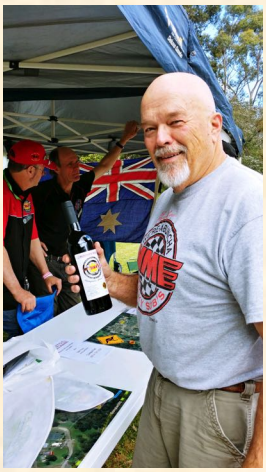
Portland Winemakers Club

November 2019

"Bill's Meanderings"

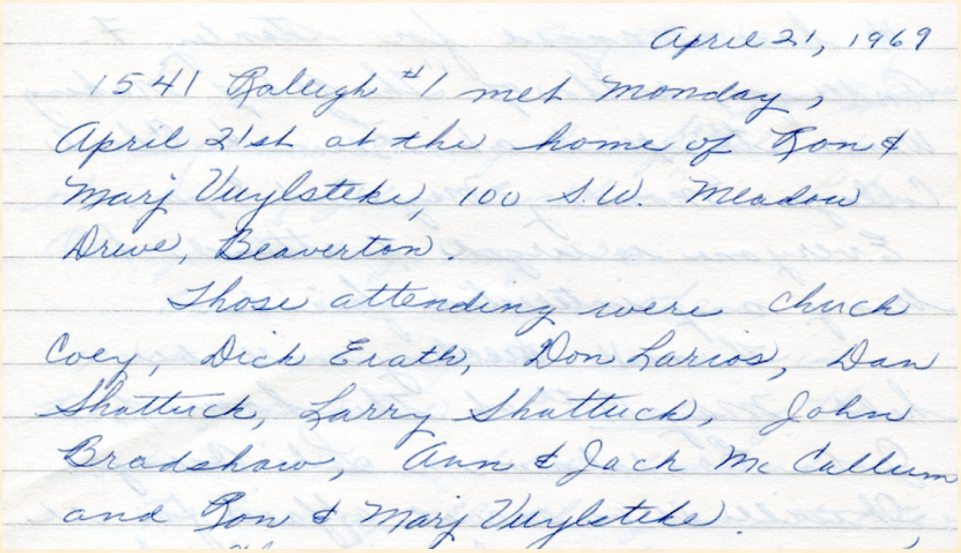


It seems like only a couple of months ago I was writing my first notes for the newsletter. The theme of most of my meanderings, being a small time farmer, has been about the vineyard and the growing of vitis vinifera.

Now the vines are devoid of leaves and approaching dormancy. Time to start prepping the ground and getting ready for pruning for the next year. So speaking of prepping for next year, our club's December meeting will cover planning for next year and electing officers. So keep in mind where you think this club should be headed for speakers, tours, events and who should chair those posts and of course the club officers whose duties are to keep the club running and organized. So speak up, offer your opinions or services, the club is only as good as the members participation.

Bill

Marj Vuylsteke's minutes from what was probably our club's first meeting. Note that our name was initially "1541 Raleigh #1". … Editor



April 21, 1969

1541 Raleigh #1 met Monday, April 21st at the home of Don & Marj Vuylsteke, 100 S.W. Meadow Drive, Beaverton.

Those attending were Chuck Coey, Dick Erath, Don Larios, Dan Shattuck, Larry Shattuck, John Bradshaw, Ann & Jack McCallum and Don & Marj Vuylsteke.

Portland Winemakers Club

Scheduled Meetings

January 16, 2019 Crush Talk / Planning

January 25, 2020 Annual Gala at Parrett Mountain Cellars

February 20, 2019 Bordeaux Tasting

March 20, 2019 Speaker:

April 17, 2019 Barrel / Carboy Sample Tasting.

May 15, 2019 Speaker:

June, 19, 2019 Best practices; member demonstrations of tips & tricks

July, 2019 Annual Picnic- TBD

August 21, 2019 All Whites Blind Tasting

September 18, 2019 Other Reds Blind Tasting

October 16, 2019 Pinot Noir Blind Tasting

November 20, 2019 Crush Talk & planning

December 4, 2019 Planning, Tours, Speakers, Events, Elections

Drink Responsibly. Drive Responsibly.

