Portland Winemakers Club

November 2024

"Bob's Blurb"

November is crush-talk. No specific tasting, so bring some wine to share.
I finally pressed my last batch of wine this past weekend (Nov 3).
Cab Franc courtesy of Brown Family cellars vineyard! Thanks Bill.
Everything is in Carboys/Tank with Oenococcus oeni (malolactic acid bacteria) for the secondary fermentation. Time to rest for a few days.
Speaking of Malic acid, I will bring my Sentia tester if you want to know your malic acid level bring a tiny sample of your wine . I will ask to cover my cost ($6) and we will test it. Come early or stay late for the testing. I will bring it again in December. I have to share this picture of a Tempranillo cluster.

This is not an unusual size for Tempranillo

Back to the topic of fermenters. What do you use for cleaning your fermenters?
I have been using PBW (Professional Brewers Wash) and scrub with plastic scrubbers.
What is your favorite scrubber. I prefer the one on the left it is a classed Dobie Pad. Doesn't suck up a lot of stuff and scrubs nicely. I have tried the other two, but I keep coming back to my favorite. See you at the November 20th meeting!
Bob Hatt

Portland Winemakers Club

Since 1968

2024 Monthly Agendas

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 of 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 13th, $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, November 20th in the basement of the Aloha Grange starting at 7:00 pm. This is our annual "Crush Talk" meeting. How did this year's crush go for you? Come with questions and answers. Bring a bottle to share.

• 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.

October Meeting Notes

Members present – 28

• Marilyn Brown is exploring using a different venue for our January 2025 Gala, possibly one that is a bit nicer than the Grange. Please let Marilyn know if you have any ideas.
• We will need a few more chairpersons for the club for 2025 (elections will be held at our December meeting): two people for club grape buys chair (will be trained), and one person for Secretary. The Secretary takes meeting minutes, communicates member correspondence and maintains the name tag box (Ken can continue to publish the Newsletter).
• Rob Marr will be getting wine bottles by the pallet and can get extra for club members with a commitment.
• New club members attended the October meeting; Sarah & Michael Begley and Jackie Mans.

2024 Grape Purchase Program Update from chairmen Bob Thoenen & Tyson Smith

Club members bought a record 13,275 lbs of grapes in 2024, up 23% from 2023. Grape purchased totaled $16,455, down 4% versus last year due to members purchasing far less juice in 2024 (due to lack of delivery). 26 members bought grapes in 2024, consistent with 2023.

2024 saw purchases from 4 new vineyards for the club – Campbell Lane Winery, Swoboda Vineyards, Chehalem Winds and Domanico Cellars. Largest suppliers to the club were Chehalem Winds, Lonesome Spring Ranch and Chandler Reach. Seventeen different varietals were purchased with the Pinot Noir dominating at over 3,000 lbs and close to $4,000.

Brian & Jolie conducted a blind tasting of member produced Pinot Noir. Results are shown in the table.

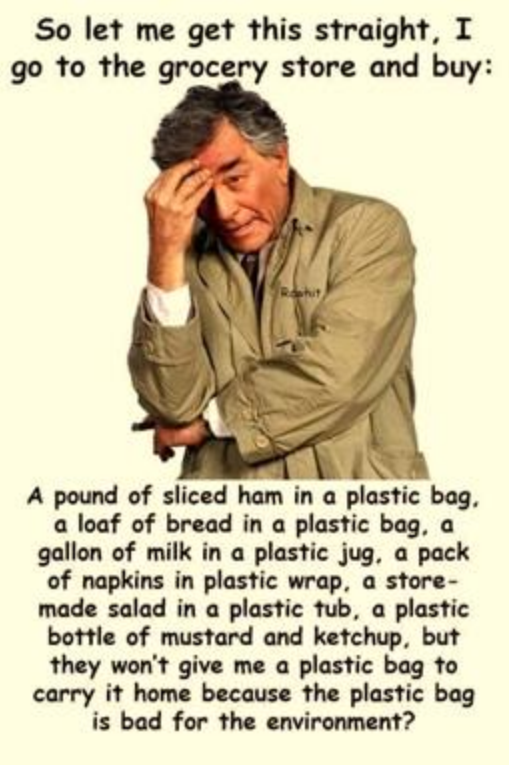
Wine vintage and type	Winemaker	Gold	Silver	Bronze	No Medal	Medal score	Medal	Tasting sheet score
2021 Pinot Noir	Scott Butler	1	15	13	0	1.59	Silver	12.5
2022 Pinot Noir	Marr Estates	0	11	15	2	1.32	Bronze	12.5
2020 Pinot Noir	Jon & Don	7	15	6	0	2.04	Silver	14.2
2020 Pinot Noir	Brown Family Cellars	2	13	12	2	1.52	Silver	12.7
2020 Pinot Noir	Paul Boychenko	1	7	15	6	1.10	Bronze	11.9
2021 Pinot Noir	Jolie Bowles	10	11	7	0	2.11	Silver	14.3
2020 Pinot Noir	Rogers & Ourada	4	6	14	3	1.41	Bronze	12.1
2021 Pinot Noir	Eric Mireter	2	11	12	4	1.38	Bronze	12.1

