Portland Winemakers Club

February 2023

"From The President"

February is here. My 2022 wines are in the barrels and hopefully finishing up Malo. Since everything is tucked away in barrels now, I was feeling a little more relaxed about wine, but then remembered that this is barrel/carboy sample tasting at the meeting this month. That made me go back to my 2021 Nebbiolo which is still in the barrel. Does that qualify for the barrel sample tasting this month? Or should it wait for the March Italian varietal tasting? With making too much wine comes too many decisions.

Why did I not add tartaric before fermentation ? What if I add it now while in the barrel ? Check out the newsletter archive on the website. It is a treasure trove of info about these kinds of questions. I hope to see you at the February meeting and ***bring a bottle of wine to put into the trading pool. Everyone who brings a bottle gets a number and then there will be a random drawing of the numbers so that the first number picked gets first choice from the trading pool. Numbers get picked until the pool is empty.***

This is not a chance to get rid of your lousy wine - Bill ;) (inside joke if you were at the January meeting.

See you at the Grange.

Regards, Bob

Editor: A communication between our Treasurer, Barb Thomson, and a club member: "Yes, $100 for four years of dues will work (I have received your money via PayPal). By the way, we also have a special, 20 years for $499.95 (just kidding)."

Thanks for your commitment to the club!

Monthly Events

January 18th, 2023
Discuss plans and ideas for 2023

January 21st, 2023
Gala at Parrott Mountain Cellars

February 15th, 2023
Barrel sample tasting
Wine trading pool

March 15th, 2023
Tasting & judging, member produced Italian varietals

April 19th, 2023
Tips & Tricks, wine flaws kit

May 17th, 2023
Tasting & judging, member produced Bordeaux Reds

June 21st, 2023
speaker

July no meeting

July 22nd, 2023
Annual Picnic, $10 ea. fee, Craig & Mindy Bush

August 16th, 2023
Tasting & judging, member produced all Whites, Rose' & sparkling

September 20th, 2023
Tasting & judging, member produced other Reds & fruit wines

October 18th, 2023
Tasting & judging, member produced Pinot Noir

November 15th, 2023
Crush Talk

December 13th, 2023
Elections, Planning for Next Year

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

Drink Responsibly
Drive Responsibly

Up-coming events / Save the date

The next PWC meeting is scheduled for Wednesday, February 15th in the basement of the Aloha Grange starting at 7:00 pm. We will be tasting and judging and discussing samples from your barrels or carboys. Put a wine in the line up by bringing 2 bottles per sample. Also bring 2 wine glasses per taster.

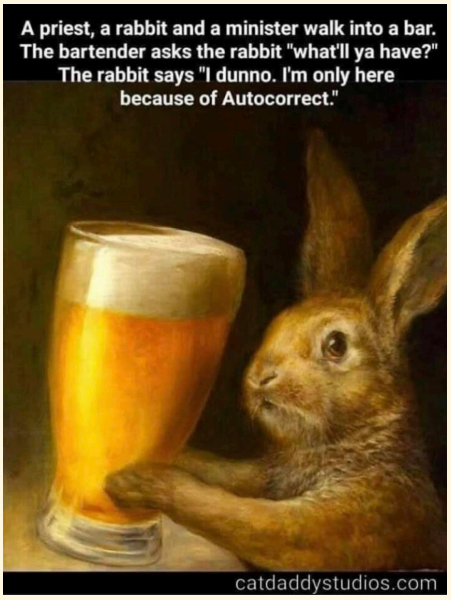
NOTE: There will be a pot-luck table for those who wish to participate. Bring a dish to share. If you would rather not participate feel free to bring your own snacks.