Note: The next regular meeting will be Wednesday, November 20th at 7:00 PM at Aloha Grange Hall.

November agenda: "Crush Talk". How did the 2019 crush go for you? Lets discuss the good & the bad. Questions and answers. If you haven't already, be sure to renew your club membership and sign a new waiver.

The regular meeting will be a potluck, bring a small snack to share. Also bring a wine glass for tasting.

The club meeting will begin at 7 pm and end by 9 pm. If you can, get there a little early to help set up. Please help put away chairs and tables at the end of the meeting.

Website: http://portlandwinemakersclub.com/

October Meeting Minutes

Present: 30

- New potential members were in attendance. They were Josiah Schlender and Rick & Audrey Johnson. Welcome to PWC.
- The annual Gala has been set for January 25th at Parrett Mountain Cellars. Watch for official announcements in the Newsletter & e-mail.
- The next meeting will crush talk about the 2019 crush. We are also looking for ideas for 2020 tours & speakers
- We discussed having a "share" table at our meetings. If you have any equipment, tools or supplies you no longer need or want, bring them to the meeting, maybe someone else will.
- The Grange passed out free passes for their "Ice Cream Social".
- Bob Hatt says all grapes ordered through our Grape Purchase program have been delivered except for Sangiovese.

2019 PWC Pinot Noir Blind Tasting

Wine #	Name	Varietal	Gold	Silver	Bronze	None	Total Score	Medal Score	Medal
1	Paul Rogers / Jim Ourada	2018 Pinot Noir	0	1	18	11	20	0.67	Bronze
2	Paul Natale	2018 Pinot Noir	0	1	20	9	22	0.73	Bronze
3	Bill & Marilyn Brown	2017 Pinot Noir	4	24	2	0	62	2.07	Silver
4	Hofford/Hooson/Savage	2017 Pinot Noir	0	20	10	0	50	1.67	Silver
5	Michael Harvey	2016 Pinot Noir	12	11	7	0	65	2.17	Silver
6	Josiah Schlender	2017 Pinot Noir	1	9	17	3	38	1.27	Bronze
7	Ted Brunner	2017 Pinot Noir	0	14	6	10	34	1.13	Bronze
8	Hofford/Hooson/Savage	2016 Pinot Noir	16	13	1	0	75	2.50	Gold
9	Ken & Barb Stinger	2016 Pinot Noir *	17	12	1	0	76	2.53	Gold
10	Craig & Mindy Bush	2016 Pinot Noir	10	18	2	0	68	2.27	Silver
11	Craig & Mindy Bush	2016 Pinot Noir	9	20	1	0	68	2.27	Silver
12	Jon Kahrs	2016 Pinot Noir	16	12	2	0	74	2.47	Silver
13	Bob Hatt	2015 Pinot Noir	7	16	5	2	58	1.93	Silver
		* Contains 5% Malbec							

Dealing with damaged fruit in the winery

During certain vintages, fruit flies may have increased presence in vineyards with cracked berries (typically as a result of rain). In some cases, the fruit fly larvae are present in the berries when they arrive at the winery. These larvae only survive under conditions where they have adequate access to oxygen and nutrients. Larvae will be killed during the fermentation period and will be removed by the settling and racking process post-fermentation without affecting wine quality.

Botrytis is shown here on a Pinot noir cluster near harvest. Fruit flies often will be found with berry cracking and Botrytis development.

While appearance of larvae may seem unsettling, the important issue is managing the spoilage bacteria and yeast associated with damaged berries. Damaged fruit will likely have a much higher population of certain microorganisms, such as acetic acid bacteria and oxidative yeast. The main spoilage issue associated with acetic acid bacteria is the excessive production of acetic acid. Although we usually encounter acetic acid production during wine aging, you may actually detect an acetic aroma on damaged berries. This is due to yeast growth on the damaged berries converting grape sugars to ethanol, which the bacteria then convert to acetic acid. The major yeast found on the berries is typically *Kloeckera apiculata*. This yeast is capable of producing high amounts of ethyl acetate (nail-polish remover smell) and acetaldehyde. Because of the likely increased concentrations of yeast and bacteria on the fruit, higher levels of SO_2 should be added at the crusher (≥50 mg/L). Additionally, minimizing oxygen exposure during cold soak and early fermentation will help reduce the growth of these microbes as they are both oxidative. Consider inert gas blanketing and/or dry ice addition to the surface of the fermenter to minimize oxygen. Once fermentation begins, the CO_2 produced will set-up an anaerobic environment which will inhibit the growth of *Acetobacter* and *Kloeckera*.