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.

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



My own social media

SIR: I haven't got a computer but I was told about Facebook and Twitter and I am trying to make friends by applying the same principles.

Every day, I walk down the street and tell passers-by what I have eaten, how I feel, what I have done before, and what I will do for the rest of the day. I give them pictures of my wife, my daughter, my dog, and me gardening, on holiday, and spending time by the pool. I also listen to their conversations, tell them I 'like' them, and give them my opinion on every subject that interests me ... whether it interests them or not.

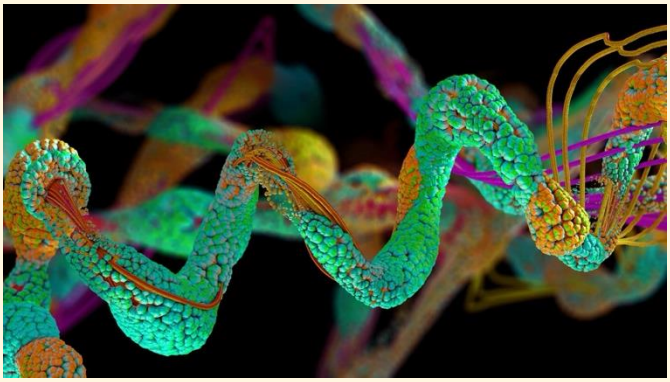
And it works! I already have four people following me: two police officers, a social worker and a psychiatrist.

Peter White, Holbrook, Derbyshire

Yeast Nutrition: Amino Acids Are Better Than Ammonia (DAP)

THE IMPORTANCE OF AN ORGANIC SOURCE OF NITROGEN

Applies to: *winemakers who are supplementing yeast available nitrogen (YAN) during alcoholic fermentation.*



WHAT FORMS OF NITROGEN CAN YEAST USE?

Nitrogen plays a critical role in yeast metabolism. Nitrogen-containing compounds that yeast can utilize are naturally found in grapes. Often, the levels of these compounds are not high enough to secure fermentation and their levels must be supplemented with winemaking nutrients.

Nitrogen that is available for yeast to utilize is called yeast assimilable nitrogen (YAN). YAN comes in two main forms, amino acids and ammonia. These are referred to as organic and inorganic nitrogen, respectively. This simply indicates whether the compound also contains carbon (inorganic = no carbon, organic = contains carbon). When talking about inorganic and organic nitrogen, we prefer to directly address the nitrogen source:

Organic Nitrogen = Amino Acids and Peptides

In winemaking, organic nitrogen is supplied as amino acids and some peptides. Common winemaking sources are nutrients derived from autolyzed yeast.

Inorganic Nitrogen = Ammonia (NH_3)

In winemaking, inorganic nitrogen is supplied as ammonia (NH_3). Common winemaking sources are diammonium phosphate (DAP) and other ammonia salts.

WHICH IS MORE EFFICIENT?

Historically, diammonium phosphate (DAP) has been the yeast nutrient of choice for winemaking. In fact, most academic recommendations for YAN supplementation are based on DAP addition. However, nitrogen supplied as ammonia (DAP) is taken up very quickly which can lead to uncontrolled cell growth and hot fermentations and does not necessarily give yeast the staying power to complete a fermentation.

Alternatively, when nitrogen is supplied in the form of amino acids, the fermentation profile is very different. Ferments do not get as hot, the yeast population is controlled, and the cells are healthier. Interestingly, both aroma and mouthfeel are also improved when DAP is avoided.

