ken & Barb Stinger	2017 Petit Verdot	Gold
Ken & Barb Stinger	2018 Cabernet Sauvignon	Silver
Ken & Barb Stinger	2018 Merlot	Bronze
Ken & Barb Stinger	2018 Malbec	Bronze

(special note: Non-member Robert Walker of Lebanon, OR won Best of Show, Country Fruit for his 100% Estate Apple 2018)

If someone tells you they don't drink wine because they are sensitive or allergic to the sulfites, ask if they enjoy eating French fries.

From the Journal of Wine Economics: A review of, what could be, an interesting book. editor

Robert N. Stavins
Harvard University

BOOK REVIEW: **Passions: The Wines and Travels of Thomas Jefferson**.

Having only recently read Ron Chernow's excellent biographies of Alexander Hamilton (Chernow, 2004), George Washington (Chernow, 2010), and Ulysses S. Grant (Chernow, 2017), I was eager to read a biography of Hamilton's great political opponent, George Washington's talented Secretary of State, and—of course—the third President of the United States, Thomas Jefferson. Instead, I "changed it up," as my son would say, by reading this work by James Gabler that promised from its title to combine my armchair fascination with American history and my abiding interest and love of fine wine.

The book lives up to its title, as it provides what may be a nearly exhaustive (but sometimes exhausting) encyclopedic compilation of Jefferson's travels and wines. Apparently, seven years were required for Gabler's research and the writing, and it shows. The book draws on what I assume to be abundant original research and offers what must be the most complete and authoritative cataloguing of the wines Jefferson enjoyed (or not) from before the Revolutionary War, through Jefferson's time in Paris as ambassador, including extended travels to vineyards in France, Italy, and Germany, in the White House as President, and—of course—at his beloved Monticello.

Thus, the book can function as an excellent reference—presumably for someone who wants to check on Jefferson's travels in this year or that, the wines he was trying at the time, and the details of his transport, accommodations, conversations, and meals. Hmm, I wonder, in April of 1787, where did Jefferson visit, how long did he stay there, where did he sleep, and what wine did he drink? OK, on page 97—we learn that Jefferson spent two days in Turin at the Hotel d'Angleterre, and drank for the first time Nebiule, made from the precursor of today's Nebbiolo grape.

So, this is a remarkable reference, and the book's reasonable cost may be justified by just two (of the five) appendices: one being a compilation of Jefferson's favorite wines that are "available today," that is, in their modern incarnations; and the other an inventory of Jefferson's White House wine cellar with detailed annotations. But even a great reference work is not necessarily a book I can recommend trying to read from start to finish (unless you have committed to write a review, of course). In too many of the book's 16 chapters, I felt like I was reading notes prepared for me by a very careful research assistant—from which I would then have to prepare a first draft of a chapter or article. Indeed, what I would love to read would be a long New Yorker article by Mr. Gabler summarizing some highlights of these 300+ pages.

For me, such highlights would include descriptions of dinners, dinner companions, cuisine, wine, and conversations at Jefferson's Paris residence on the Champs- Elysées, at the White House, and at Monticello. Likewise, it was fun to read excerpts from letters in which Jefferson gave advice about which wines to buy to three Presidents: Washington, Madison, and Monroe.

Yes, Jefferson's favorites from Bordeaux included Château Margaux, Haut-Brion, Lafite, and Latour, which I was surprised to learn were called "First Growths" even in 1784, fully 70 years before Napoleon III's 1855 classification. But Jefferson was not the ultimate wine snob and purchased and drank a range of slightly lesser Bordeaux, including Gruard-Larose, Leoville-Las-Cases, Leoville-Poyferre, Leoville-Barton, Calon-Segur, Pontet-Canet, and—of course—from Sauternes, Château Yquem, which I learned was a very different wine in Jefferson's day, 60 years before infection with botrytis cinerea made d'Yquem the remarkable Sauternes it is today. Beyond Bordeaux, wines of roughly similar pedigree were Jefferson's favorites in Burgundy, the northern and southern Rhone, and elsewhere on the Continent. Jefferson enjoyed a long retirement from the Presidency at his beloved Monticello from age 66 until his passing at 83 years of age. Those years included some marginal involvement in the political world, but mainly via letters to his successors pressing for some favored policy. Just two years into his retirement, in 1811, Jefferson abandoned his previous view of international trade policy, which was essentially based on the theory of absolute advantage of Smith (1776), and came to favor instead a somewhat isolationist policy, even more distant from Ricardo's theory of

comparative advantage (Ricardo, 1817), which had not yet appeared, let alone diffused. At a time of European wars, this meant—remarkably—that for a time, Jefferson favored wines from Maryland, which he claimed to be "of the quality of the best Burgundy" (p. 215).