A fruit fly larvae is shown on the surface of a Pinot noir berry.

Although *Acetobacter* will not be growing during the alcoholic fermentation, they will still be present in the wine, so good practices in the cellar post-fermentation will be needed to prevent their growth. After alcoholic fermentation, the principle factors affecting *Acetobacter* growth include alcohol content, pH, SO_2, and the redox potential of the wine. *Acetobacter are* inhibited at low pH, and at low pH more SO_2 is in the free molecular form which is active against microorganisms. One of the issues with controlling *Acetobacter* with SO_2 is that they produce spoilage products that bind free SO_2 and minimize its effectiveness. This makes early control important because these bacteria can be difficult to control at high populations. Wines should be protected from air by filling tanks and barrels as completely as possible and ensuring barrel-topping over time. In addition, minimize air pick-up when wines with a high count of *Acetobacter are* being moved during racking, pumping over, fining and bottling.

An additional factor of note when dealing with damaged fruit is grape nutrient content. Microbial growth on the berries and during cold soak/early fermentation can lead to depletion of yeast assimilable nitrogen (YAN) and vitamins. In addition, the higher use of SO_2 can lead to thiamin deficiency as SO_2 reacts irreversible with this vitamin. Therefore, monitor YAN and make appropriate additions of organic and inorganic nitrogen (not just DAP, as this will not replace

the vitamins).

In summary, consider the following tactics in dealing with damaged fruit:

- Sort fruit prior to processing
- Increase SO_2 addition at the crusher
- Reduce or eliminated cold soaking. If you do cold soak, minimize exposure to air during cold soak (inert gas or dry ice)
- Assess YAN and make adjustment-- microbial rot will reduce YAN and vitamins and SO_2 use will reduce thiamin content
- Increase vigilance in the cellar post-fermentation to prevent *Acetobacter* growth: pH and SO_2 management, protect wine from air

Simultaneous Malolactic Fermentations: The right option for you?

What is Malolactic Fermentation?

Malolactic fermentation (MLF) is a vital step in the production of red wines as well as some white wines. MLF is performed by lactic acid bacteria, primarily *Oenococcus oeni* and results in the conversion of malic acid to lactic acid causing a decrease in acidity. For wines grown in cool climates that contain high levels of malic acid, this decrease in acidity is essential to wine balance. In addition, MLF can modify certain wine flavors and aromas such as diacetyl. This compound has a buttery aroma and while at high concentrations (> 5 mg/L) it can be objectionable, at lower concentrations it may be desirable (depending on the wine style). Traditionally, this process has been conducted by indigenous wine lactic acid bacteria (LAB) present on the grapes or within the winery, and occurs during or after the alcoholic fermentation (AF). However, with the development of commercial starter cultures of *O. oeni*, winemakers now have more control over the timing of when this process occurs. This naturally leads to the question, "when is the best time to conduct the MLF?"