While yeast may show an affinity for ammonia, a yeast diet balanced with amino

acids can produce healthier fermentations, better aromatics (e.g. terpenes and esters) and lower levels of undesirable compounds (e.g. ethyl acetate and hydrogen sulfide).

SUPPORTING DATA: FERMAID O™ VS. DAP

Data represented are from trials done by Lallemand Oenology and the Institut Coopératif du Vin (ICV) in collaboration with the National Agricultural Research Institute (INRA) Pech Rouge Research Station in the Languedoc region of France.

Figure 1: *Fermentation kinetics representing the fermentation activity of yeast according to the three protocols (expressed in g/L.h^{-1} of CO_2 released).*

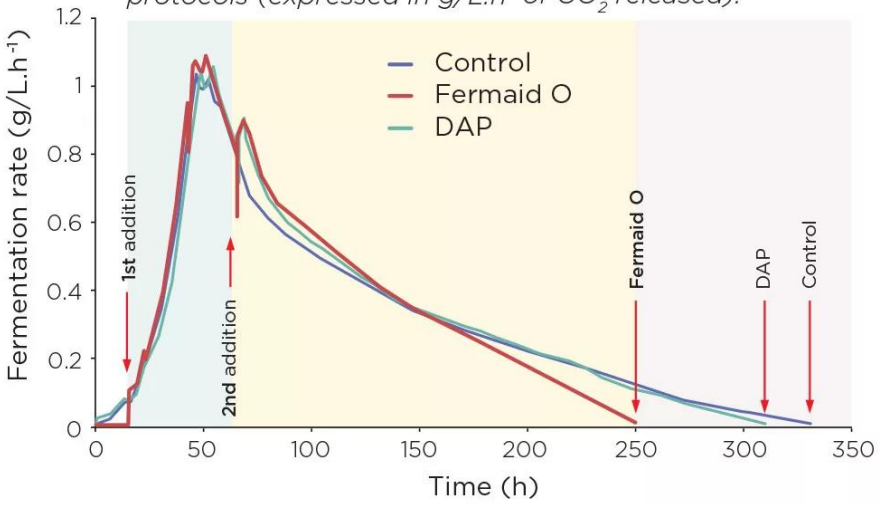
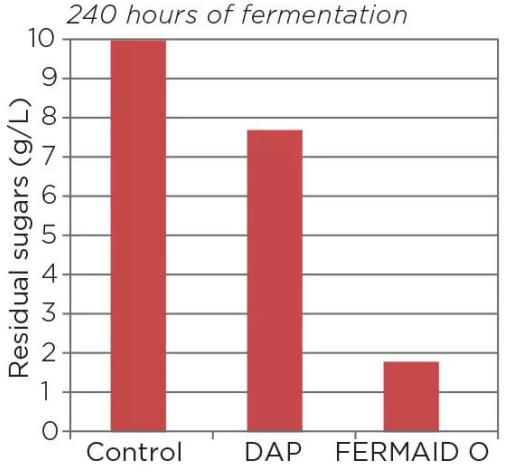


Figure 2: *Residual sugars at 240 hours of fermentation*



The data above compares the effects on fermentation kinetics when nourishing with ammonia vs. amino acids. DAP served as the source of ammonia while FERMAID O™ served as the source of amino acids.

The trial musts and fermentation protocols were identical. The only difference was that one lot received an addition of the equivalent of 16 ppm of YAN in the form of DAP while another received a similar YAN addition from FERMAID O. This addition was split into two for both treatments, with the first addition added at the onset of fermentation and the second addition added at 1/3 sugar depletion. The control received no addition of nitrogen. The addition of YAN from FERMAID O resulted in a complete fermentation (Figure 2) in approximately 10 days (Figure 1). Further, the fermentation involving only DAP had a significantly slower conclusion and higher final residual sugars than the wine made with FERMAID O (Figure 2).

These trials support that nitrogen supplied as amino acids produce more efficient fermentations that are more likely to finish vs. nitrogen supplied as ammonia.