Not long after Jefferson sent a long letter to President Monroe, shortly after his inauguration, advising the new President of the wines he should add to the White House wine cellar, Jefferson became an advocate for public policies that would be favorable to wine drinkers like himself. Interestingly, he did so in ways that would be perfectly familiar to today's lobbyists. He argued in a letter to the new Secretary of the Treasury against a luxury tax on wine then being considered by Congress: "I think it is a great error to consider a heavy tax on wines as a tax on luxury. On the contrary, it is a tax on the health of our citizens" because it would reduce wine consumption and would be "in effect a condemnation of all the middling and lower conditions of society to the poison of whiskey ..." (p. 224).

To the end, Thomas Jefferson was a remarkable man—statesman, diplomat, architect, inventor, farmer, viticulturalist, and passionate oenophile. In regard to Jefferson's reputation as a "Renaissance man," my favorite quote in the book is not from Jefferson's many letters but rather is a quote from another President some 150 years after Jefferson left office. At a White House dinner on April 29, 1962, honoring Nobel laureates, President John F. Kennedy told the group, "I think this is the most extraordinary collection of talent, of human knowledge, that has ever been gathered together at the White House, with the possible exception of when Thomas Jefferson dined alone" (Kennedy, 1962).

References

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Chernow, R. (2017). Grant. New York: Penguin Group.

Kennedy, J. F. (1962). "Remarks at a Dinner Honoring Nobel Prize Winners of the Western Hemisphere," 29 April. Published by Gerhard Peters and John T. Woolley, eds., American Presidency Project. Santa Barbara, CA: University of California Press. Ricardo, D. (1817). On the Principles of Political Economy and Taxation. London: John Murray, Albemarle-Street.

Smith, A. (1776). An Inquiry into the Nature and Causes of the Wealth of Nations. London: W. Strahan and T. Cadell.

Determining Ripeness

Written by Bob Peak

Ripe grapes make the best wine. Of course, there are wines made deliberately from under-ripe grapes, like Champagne. And there are those made from over-ripe grapes such as late harvest or ice wine. But for the vast majority of fine table wine, the winemaker wants to start with fruit that is exactly ripe. Before getting into how to determine grape ripeness, let's consider what it means. At its simplest, as the Concise Oxford Dictionary says, ripe is "ready to be reaped, gathered, eaten." For home winemakers who grow their own grapes or have influence over the harvest date of purchased grapes, determining that readiness is one of the most important decisions of the entire vintage.

There have been numerous university studies of grape ripeness trying to correlate specific numerical measurements with the quality of the resulting wine. Unfortunately, no simple index has been found to be universally predictive of great wine. The first and foremost numerical feature for a picking decision is the sugar level, which winemakers measure in °Brix (the percent sugar by weight in the juice). However, fine wine also requires grapes displaying what experts call "physiological maturity."

To understand ripeness better, you need to understand how the wine grape develops. Early in the growing season, berries are small, hard and acidic (and contain little sugar), all of which discourages animal predation. As the vintage progresses, acid levels in the grape drop steadily, mostly due to the depletion of malic acid. At véraison, a variety of changes occur. Berry size increases more quickly than before, and the pH rises rapidly. Sugar levels (overwhelmingly glucose and fructose), which begin to take off a bit before véraison, continue to rise rapidly. In red grapes, anthocyanin production begins, and the grapes take on color. (In addition, both red and white fruit lose chlorophyll.) As ripeness approaches, the berries soften to a consistency that is palatable to animals that would eat the fruit and disperse the seeds. Although all grapes share a similar path to ripening, as ripeness approaches, each will start to display the characteristic flavors and aromas of its variety. Home vineyardists should get to know the characteristics expected of ripe grapes — which include an expected level of sugar and acids as well as characteristic colors, aromas and flavors — of the variety they are growing in their climate.

For the grape, ripeness is not a discrete quality, it is a window in the continuum of development. For the home vineyardist, figuring out when this window occurs will let you bring in the grapes at optimal ripeness and make the best possible wine.