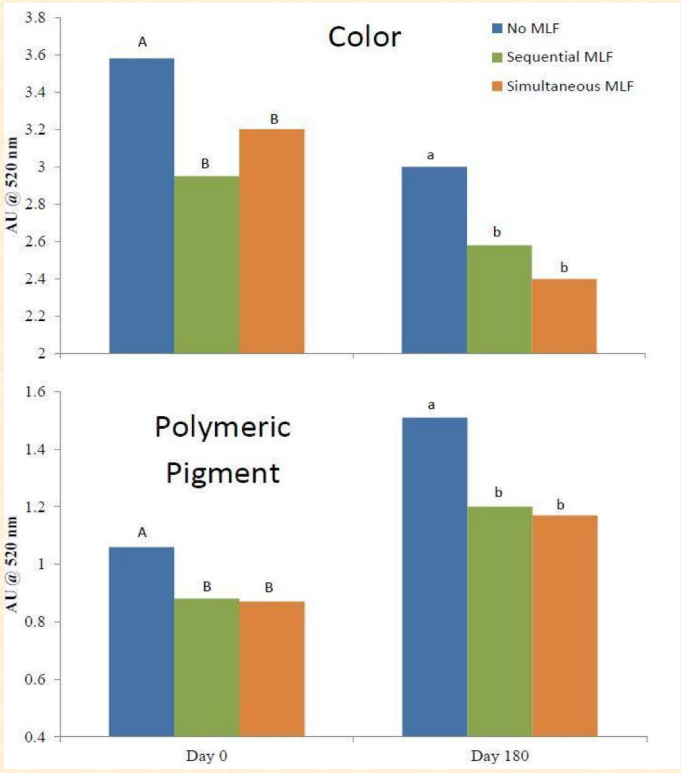


Figure 1. Color and polymeric pigment in Pinot noir wines that did not undergo MLF or underwent a simultaneous or sequential MLF using *O. oeni* VFO. Wines were analyzed 0 and 180 days post completion of MLF. Different letters indicate significant differences at $p<0.05$.

When should malolactic fermentation take place?

MLF is most commonly conducted after the completion of the AF (sequential inoculation). There are a number of reasons for this. Firstly, it may be logistically advantageous to separate the two processes of AF and MLF so that wines in which you wish to retain acidity can be more easily prevented from undergoing MLF.

Secondly, there is concern that the addition of *O. oeni* into juice or must (rather than wine) can lead to an increase in volatile acidity (VA) since *O. oeni* can convert sugar into acetic acid. However, several studies report that MLF in the presence of sugars does not necessarily lead to an increase in VA if the AF starts well and has no issues completing (Beelman and Kunkee 1985; Jussier et al. 2006). Others have also shown that *O. oeni* metabolism is significantly impacted by pH, and that at pH < 3.50 the bacteria will begin to consume sugar only when malic acid has been degraded. This means that in wines where the pH is < 3.50 acetic acid production by *O. oeni* would likely only be an issue if AF was sluggish and resulted in residual sugar still being present when the bacteria had completed malic acid degradation (Krieger-Weber and Silvano 2015).

At higher pH (> 3.50), the risk of acetic acid production by *O. oeni* is greater as sugar metabolism may occur concurrently with malic acid consumption. Recent work in our laboratory confirms what others have found regarding acetic acid production during simultaneous MLFs (Sereni 2016). Chardonnay wines were produced where MLF was conducted simultaneously or sequentially. Fermentations (AF and MLF) were performed at either 15 or 21°C with the pH values of the wines being relatively low (pH < 3.50). At each temperature, there were no significant differences in

the acetic acid concentrations of wines produced with simultaneous or sequentially MLF (Table 1). Instead, acetic acid concentration was more dependent on fermentation temperature, with wines fermented at 15°C containing significantly higher acetic acid concentrations than wines fermented at 21°C no matter how MLF was conducted (Table 1).

Table 1. Time to complete alcoholic and malolactic fermentation and basic chemistry of Chardonnay wines produced where MLF was performed simultaneously or sequentially using *O. oeni* Beta at 15 or 21 °C. Different letters within a row indicate significant differences at p <0.05.

	Fermentation Temperature (C)	Days to complete alcoholic & Malolactic Fermentation	Alcohol % (v/v)	Acetic acid (g/L)	Wine pH
Co-inoculation	60°F	26[a]	14.14[a]	0.72[a]	3.37
Sequential	60°F	68[b]	14.64[b]	0.70[a]	3.44
Co-inoculation	70°F	26[a]	14.18[a]	0.58[a]	3.42
Sequential	70°F	62[b]	14.55[c]	0.56[b]	3.44

An additional concern when conducting simultaneous fermentations is the potential inhibition of yeast by the bacteria leading to stuck or sluggish AF. While there are reports of this occurring (Munoz et al. 2014), the issue was yeast strain specific, and highlighted the importance of choosing the right combination of yeast and ML bacteria strains if a simultaneous MLF is being conducted. Regardless of when you decide to conduct the MLF, using a compatible yeast and ML bacteria strain is important as certain yeast strains can be inhibitory to ML bacteria and cause problematic MLF (Henick-Kling et al. 1994, Osborne and Edwards 2006). Many wine yeast and ML bacteria producers provide recommendations for combinations of yeast and ML bacteria strains to use, and these may differ depending on whether you wish to perform a simultaneous or sequential MLF.