CREATING A YEAST NUTRITION PLAN

As previously addressed, diammonium phosphate (DAP) has long been the yeast nutrient of choice for winemaking as well as research surrounding fermentation nutrition. Though, with better information about the impacts of DAP on fermentation kinetics, increasingly sophisticated autolyzed yeast nutrients have been coming to market. Furthermore, our understanding of creating a holistic nutrition regime has evolved to include:

Rehydration Nutrients

To conduct a healthy and complete fermentation, yeast not only require nitrogen, but minerals, vitamins, fatty acids, and sterols. Minerals, vitamins, fatty acids and sterols

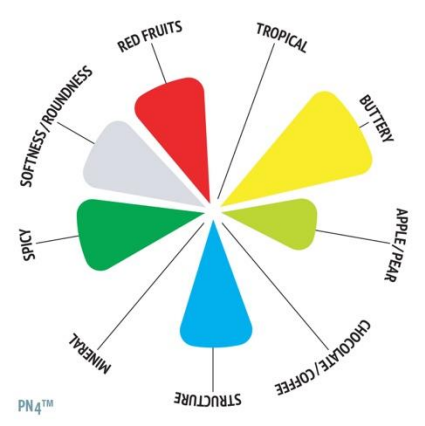
can be provided by a rehydration nutrient (GO-FERM PROTECT EVOLUTION™ or GO-FERM STEROL FLASH™).

Fermentation Nutrients

Beyond fermentation kinetics and security, certain yeast nutrients have the ability to also stimulate specific metabolic pathways resulting in increased wine aroma. The STIMULA™ range of nutrients both supplies nitrogen (as amino acids) and stimulates metabolic pathways to increase aromas and flavors. We recommend using STIMULA in combination with FERMAID O™ for complete fermentation nutrition.

Managing Diacetyl Production During MLF

Applies to: Winemakers looking for ways to maximize or minimize the production of Diacetyl (butter aroma and flavor) during malolactic fermentation.



Malolactic fermentation (MLF) is more than a simple conversion of malic acid to lactic acid. The ability of malolactic bacteria, *Oenococcus oeni*, to affect wine texture and sensory characteristics in a positive way can be harnessed to influence wine aromas and drive wine style. As seen in the figure here, we've characterized the sensory impact to better assist winemakers in achieving their stylistic goals.

One of the sensory impacts, "buttery," can largely be attributed to the compound diacetyl. Controlling the production of diacetyl can be important in achieving a desired wine style. For example, high diacetyl concentrations in Chardonnay are often characterized as distinctly "New World," however; if too high, they can be perceived as overly 'buttery' and may be regarded as undesirable by some consumers. Similarly, low diacetyl concentrations can represent an "Old World" style but may not appeal to certain sectors of the market.

As diacetyl is largely a byproduct of malolactic fermentation, there are several factors that can be easily manipulated by the winemaker during MLF to achieve their desired diacetyl level including:

Strain Choice

Strains of malolactic bacteria vary in their potential for production of diacetyl. Refer to the figure below to compare strains.

Relative Diacetyl Potential by ML Bacteria Added Post Alcoholic Fermentation

	O-MEGA	VP41	SOLO SELECT	LALVIN 31	ALPHA	SILKA	ELIOS 1	PN4	BETA	
Less Diacetyl	Very low producer	Only attacks citric acid after completion of malic acid	Low producer	Medium to low producer	Medium producer	Medium producer	Medium producer	Early attack of citric acid	High producer when used in sequential inoculation	More Diacetyl

Timing of ML Inoculation
A simultaneous alcoholic/malolactic fermentation (MLF) will tend to favor lower diacetyl levels. As the diacetyl is being produced, yeast and bacteria will break it down. Similarly, inoculating for MLF following the completion of alcoholic fermentation will contribute to higher diacetyl levels in wine.

Contact Time with Lees
The shorter the contact time with yeast and bacteria, the higher the diacetyl. This is because living yeast and bacteria break down diacetyl irreversibly.

Malolactic Fermentation Length
The longer the malolactic fermentation the higher the diacetyl. This is influenced

primarily by wine pH and temperature. Low pH and temperatures lead to longer MLFs and vice versa.

Stirring
Stirring during MLF affects the redox potential of the wine – stirring allows slightly oxidative conditions and lack of stirring allows reductive conditions. Oxidative conditions (higher redox potential) favor the production of Diacetyl while reductive conditions (lower redox potential) favor the production of acetoin and 2,3-butanediol which do not contribute to the overall aroma of wine.