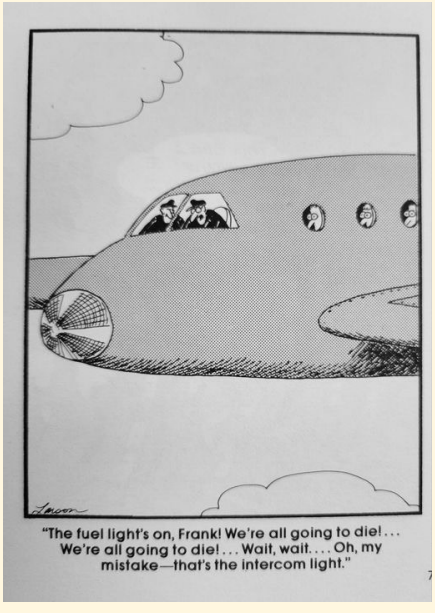
January Meeting Notes

Members present: 24

- President Bob Hatt presented Al Glasby with the "Member of the Year " award for his management of the 2022 grape purchase program.
- It's time to be thinking about your grape needs for 2023. Some vineyards will want requests in May or June.
- About 8 members sent wines to the Newport Seafood & Wine Festival for judging.
- Treasurer Barb Thomson says new waivers are needed from each member as well as dues.
- Rob Marr would like to arrange for ETS Labs as a speaker, possibly with a slide show.
- Wines for the Winemaker Magazine amateur competition are due in Vermont by 17 March. $30 entry. 1 bottle per entry.
- There was a discussion of the pros & cons of including fruit wines in the club's platform.
- ***Starting at the February meeting bring a bottle of wine to put into a trading pool. Everyone who brings a bottle gets a number and then there will be a random drawing of the numbers so that the first number picked gets first choice from the trading pool. Numbers get picked until the pool is empty.***

- Please 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. There are 33 members in the group so far.





EDITOR: The Portland Winemakers Club held their Winter Gala party at Parrett Mountain Cellars on January 21st for the first time since COVID19 began way back in the Spring of 2020. The last previous Gala held was January 25th, 2020. Virtual meetings started in March of 2020.

Over forty members and significant others tasted some great wines, ate well, won raffle prizes, were honored for their accomplishment and listened to some very good blues by artists Ben Rice with Melanie Owen. Here are some pictures from the evening.

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vino
CABERNET
PINOT
NOIR
red
ZINFANDEL
MERLOT
white
RIESLING
CHARDONNAY
BLANC










2023 WineMaker International Amateur WINE COMPETITION

ENTER YOUR BEST HOMEMADE WINES IN THE WORLD'S LARGEST COMPETITION FOR HOBBY WINEMAKERS! DON'T WAIT — SEND YOUR ENTRIES NOW! ENTRY DEADLINE: MARCH 17, 2023!
Click here to download competition rules and entry form or click here for the online form to print out and mail in.
Enter your wines, meads, and ciders and compete for gold, silver and bronze medals in 50 categories awarded by a panel of experienced wine judges. You can gain international recognition for your skills and get valuable feedback on your wines from the competition's judging panel.

Malolactic Co-inoculation of selected Wine Bacteria

What is co-inoculation?

Co-inoculation is the practice of inoculating selected wine bacteria at the beginning of the winemaking process shortly after yeast inoculation. This technique is gaining in popularity because not only will it secure the malolactic fermentation (MLF), but also because there are definite advantages that are recognized by winemakers and professionals. Malolactic fermentation, the enzymatic decarboxylation of L-malic acid to L-lactic acid and carbon dioxide, is the important secondary fermentation conducted by wine bacteria (Versari *et al.*, 1999). There are different timing of inoculation possibilities with selected wine bacteria (figure 1), such as co-inoculation which is the inoculation of wine bacteria at the beginning of alcoholic fermentation (AF) shortly after yeast addition, inoculation at 2/3 of the alcoholic fermentation (early inoculation) and inoculation after the completion of AF (sequential inoculation).

How does it work?