Think for a moment about the grape as the reproductive bait that it is. The fruit must develop aromas, flavors, and colors that will attract predators to consume the fruit — and the enclosed seeds — with the possibility of depositing those seeds later in fertile soil. As anyone who has a vineyard knows, though, the birds will eat the fruit long before it is ripe enough for fine wine. Physiological maturity means the seeds are mature enough to grow a new plant. For winemaking, we look for characteristic hardening and browning of the seeds to illustrate that maturity. We also look for rich golden, purple, or blue-black colors in the grape skin as clues to maturity. So, although sugar level is king, it is not enough if the grapes are not mature. Wine made from immature grapes, even with enough sugar to produce a suitable alcohol level, will have under-ripe aromas and flavors. In maturing grapes, and in the wine that results, flavors move from vegetal and citrusy into red fruit notes like berries and cherries, and finally into black fruits like currants and blackberries. Left to ripen further, flavors of jam, dried fruit, or stewed prunes may emerge. (In white varieties, the reference fruits are different, moving from lemon and green apple through ripe pears and peaches, then possibly to litchi and mango.)

Acidity

Beyond the subjective evaluation of skin color, seed color and hardness, and fruit flavor, we can do some additional measurements beyond Brix. The most commonly used index figures for ripeness are Titratable Acidity (TA) and pH. Those have bearing on the harvest decision because as grapes ripen, the malic acid level drops while the tartaric acid level remains the same. As a result, TA drops and pH rises. In your harvest decision, you will want to look for the "perfect" combination of Brix, TA, and pH. (People sometimes ask me why they cannot just pick early — before the birds eat the grapes — and add sugar. Technically, you can. But those immature flavors will present the same kind of problems as trying to add sugar to a green bell pepper to make it taste like a red bell pepper—it won't work.)

Putting It All Together: An Example

But what combination of sugar, acid, and pH will you look for? First, choose the sugar level you are targeting. For my backyard Pinot Noir, I want vineyard Brix measurements to come in at 25 °Brix and my Chardonnay at 23 °Brix. (Despite my best efforts, post-crush Brix is often a bit lower than the vineyard samples — possibly due to under-ripe clusters getting into the picking bins!) Because I grow in a cool climate (western Sonoma County, California), I expect slightly high TAs of around 0.7 g/100 mL for the Pinot and 0.8 or even 0.9 on the Chardonnay. Corresponding pHs are a bit below conventional wisdom, at about 3.2 and 3.0. Usual guidelines for red wine are Brix levels of 23 to 25, TA of about 0.65, and pH of 3.4 to 3.6. White grapes are often harvested at slightly lower sugars, higher acids, and lower pHs.

With sugar levels rising and acid levels dropping near harvest, how can we combine the numbers effectively? Linda Bisson of UC Davis has reported two different formulas sometimes applied to this question. The first is:

Brix x pH = 220 to 260

The second is:

Brix/TA (in g/100 mL) = 30 to 32

As an example, my 2008 homegrown Pinot Noir came in as one of the best harvests I have ever had in my hobby vineyard and the wine went on to win several awards. The crushed, soaked-up juice sample measured 24.8 °Brix, 0.71 TA, and 3.2 pH. Those figures yield 254 by formula one, which is high, but in range. The second result is 35.0, which is out of range high, indicating a low acid: sugar ratio. The wine, nonetheless, was one of the best I have made. That serves as a reminder that you must choose figures for your grapes that reflect your objectives and conditions. You are using these figures not just to determine the potential alcohol and actual acidity, but also as indicators of that elusive quality — "physiological maturity."

What to do. First of all, write down everything. If you use grapes from the same vineyard year after year, you can develop your own rules of thumb for your grape harvest. Secondly, choose a harvest target for Brix and stick to it. It is very tempting to note that the birds (or foxes, or raccoons) are eating the grapes and rush the harvest. Don't do it. Better to make less wine that is very good, than more wine that you can't drink.

I like to divide my harvest monitoring into two phases: ripeness tracking and harvest decision. Three or four weeks before my anticipated harvest date, I begin taking vineyard Brix readings once a week to help me choose when to pick. Finally, a few days before the expected date, I do more extensive testing to verify the choice. I notify the friends and family who have offered to help pick my 1⁄3 acre of each set of readings. For the final harvest test, I allow about 3 days until the anticipated date, in case I need to call off the harvest party and postpone for a week or so.