SO_2 Addition
SO_2 binds to diacetyl in a reversible reaction. Initially, the diacetyl level will seem to disappear, but over time the reaction will reverse, and the diacetyl will be released. However, sulfites also inhibit or kill off yeast and bacteria that help break down diacetyl. Adding SO_2 immediately after the completion of MLF will favor the highest diacetyl levels in the final wine.

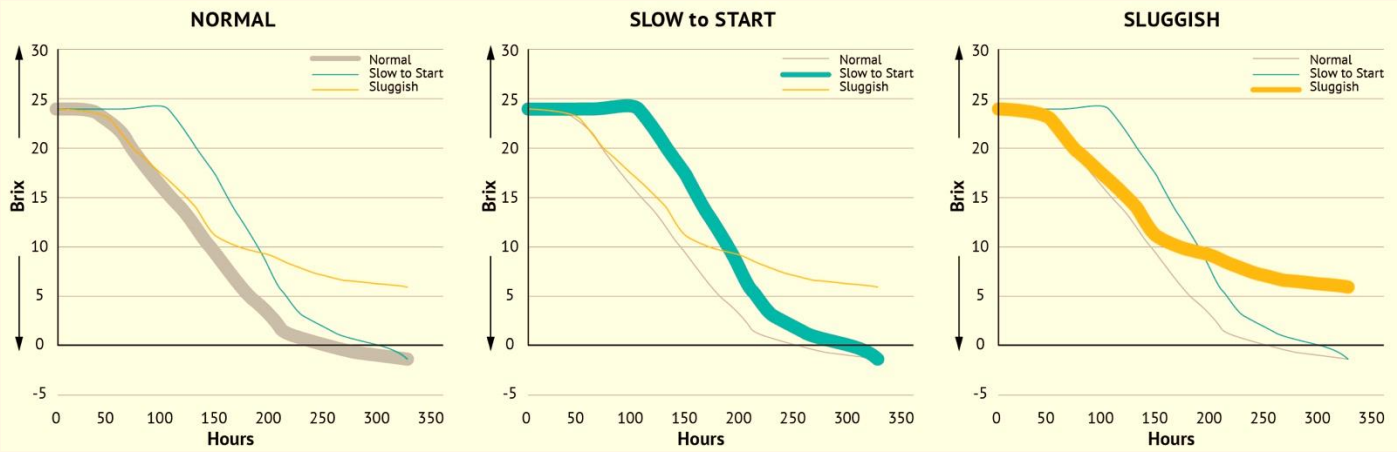
QUICK REFERENCE GUIDE
Consult the table below for specific winemaking recommendations on maximizing and minimizing the production of diacetyl during malolactic fermentation

	Maximizing	**Minimizing**
Strain Choice	Choose a strain with a high potential for diacetyl production (ENOFERM BETA™ and PN4™).	Choose a strain with low potential for diacetyl production (VP41™ or O-MEGA™).
Contact Time with Lees	Rack off lees or wait a few days for the yeast to transition to a metabolically inactive state after primary fermentation before adding bacteria.	Complete MLF on the lees and monitor diacetyl levels. When diacetyl has reached the desired level, add SO_2 and rack off lees.
Timing of ML Inoculation	Add malolactic bacteria after primary fermentation (sequential fermentation). Filter wine to remove yeast or rack off the lees prior to inoculation with malolactic bacteria.	Co-inoculate with yeast and malolactic bacteria (simultaneous fermentation). If bacteria is added after alcoholic fermentation, let the wine stay on the lees until a desired level of diacetyl is reached.
Wine Conditions	Adjust to conditions that will favor a longer MLF - Lower pH and cooler temperature.	Adjust to conditions that will favor a quicker MLF - Higher pH and warmer temperature.
Stirring During MLF	Stir during MLF.	Do not stir during MLF.
Addition of SO_2	Add SO_2 immediately following the completion of MLF (when Diacetyl is highest).	Complete MLF, then monitor diacetyl and add SO_2 when it reaches the desired level.

Troubleshooting Stuck or Sluggish Alcoholic Fermentations

Last updated: 10/2024

Applies to: Winemakers dealing with slow or stuck alcoholic fermentations. It is recommended to read this guide before attempting to restart a stuck fermentation.



Alcoholic fermentations may become problematic at several points. Sometimes they are slow to start, sometimes they become sluggish, and sometimes they become completely stuck.