Considerations for using malolactic fermentations

Effects on red color

Loss of red wine color due to simultaneous MLF may also be a concern that may discourage a winemaker from using this technique. However, recent studies in our lab demonstrated that color loss due to MLF occurs whether MLF is simultaneous or sequential (Burns and Osborne 2013). Color loss is primarily due to the lower concentration of polymeric pigments in wines that have undergone MLF compared to those that have not (Fig. 1), and wines that underwent simultaneous MLF show the same trend. Degradation of acetaldehyde by *O. oeni* is thought to be responsible for the decreased levels of polymeric pigments as this compound is involved in the formation of these stable color pigments. Because *O. oeni* degrade acetaldehyde during simultaneous and sequential MLF it does not matter when MLF is conducted (Burns and Osborne 2013).

Reducing microbial spoilage

While many of the reasons given for why MLF should be conducted sequentially rather than simultaneously are not necessarily backed up by research, are there any compelling reasons why you may want to conduct your MLF simultaneously? The major advantage with a simultaneous MLF is the reduced time needed to complete both the AF and MLF. This is important from an efficiency point of view, allowing wines to be stabilized with SO_2 sooner and minimizing the risk of microbial spoilage issues such as *Brettanomyces*. For example, in our Chardonnay study, simultaneous fermentations were completed in 26 days at both 15 and 21°C while sequential fermentations took 68

days to complete at 15°C and 62 days at 21°C (Table 1). This meant that wines produced by simultaneous MLF could have SO_2 added up to 40 days earlier than wines produced by sequential ferments. Notably, the wines produced in this study contained relatively high alcohol content (> 14% v/v) and yet did not have any issues completing MLF if the MLF was simultaneous. A successful MLF is often difficult to complete in high alcohol wines (Krieger-Weber and Silvano 2015). However, the addition of ML bacteria at the beginning of AF allows the bacteria to acclimate to increasing alcohol concentration as fermentation proceeds rather than being directly added to a high alcohol wine at the end of AF. In a similar manner, simultaneous MLF has also been shown to work well in low pH white wines that can also be problematic for MLF (Knoll et al. 2012).

Effects on wine flavor and aroma

MLF timing will also affect several wine flavor and aroma qualities. In particular, the concentration of the buttery aroma compound diacetyl will depend on whether MLF is simultaneous or sequential. Diacetyl can be produced by *O. oeni* during the MLF with the amount produced being dependent on *O. oeni* strain, fermentation conditions (pH, oxidative-reductive potential, temperature), and citric acid concentration. Under reductive conditions, diacetyl can be reduced to acetoin and then further to 2,3-butanediol, which can have little to no sensory impact. The reduction of diacetyl occurs during AF as the fermenting yeast create a very reductive environment. Because of this, diacetyl produced by *O. oeni* during a simultaneous fermentation will quickly be reduced to acetoin and potentially to 2,3-butanediol (Krieger-Weber and Silvano 2015) resulting in low diacetyl concentrations in the wine. Therefore, if your goal is to produce a wine with buttery diacetyl aromas, you should not conduct a simultaneous MLF. Rather, perform a sequential MLF with a high diacetyl-producing *O. oeni* strain. On the other hand, if you wish to avoid having diacetyl in your wine, then consider conducting a simultaneous MLF with a low diacetyl-producing strain.

In choosing when to conduct the MLF in your wines, consider the advantages and disadvantages of conducting a simultaneous MLF. For some wine types and styles, this option may provide a number of benefits. For others, a sequential MLF may still be the best option, particularly in the case of higher pH wines or wines that you predict may have difficulty completing alcoholic fermentation. If you choose to conduct a simultaneous MLF check with your yeast and bacteria suppliers to ensure good compatibility between yeast and *O. oeni* strains. Also, keep in mind that *O. oeni* are more sensitive to low temperature and SO_2 concentrations, so you may have to adjust your winemaking procedures to ensure the success of the simultaneous MLF.