Co-inoculation, where bacteria are inoculated briefly after yeast inoculation gives the selected wine bacteria a more favorable medium, mainly lower ethanol concentrations and a better nutrient availability. Since yeast grows more vigorously, ML bacteria activity will be suppressed during active AF, but the selected bacteria will acclimatize slowly to the in- creasing alcohol levels. Bacteria transition from the lag to the logarithmic phase of growth in a mixed culture with yeast coinciding with the start of the death phase of the yeast. This phenomenon may bring essential bacterial nutrients to the system as a result of yeast death and autolysis. Inoculation in the middle of alcoholic fermentation very often results in a

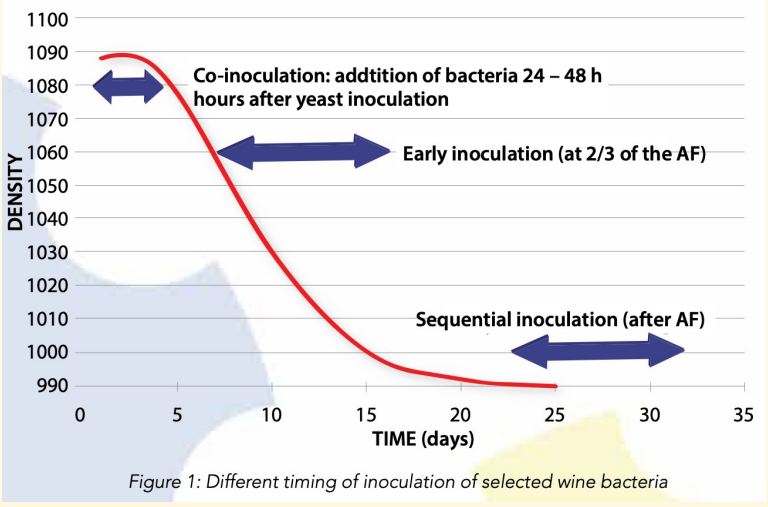

Figure 1: Different timing of inoculation of selected wine bacteria

more significant die-off of the selected ML bacteria, caused by the production of yeast-derived toxic compounds other than ethanol and sulfur dioxide during this highly active stage of AF. The most intense levels of yeast-induced antagonism by metabolites such as decanoic acid may be encountered at this stage. However, under low pH conditions (< pH 3.15) inoculation at 1/3rd of alcoholic fermentation could be more favorable, because at this stage all Sulphur dioxide added at crush will be bound and less active against the selected wine bacteria. Most compatible yeast strains for early inoculation strategies are low producers of SO2, with a low to medium nitrogen demand and moderate fermentation kinetics.

Managing acetic acid production

When talking about the practice of co-inoculation, it is important to address the concern of possible production of acetic acid by the lactic acid bacteria. Inoculation of wine with malolactic starter cultures was traditionally practiced after the end of the alcoholic fermentation, when all fermentable sugars have been consumed by yeast and more significant die-off of the selected ML bacteria, caused by the production of yeast-derived toxic compounds other than ethanol and sulfur dioxide during this highly active stage of AF. The most intense levels of yeast-induced antagonism by metabolites such as decanoic acid may be encountered at this stage. However, under low pH conditions (< pH 3.15) inoculation at 1/3rd of alcoholic fermentation could be more favorable, because at this stage all Sulphur dioxide added at crush will be bound and less active against the selected wine bacteria. Most compatible yeast strains for early inoculation strategies are low producers of SO2, with a low to medium nitrogen demand and moderate fermentation kinetics.

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What are the benefits of co-inoculation? Secure and time saving

One of the more obvious advantages of co-inoculation is a better control over the wine-making process in terms of time management and security of MLF completion. Jussier *et al.*, (2006) observed a significant reduction in time for MLF from Chardonnay at a pH of 3.53 and ethanol over 13% (v/v) when co-inoculation was induced with respect to sequential AF/MLF. Under high alcohol conditions (16% and above), an important stress

in winemaking, in a study, they not only showed that the MLF was completed successfully under difficult conditions, but that it was completed earlier than sequential inoculation (70 days, versus 112 days).

What are the benefits of co-inoculation? Sensory impact

Recent studies investigated the impact of co-inoculation on the wine sensory quality. It was shown that selected wine bacteria have the potential to influence the aroma profile of wines by the production of volatile secondary metabolites and modify the grape or yeast derived metabolites such as ethyl esters, acetate esters, acids and alcohols. These sensory compounds are strongly influenced by the strain of wine bacteria used for MLF, as well as the timing of wine bacteria inoculation is very important for the wine aroma and flavor.