For ripeness tracking, get yourself a hand-held refractometer. Go out in the vineyard with it, along with a wash bottle of distilled water, a roll of paper towels, and your notebook. Choose some reasonable number of figures to take — with 125 vines each of Pinot Noir and Chardonnay, I sample six grapes of each out of two rows for this monitoring. Without looking at them (because you will be unconsciously biased toward ripe grapes if you look), reach under the bird netting and pluck a grape. Look at (and note) its color development. Squeeze the juice onto the refractometer prism. Pop the grape in your mouth and chew thoughtfully on the pulp and skin as you take your Brix reading. Note the Brix reading and spit the grape seeds into your hand. Note the color — I record G for green, G/B for some green and some brown, and B for brown. Make notes on the flavor of the fruit and the skin, which will be the primary tannin source in your finished wine. While development of ripe flavors is critical, experts find that the disappearance of under-ripe flavors is more important to producing good wine.

Move to another vine, pull another grape, and repeat. Do this a predetermined number of times through the vineyard. Back in the house, take an average of your Brix readings. Don't worry if they are not tightly clustered readings, but if one is way out, remove it from the averaging process. If you repeat this sequence weekly, you will be able to determine how fast your grapes are ripening. Mine usually come up about 1.5 degrees per week, so I can predict a week or so ahead of time (barring a sudden change in the weather) when I will reach my Brix targets. Then comes the harvest decision.

Collect at least 50 grapes from throughout the vineyard into a small zip lock plastic bag. With your fingers, crush the grapes. Let the sample macerate in the bag at room temperature for two or three hours. Strain the juice through a stainless steel sieve or colander, collecting a sample for testing. Measure Brix, pH, and TA and apply the formulas above or just look for numbers that work for your vineyard. If your perception of color, seed ripeness, and flavors all concur with good numbers, Harvest is on! Notify your picking crew and get ready to make some fine wine from ripe grapes.

What Is Orange Wine All About?

We are all used to a choice between red, white and rosé, but there's a fourth color increasingly being talked about in the world of wine - orange. This doesn't mean wines made from citrus fruit, but white wines that are much deeper in color than usual, ranging from pale amber to deep orange. Some countries, notably Georgia, prefer the term 'amber' to avoid exactly this confusion. The winemaking method that results in these deeply colored wines is probably the most ancient way of making white wine, a technique that has undergone a revival since the mid-1990s

(especially led by producers in northeast Italy such as Gravner and Radikon and joined by neighbors over the border in Slovenia). Whether you call them orange or amber, such wines have recently gained an enthusiastic following, alongside the rise of the trendy, but ill-defined, cult of 'natural' wines. There's sometimes an overlap between these two categories but not always.

What does orange wine taste like?

In drinking terms, orange wines can be a little bit of a shock at first to anyone used to clear, pale colored, fruity white wines. Orange or amber wines tend not to be fruity but are complex, layered and structured, often with notes of dried fruit, herbs and spices, tea and a savory umami quality. These are food wines par excellence and can be amazing matches with foods like asparagus, fennel, mushrooms and cheeses, or when you're looking for a white wine that has the intensity and structure to go with a meat dish. These are also wines that can be incredibly long-lived, helped by that phenolic structure, and because they don't rely on fragile, fruity aromas and flavors for their personality. Don't think about them as white wines but as a new style all together. Orange wines are not for everyone – but well worth exploring for a truly fascinating and intriguing wine experience.

How is orange wine made?

In simple terms, making an orange wine means vinifying white grapes in a similar way to making red wine, so the fermenting juice spends time macerating in contact with the grape skins. This period may be anything from a few days to many months (which is in fact far more extreme than almost any red). The most traditional recipe comes from Georgia where qvevri winemaking was listed in 2013 by UNESCO as 'intangible cultural heritage of humanity'. This technique has a history of around 8,000 years, and it involves crushing the grapes and pouring the lot (juice, skins, pips and stems) into large egg-shaped clay jars called qvevri (sometimes spelt kvevri), which have been scrubbed and lined with beeswax. These jars are buried in the ground, traditionally in the cellar or 'marani' of the house. The idea is that the earth both supports the fragile clay jars and helps keep the vessel naturally cool. The qvevri are sealed with a wood or stone lid and the fermentation is allowed to proceed naturally for several months. As with red wine making, there are variations on this theme that affect the color and structure of the final wine. Winemakers have the choice to include stems or not, whether they punch down and stir the fermenting mass, and whether the seeds (which can be bitter) are allowed to settle to the bottom. Maceration time, temperature and exposure to oxygen all have an effect too – longer maceration and more oxygen tend to mean deeper colors, and at the same time, phenolic compounds and tannins may be extracted from the skins giving structure more like red wine than white. Frequently winemakers choose to allow spontaneous fermentation, so no added yeast or bacteria. Typically, no sulfites will be added, at least until bottling, and there may not be any filtration so, the wines are often cloudy. Winemakers may opt to chill the fermenting juice, though ambient temperatures are more usual in the spirit of minimizing intervention. Fermentation vessels may be steel, oak, concrete or clay, with vessels that allow some oxygen exposure usually preferred. It's also very important that grapes are ripe and healthy, because this method will emphasize any unripe stalky tannins or moldy characters. It's worth noting that there's a difference between this winemaking approach and the sort of skin maceration used in places like Croatia, usually at a cool temperature and before fermentation, to gain texture and complexity but avoid the color and structure of an orange wine.