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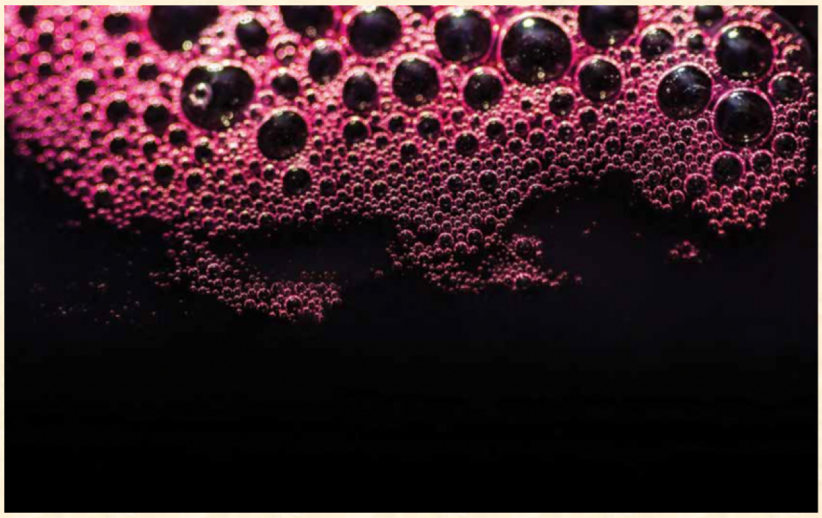


When Malolactic was a Flaw

Things were not working out well for Eric Miller. As the young winemaker at his father Mark Miller's new Benmarl Winery in the Hudson River Valley – launched in the early 1970's by the elder Miller with considerable investment and publicity fanfare – he was having complications with his first red wines.

"There was this weird bubbling action in the wine with the '71 and '72 vintages that I couldn't figure out," says Miller who was later to cofound the pioneering Chaddsford Winery in Pennsylvania and is today a frequent contributor to this publication. "The winemaking books I had from UC Davis were of no help," he says.

Finally, his father contracted for Émile Peynaud, the famous Bordeaux enologist, to travel from France to Marlboro where the winery was located. "Of course, it was malolactic fermentation," Miller says, "and Émile taught me how to use chromatography to deal with it."

And it wasn't just a matter of an inexperienced winemaker from the wine-backward East Coast experiencing difficulties with malolactic. Across the country and a few years later, Brice Jones was having similar headaches. A former Air Force pilot and Harvard Business School graduate, Jones had planted vineyards in Sonoma County, and soon his Sonoma-Cutrer winery became known for its array of vineyard-designated Chardonnays. "One day in 1984 or 1985," Jones remembers, "my winemaker, Bill Bonetti [a pioneer in the industry], came timidity into my office and said, 'Brice, I'm sorry, but the wines have gone through malolactic.' My first thoughts were, being sloppy like that can get a winemaker fired.

But we decided to taste the wines to see if they were ruined. Actually, they tasted pretty good, so later I took a bottle with me to visit a snooty restaurant in Boston, and the buyer loved it. He said, 'Send me a case.'"