What are the benefits of co-inoculation? Risk management

The time between the end of alcoholic fermentation and the onset of malolactic fermentation is a critical period. Un-stabilized wine is still at risk for aromatic deviations. Co- inoculation with selected *Oenococcus oeni* can help avoid the production of potential spoilage compounds by first reducing the risk of spontaneous MLF during alcoholic fermentation by suppressing wild bacteria, and at the same time conducting a more controlled MLF. This is especially important in red wine with a high pH where spontaneous MLF may occur during AF, causing stuck AF and a rise in volatile acidity. During co-inoculation, the microbiological activity of both yeast and bacteria helps to limit development of contaminating microorganisms such as hetero-fermentative *Lactobacillus* species, *Pediococcus*, and ***Brettanomyces***. Consequently, the production of volatile phenols may be avoided. In a study, it was shown that early inoculation of selected wine bacteria did not allow for the growth of *Brettanomyces*, even when it was intentionally inoculated in Pinot Noir wines from Burgundy (France).

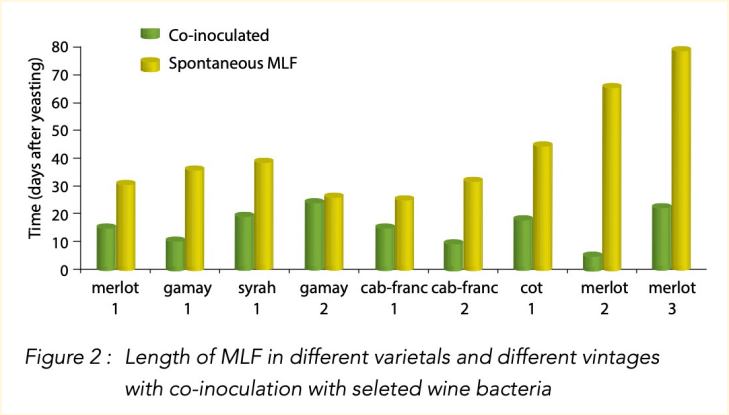

Figure 2 : Length of MLF in different varietals and different vintages with co-inoculation with seleted wine bacteria

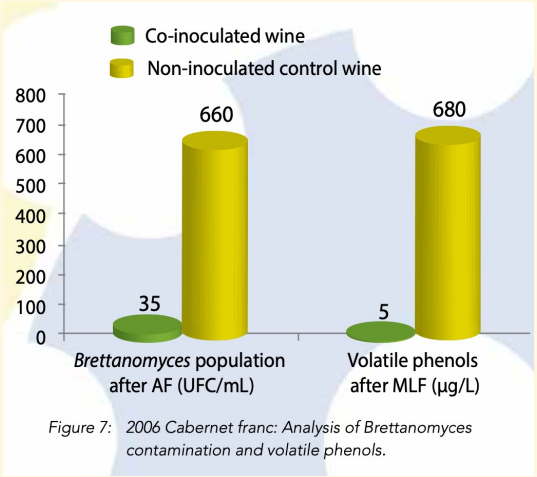

Figure 7: 2006 Cabernet franc: Analysis of Brettanomyces contamination and volatile phenols.

A word from our expert ... Prof Maret du Toit

Apart from alcoholic fermentation, malolactic fermentation (MLF) is a secondary fermentation conducted by lactic acid bacteria (LAB), firstly to reduce the acidity of wine and secondly to contribute to wine aroma.