Fermentation is Slow to Start:
When yeast is inoculated it undergoes a lag phase where yeast cells are adapting to their new environment. It might seem like nothing is happening (no sugar drop, no bubbles), but the yeast are likely still alive and preparing for growth and active fermentation. If fermentation is slow to start, several factors may be extending the lag phase.

JUICE MAY BE TOO COLD: Lag phase length is significantly influenced by temperature. To shorten it, ensure that the fermentation temperature is warm enough
But within the suggested temperature range for he selected yeast.

THERE MAY BE A LACK OF NUTRIENTS. At the start of fermentation, yeast have a **high demand for vitamins and minerals** and a moderate demand for nitrogen. Grapes naturally contain some of these nutrients, but they may be deficient and/or quickly consumed by native microflora and supplementation is necessary. Rehydration nutrients can supply vitamins and minerals, and fermentation nutrients added at inoculation can supply necessary nitrogen to get fermentation started. If proper pre-fermentation nutrient additions were not made or the juice/must was otherwise deficient, an addition of a fermentation nutrient (FERMAID™ or STIMULA™) can help invigorate fermentation.

JUICE/WINE MIGHT BE TOO CLEAR: If the juice is over-clarified (<50 NTU), **yeast may struggle to stay in suspension** during the early phases of fermentation. In this case, increase the turbidity by adding RESKUE™ and stir the fermentation. It is also worth noting that proper use of rehydration nutrients will increase the turbidity of the juice and may help avoid this problem.

YEAST MAY NOT HAVE BEEN ACCLIMATIZED: Rehydrated yeast must have time to acclimatize to juice/must conditions (temperature, pH, etc.). **Improper acclimatization can shock the yeast, increasing the lag phase or killing the cells**. In this case, a reinoculation might be necessary. To avoid this problem, use the "Saccharomyces Yeast
Rehydration" protocol which details proper steps for acclimatization.

THERE MAY NOT BE ENOUGH YEAST: If you did not inoculate or you did not inoculate at the recommended rate, it is possible that there is not a sufficient population of yeast. In this case, a reinoculation might be necessary.

FERMENTATION BECOMES SLUGGISH OR STUCK: The most common fermentation problems are stuck and sluggish fermentations.
• A fermentation is considered stuck if the sugar has not dropped for > than 48 hours.

• **A fermentation is sluggish and may become stuck** if it is approaching ~1 °Brix and slows to <0.25 °Brix per day. Many times, stuck and sluggish fermentations will require a restart but not always. Consider the following before conducting a restart:

TEMPERATURE MAY BE PROBLEMATIC: Each yeast strain has an optimal temperature range and anything outside of this range can cause yeast stress. **If the temperature is too high** (or if it spiked at any point), it's possible that the yeast are no longer viable and a reinoculation will be necessary. **If the temperature is too low**, try slowly warming the wine. To help avoid this problem, try adjusting the temperature of the wine to 68 – 72 degrees F especially toward the end of fermentation.

ALCOHOL MAY BE TOO HIGH: Certain yeast strains can tolerate more alcohol than others. If you have exceeded the tolerance level of your selected strain, you may need to reinoculated with a strain that has a higher tolerance.

WINE MIGHT NEED A DETOXIFICATION: When wine **yeast become stressed**, they can produce compounds that impede fermentation. RESKUE™ can be extremely beneficial in this situation. Add RESKUE and mix thoroughly, then rack after 48 hours. If you are unable to rack, adding RESKUE and leaving it in the wine can still help.

THERE MIGHT BE UNWANTED MICROBIAL POPULATIONS: Lactic acid bacteria (LAB) can produce volatile acidity (VA) and inhibit yeast activity. Volatile acidity >0.6 g/L can be challenging for yeast (especially in high alcohol conditions), and VA >0.8 g/L can be inhibitory. To control LAB, use DELVOZYME if malolactic fermentation (MLF) isn't complete but is desired, or BACTILESS™ if MLF is complete or not desired. In any condition, uncontrolled LAB should be controlled before trying to restart a stuck fermentation.

If a restart is necessary, please note, fermentations stuck when the sugar level is >3 brix and < than 11.5 % (v/v) alcohol are relatively easy to restart if there are no other compounding factors. Fermentations with less sugar and more alcohol become increasingly difficult to restart.

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

Web Design Editor: **Barb Thomson** bt.grapevine@frontier.com
http://portlandwinemakersclub.com/