FROM MALIC TO LACTIC

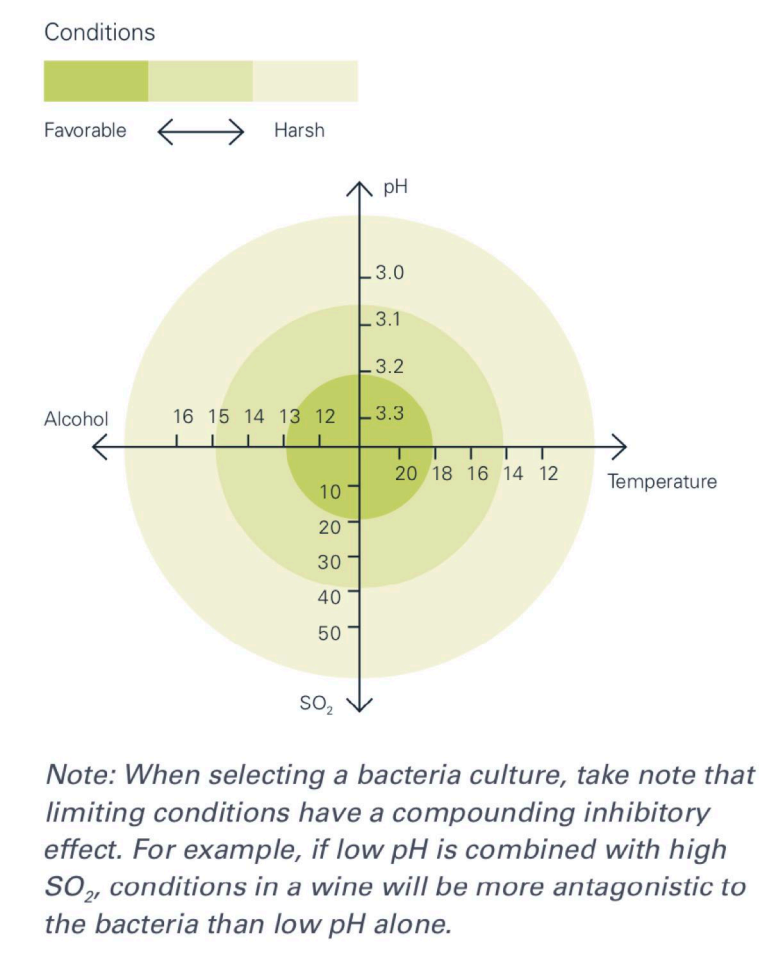
Today, even the lowliest wine geek knows something about malolactic fermentation. After the first, yeast-driven primary fermentation turns sugar into alcohol, a secondary bacterial fermentation often takes place – traditionally in the spring – when lactic bacteria turns tarter malic acid into rounder lactic acid, producing a turbulence and CO2 bubbles in the wine. Malolactic, or ML, MLF or malo, "softens" the wines and adds flavors and aromas, among them the "buttery" taste to Chardonnay that drinkers either love in moderation or love to hate.

Louis Pasteur in 1866 was the first to observe bacteria in wine and considered all bacteria to be harmful or spoilage mechanisms. Other observations were made in the intervening years, but Peynaud was in the late 1930's one of the first to systematically study ML. Writing about California, the British journalist, Jamie Goode, has a fascinating story on the GuildSomm site about how Hanzell winemaker Brad Webb worked with UC Davis scientist John Ingraham in the late thesis was on volatile ester hydrolysis or how aromas evolve in wine, still a valuable contribution. And he was also fascinated enough by French winemaking to intern at Château Petrus and was on the winemaking team at Dominus in Napa Valley when the Petrus owner Christian Moueix decided to establish a California estate. In spite of the fact that Peynaud and others in Europe were working on the problem, Ramey says, "There was a jealousy of the French at Davis. Rather than work with the University of Bordeaux, they would prefer not to learn. Nature and tradition didn't matter. Personally, I thought we should have been analyzing French wines." And he also found that some of his winemaking colleagues, post-graduation, also mistrusted the French. " 'Just because they do malolactic in Burgundy doesn't mean we have to do it here' was their attitude."

But Ramey says that in some ways their stance was understandable, as the primary winemaking at that time was “in Lodi and Bakersfield where you didn’t need your Chardonnay to go
1950’s to understand why ML occurred, or not, and how the process could be predicted and controlled. The problem was that Webb’s Pinot Noir at Hanzell was not going through ML – and he wanted it to.

“Food scientists are by nature distrustful of process. To them, bread baking at its ideal is Wonder Bread. It’s uniform, and it comes out the same time after time.” Good winemaking, by comparison, is like making sourdough bread – the risk is there, but so is the reward.”