There is relatively little formal science to be found on orange winemaking, though it's clear that there's no actual orange pigment present, and unless a winemaker is using pink-skinned grapes like pinot gris, there are no anthocyanins either. The orange color seems to come from compounds such as carotenoids, flavonoid-type phenols and catechins (which can be bitter) from the skins.

One piece of research in South Africa tested different vinification methods on chenin blanc and showed that with fermentation on skins, levels of volatile aromatics were reduced, especially some terpenes (chemicals that give floral and aromatic notes to certain grapes). There were also higher alcohol levels, fewer fruity esters and lower acidity (possibly due to higher potassium salts in grape skins). There are few legal definitions around skin-contact wines or orange wines, though in South Africa such wines require a minimum of 96 hours on skins including fermentation and a maximum of 40 mg/l total sulfites. Ontario in Canada requires 100% of the grapes to be macerated and fermented on skins for a minimum of 10 days.

Properly Adding Copper

by Alison Crowe.

Q

I have used copper tubing, along with racking and aeration, with success to remove H_2S odors. When H_2S odors are detected, I rack/aerate and place a copper tube in the carboy until the odor has dissipated. There was no mention of this technique in the article. My question is, if there is a strict limit of using $CuSO_4$, is there also a limit to using copper (e.g., how much copper tubing to use for a period of time)? Also, does the copper dissolve into the wine or does it simply chemically react to the wine?

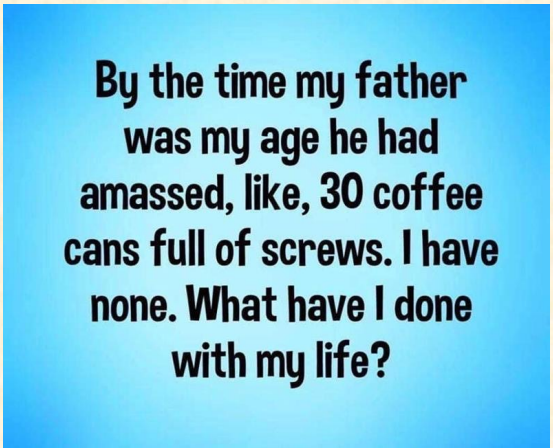
A

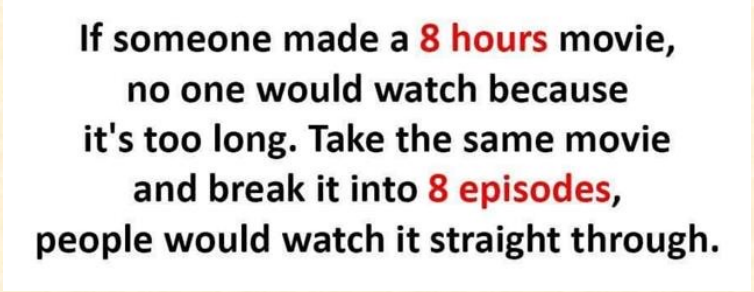
Ah yes, the classic "I sunk a bunch of pennies in my carboy" tale. Forgetting for a moment that modern pennies contain very little copper, there's a reason that most winemakers I know don't use brass fittings or copper equipment anymore. It's because it is indeed impossible to really know how much elemental copper you're releasing into your wine.

In high doses, copper is indeed poisonous and there's a very good reason that those gorgeous old Victorian cooking pots you see in antique stores are lined with shiny tin. It's because Mrs. Crumbie the Cook wouldn't want to inadvertently give the Master and Mistress of the house copper poisoning with a poorly lined saucepan (on second thought, who's to say, maybe she would). Regardless, I don't want you poisoning yourselves or your loved ones so it's always best to carefully measure copper sulfate ($CuSO_4$) into your wine rather than rely on copper-containing objects or equipment.