Oenococcus oeni is currently still the best adapted starter culture for MLF, especially for low pH and high ethanol conditions and its contribution to wine aroma is well understood. MLF starter cultures can be inoculated at two stages of fermentation, namely sequential inoculation, but with higher alcohol levels due to climate changes, the pressure on the strains to perform under these conditions is becoming challenging. This has led to inoculation at another stage of fermentation, the co-inoculation of yeast

and bacteria at the beginning of alcoholic fermentation. It is important that co-inoculation is done within 24 hours after yeast inoculation, otherwise alcohol and the competition from the actively fermenting yeast impacts on the inoculated MLF starter. A crucial factor is to ensure that the yeast and bacteria are compatible; therefore, yeast selection needs to be considered carefully. The biggest question with regards to this technology is the potential production of acetic acid from sugars in the must. However, in the last 7 years of being involved in co-inoculation research it was never experienced that co-inoculation yielded significantly higher levels of acetic acid.
Co-inoculation has a number of advantageous. Firstly, the must contains all the necessary nutrients needed by the bacteria and therefore the addition of extra nutrients is not necessary. Secondly, the completion of MLF is faster compared to sequential inoculation, which means that SO2 can be added sooner, and the potential of microbial spoilage is reduced. Furthermore, with co-inoculation results in better implantation and out-competing of the natural LAB flora, which means the strain inoculated is the one that will dominate MLF. The other crucial factor is that there is no or limited alcohol present in the must which ensure higher survival rates and vitality of the inoculated strains. Wines made with a co-inoculation strategy has a different aroma profile than wines made with sequential inoculation, they are perceived as more fruity, balanced and having a fuller body. After MLF the wines are also better integrated and in harmony at such an early stage. Co-inoculation is a tool that can be used to ensure problems normally associated with some sequential inoculations are no longer part of the equation, as well as to diversify your wine style through the production of different aroma compounds or ratios of aromas in the final wine. This technology has also opened the opportunity for other wine LAB, such as *Lactobacillus plantarum* to be used in the future as MLF starter cultures, as the matrix and challenges are much less compared to sequential inoculation.

Not Getting An SO2 Reading.. Why?

EDITOR: This is a trouble shooting article suggested by member Rob Marr for those members using SC-XXX devices in their winemaking.

We get this question a lot so we thought we would discuss it here. [*Note: Most of this information is available on our troubleshooting guide under SO2 Problems*]

There's two situations that may cause concern about the reading.

1.Your instrument indicates an endpoint (beeps) *right away*, either before adding any SO2 Titrant, or after adding just 1 or 2 drops.
2.Your instrument apparently *never* indicates an endpoint, even after titration with a large amount of the SO2 Titrant.

Situation (1.) happens a lot. Most of the time, this is just the normal endpoint response, telling you that your wine's ppm of free SO2 is *zero*. To verify

that the endpoint indication is valid, add 1 drop of 10% KMBS and stir. The signal should drop to below 50 right away, and the endpoint indicators should stop signaling. If the endpoint signaling does not stop, you may have a problem with the instrument.

Situation (2.) also crops up from time to time. Let's say you are running an SO2 test on your wine and you use the ENTIRE 5mL syringe of SO2 Titrant, but your instrument stays on 0.00 or a low number, indicating that you still haven't reached the endpoint. This would normally mean you have over 100 ppm free SO2 in your wine. But you're pretty sure there isn't that much SO2 present. So, your instrument must not be working, right?

Actually, it might be working just fine!

There are a few considerations and tests to help you determine what might be happening. The easiest and first test we recommend is the SO2 Reagent Test. This ensures that your reagents and instrument are working appropriately in a mock endpoint condition:

1.Place 20mL DI water into a small beaker.
2.Add 1mL Acid solution and 1mL Reactant solution. Mix well.
3.Turn your instrument on (SC-100, SC-100A or SC-300). If necessary, navigate to SO2 mode and press Enter if prompted to do so.
4.Attach your SO2 electrode. Make sure there is a good connection between the connector and the electrode plug. Your instrument should read 0.0 or a number well below 50 with the electrode not immersed in solution.
5.With the solution stirring, place the electrode into the beaker. Your instrument should still read 0.0 or a number well below 50.
6.Add 1-2 drops of your SO2 Titrant to the beaker. The solution should turn slightly yellow. Mix well. With the solution stirring, the response should rise pretty quickly (within 3-5 seconds) to a value above 200 (over 4 on the original SC-100), and endpoint indicators (beeping and red STOP light flashing) should activate. This is the mock endpoint you're looking for.
7. Now add 1 drop of a 10% KMBS solution to the beaker. Make sure the solution is still mixing. The solution should turn clear, and the unit should drop back below 50 (ideally down to 0.0).