through malolactic.” The desert heat reduced the acidity in the grapes, and hence there was no need to soften the wine further.
Richard Arrowood, another winemaker from this era, has today come full circle. Famous early on for his vineyard-
But even though researchers at Davis might have been studying ML during this period, they were not yet teaching its winemakers how to use it. In fact, a few years ago winemaker Ken Deis put it more strongly when he told me, “Basically, we were taught at Davis that malolactic was a flaw that needed to be controlled.” Winemaker David Ramey, who owns the eponymous Ramey Wine Cellars in Sonoma County, was also a student at Davis during this era. “Davis back then was not a place you went to learn winemaking,” says Ramey, who graduated from the university in 1979. “You went there to study the science of winemaking and the scientific process. We had this crappy old winemaking area that would just produce a few gallons.”
Ramey continues: “Food scientists are by nature distrustful of process. To them, bread baking at its ideal is Wonder Bread. It’s uniform, and it comes out the same time after time.” Good winemaking, by comparison, is like making sourdough bread – the risk is there, but so is the reward.
It should be noted that Ramey isn’t anti-science – in fact, his 1979
designated Chardonnays at Chateau St. Jean, Arrowood says that during this time, his grapes were coming from the warmer regions of Sonoma County. “We sterile filtered to prevent malolactic at St. Jean,” he says. Now, at his Amapola Creek winery, Arrowood is working with cooler-climate grapes that have higher acidity, and so he induces the secondary fermentation. “You just have to be careful not to have too much diacetyl in the process so that the wines don’t taste too buttery,” he says.
Although no longer considered a de facto flaw nor the complete mystery it once was, malolactic fermentation still is a closely watched process for winemakers who want do use it – or not.



Note: When selecting a bacteria culture, take note that limiting conditions have a compounding inhibitory effect. For example, if low pH is combined with high SO_2, conditions in a wine will be more antagonistic to the bacteria than low pH alone.

The key part of the process is a visual inspection of the barrel, which is done by removing the top. According to Vasquez, the dry ice leaves no water or chemical residue and is environmentally safe. “Blasting a barrel at three years is most cost-effective,” he said at the Nov. 5 Napa Valley Wine & Grape Expo, sponsored by the Napa Valley Grape growers. Vasquez said cleaning a barrel when it is 4, 5 or 6 years old also is effective and adds that Sebastiani hires Vasquez and Flook to clean their barrels every other year, starting with their 3-year-old barrels. The last cleaning is when the barrels are 7 years old. The inside of the barrels are automatically cleaned but the top and bottom are cleaned by hand, using a high-powered wand.

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Using dry ice to blast wine barrels clean

By David Stoneberg

For the past five years, Vic Vasquez and Bob Flook have been using recycled CO2, or dry ice, to blast wine barrels, barrel rooms, wine caves and winery equipment.

The dry ice, at 109 degrees below zero, removes mold spores, bacteria and fungus. From the inside of a wine barrel, the automated “Rajeunir” machine removes five thousands of a inch of old, wine-saturated wood without removing the “toast” levels of the barrel, thus extending the life of the barrel and allowing the winemaker to use it again. After the barrel is “blasted” it is a clean, sanitary vessel for the next vintage of wine.

Oregon Wine's Civil Civil War

Oregon is in the strange position of having two representative wine bodies: the long-standing official one, and a group of upstarts who complain (politely) that the official board doesn't represent them. Mainly it is a clash between the Pinot Noir producers of Willamette Valley and growers and wineries in other parts of the state. As with most problems in the Pacific Northwest, it's really all California's fault.

Battle Creek Cellars Opens in Portland's Pearl District

The new 2,000-square-foot space, situated at 820 NW 13th Ave., offers visitors a comfortable place to connect over wine and light bites. "Portland is also the jumping point for tourists who are eager to come experience Oregon wines," says Cabot. "By opening our tasting room in Portland, our goal is to bring a slice of wine country to the city for everyone to enjoy-be it after work, on a Saturday afternoon, or as they kick-off a wine country vacation."

Portland Winemakers Club
Leadership Team – 2019

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** bt.grapevine@frontier.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: **Barb Stinger** kbstinger@frontier.com
- Arrange for speakers & educational content for our meetings

Chair for Tastings: **Paul Sowray & Barb Stinger** davids1898@aol.com
- Conduct club tastings kbstinger@frontier.com
- 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** bobhatt2000@yahoo.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** labmanpaul@hotmail.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
* Gala / Picnic / parties mindybush@hotmail.com

Web Design Editor: **Alice Bonham** alice@alicedesigns.org