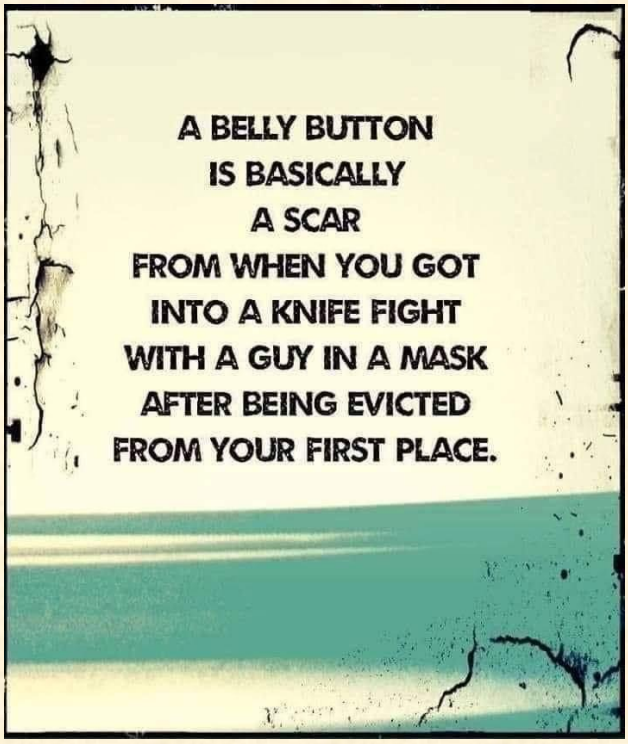
The TTB (Alcohol and Tobacco Tax and Trade Bureau) website states that as of 2020, "The quantity of copper sulfate (calculated as copper) must not exceed 6 parts copper per million parts of wine (6.0 mg/L). The residual level of copper in the finished wine must not exceed 1 part per million (1 mg/L)." Copper from brass fittings or copper equipment does indeed react with wine and certainly can contribute to residual dissolved copper in finished wines. How much copper gets into your wine is dependent on a multitude of factors. One, as you mention, is contact time. The others include, but are not limited to, temperature, copper content of the metal item in question, surface area of the metal, the pH of your wine, the alcohol content of your wine, etc. As you can see, it's quite unpredictable.

Now, do I think there's anything terribly wrong with, while doing a pumpover, using a copper screen in the tub for a minute or two or racking a young wine by passing it through a hose with a copper fitting? Not really. I do think that leaving copper-containing objects in containers for any length of time over a few minutes is risky and don't recommend it, especially if a wine is approaching bottling. Fermenting, young wines have their entire lives in carboy, keg, or barrel to precipitate and "drop out" copper-containing solids over time and are much less likely to end up with an unhealthy amount of residual copper in a finished bottle. Wine that is ready to bottle doesn't have the luxury of time and so is quite sensitive to potentially big doses. Do you really want to chance it? If you can pick up some diluted copper sulfate solution (I usually buy a 1.00% solution) and have some small-gauge pipettes (1 mL or smaller), you'll be able to do bench trials and measure in small amounts of copper like a pro, without any fear of having any toxic residues in your wine.





Did You Know... In Las Vegas there are more Catholic Churches than casinos. Not surprisingly some worshipers at Sunday services will give casino chips rather than cash when the basket is passed.
Since they get chips from many different casinos, the churches have devised a method to collect the offerings. The churches send all their collected chips to a nearby Franciscan monastery for sorting and then the chips are taken to the casinos of origin and cashed In.
This is done by the chip monks.



References

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

Scott Labs 2021 Winemaking Handbook - 21 mb - 119 pages
Scott Labs 2018 Cider Handbook - 24 mb - 49 pages
Scott Labs 2018-2019 Sparkling Handbook - 8 mb - 58 pages
Anchor 2021 – 2022 Enology Harvest Guide 15.7 MB - 16 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
Wine Flavors, Faults & Taints – 600 kb, 11 pages

Portland Winemakers Club
Leadership Team – 2021

President: **Bill Brown** 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
jmourada57@gmail.com
- Collect dues and fees, update membership list with secretary.
- Pay bills

Secretary: **Ken Stinger** 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
- Arrange for speakers & educational content for our meetings

Chair for Tastings: **Paul Sowray / Barb Stinger** davids1898@aol.com
kbstinger@frontier.com
- Conduct club tastings
- Review and improve club tasting procedures

Chair of Winery / Vineyard Tours: **Damon Lopez.** 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
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
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
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