If your unit passes this test, then your SO2 electrode, SC unit and SO2 Reagents are all apparently functioning properly.

If your electrode hasn't been used in a while, or if the two platinum wires at the end of the electrode look dirty, it may need to be cleaned. (If you run the above test and the value on the screen only goes up slowly, and to a signal less than 200, then your electrode probably needs to be cleaned.) To do this, soak your SO2 electrode in your SO2 Acid solution for about 10 minutes. Remove and rinse with DI water. Then, using something like a small spatula or flat edge of a knife, very gently scrape the two platinum wires at the end of the electrode. (Be careful not to bend or break them!) Some small deposits may come off. The wires should appear bright and shiny. Rinse well with DI water and try the above SO2 Reagent Test again.

If your unit does NOT respond to the SO2 Reagent test, there could be something wrong internally in either your instrument or your electrode. Contact us for further instructions.

Okay…. so, my equipment passes the SO2 Reagent Test. Now what?

First, is it possible you are using fruit or juice that has a large amount of *vitamin C (ascorbic acid)* in it? Most grape varietals don't, but if you are making a wine from citrus, some kinds of berries, persimmons, or other sources, there could be significant amounts of ascorbic acid present. Molecule for molecule, ascorbic acid reacts just as free SO2 does in the Ripper titration that is the basis of the Vinmetrica test. In that case you may need to use a different method.

If ascorbic acid is not likely, then it is possible (we see it all the time) that your wine actually has a lot more sulfite in it than you think. Yes, I know you haven't added any or if you did, you made sure to measure it accurately. It's okay! It happens! You are not alone (we've been there…)! Let's run that SO2 test again, but this time, we are going to get a smaller volume of wine, 10mL, and top it off with 15mL of DI water (adding DI water will not negatively affect your results, we promise!). Run the SO2 test as you normally would, by adding in your Reactant and Acid solutions and titrating in the normal way. When you reach your end point, take the volume of SO2 Titrant that you used and multiply that value by 20 (this is the normal calculation) but then to account for the different volume of wine that you used, you will then need to multiply that result by 2.5. This will give you the ppm of SO2 in your wine.

If you are still using the whole 5mL syringe then try taking a smaller wine sample (5.0 mL), adding 20 mL of DI water, and performing the test in the normal way. Do the final calculation in the normal way (multiply your value by 20) but then multiply that value by 5.

If you still are not getting an endpoint reading on your SC device, then something might be wrong. Please give us a call and we can help troubleshoot.

Last but not least, if you want to send your unit and electrodes in for general maintenance and testing, we would be happy to take a look at them for you.

Reference Library

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 PDF format, e-mail Ken Stinger at kbstinger@frontier.com

Scott Lab 2022 Winemaking Handbook – 6 mb - 135 pages
Scott Lab 2022 Cider Handbook – 2.1 mb - 75 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 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
Daniel Pambianchi wine calculator set – 13.5 mb, 10 calculators
Wine flavors, faults and taints - 88 kb, 11 pages

Portland Winemakers Club
Leadership Team – 2023

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 / 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: **Rob Marr** mdbmarr@live.com

- Arrange for speakers & educational content for our meetings

Chair for Tastings: **Brian Bowles / Jolie Bowles** bowles97229@gmail.com
jolie97229@yahoo.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: **Al Glasby / Bob Thoenen** alglasby@gmail.com
bobthoenen@yahoo.com

- Grape purchases, Makes the arrangements to purchase, collect, and distribute

- Supplies – These should be passed to the President or Secretary for distribution.

Chair of Competitions: **Rob Marr** mdbmarr@live.com

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

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

- Gala / Picnic / parties

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