Portland Winemakers Club

February 2016

Monthly Rant

Greetings to the members of the newly titled Portland Winemakers Club. In a 2 stage vote, the large group of members present at the January meeting voted nearly unanimously to change to the new name. I was glad to see a spirited and insightful discussion as we narrowed the list of suggestions, and somewhat surprised by the fact that there were no votes to keep the old name. But as has been said numerous times, changing our title does not mean we will leave our legacy as Oregon's oldest winemaking club behind. I believe this will be most obvious on the new website, Alice is already at work on it, but by no means limited to just that.

In other news, completely random, but what the heck. Some recent figures on the state of wine consumption in the US:

• Number of US Wineries in 2015 = 8702
• 5 Largest Wine States by # of Wineries: California 4054, Washington = 718, Oregon, 689, NY = 367, Virginia = 262
• Percentage of US Adults who drink wine: 40%
• US Wine Consumption per Capita: 3.14 gallons (11.9 liters) in 2014
• Gender Percentage = 57% female and 43% male
• High Frequency Wine Drinkers = 35% of US wine drinking population, or those who drink wine several times per week; an increase of 2% since 2010.
• Percentage Sales by Wine Color = Red: 46.3%; White: 44.3%; Pink: 4%.
• Largest Wine Consuming Generations = Millennials at 36% and Baby Boomers at 34%.

Since 2010 the US has been the world's largest consumer of wine. Interestingly, there was double digit value and volume growth in 4 price points: $11 – $14.99, $15 – $19.99, $20-$24.99 and over $25. But shockingly, at least to me, 75% of the wine in the US is still sold at $9 and under. I guess that explains the wall of cases of 2 Buck Chuck I saw in Trader Joe's last week, far more than any other wine at any price point. Yikes.

Phil

Drink Responsibly. Drive Responsibly.

Scheduled Meetings

January 9, 2016
Annual Gala – Archer Winery; 4-9 PM

January 20, 2016
Crush Talk / Planning

February 17, 2016
Bordeaux Tasting

March 16, 2016
Speaker

April, 2016
Tour

April 20, 2016
Barrel / Carboy Sample Tasting

May 18, 2016
Speaker

June 15, 2016
"Open discussion of winemaking issues"

June, 2016
Tour

July 16, 2016
Annual Picnic

August 17, 2016
All Whites Tasting

September 21, 2016
Other Reds Tasting

October 19, 2016
Pinot Noir Tasting

November 2016
No Meeting

December 2, 2015
Planning, Tours, Speakers, Events, Elections

Information & Trivia

• **Only a month** to go until the entry deadline of March 11, 2016 Click on the quick link: http://winemakermag.com/1511-2016-winemaker-competition-entry to get all the information, rules, and a downloadable entry form for the 2016 event.

• **Abacela** near Roseburg, Ore., continues to nurture its historic Listán Prieto vines. Abacela recently learned the identity of the vines, which it believes were planted by the homesteading Cox family in 1873.

• **Britain's Prince Charles** has long been an environmental crusader. And this extends even to his Aston Martin DB5 sports car, which he powers with bio-fuel made from surplus English wine. Here, here!

• **And following that thread,** a recent Australian study shows that up to 400 liters of inexpensive bio-fuel can be sourced from one metric ton of pomace, the residue of skins, pits and stems left over from winemaking.

• **You say you'd like to own a vineyard in Napa Valley?** Well, be prepared to spend a lot of money. The website Napa Valley Address says that, today, a vineyard in one of Napa's prime areas costs anywhere from $225,000 to $300,000 per acre (yes, per acre), while a vineyard in one of the region's secondary areas runs from $90,000 to $165,000 per acre. But don't despair: A vineyard in one of Napa's fringe neighborhoods can be yours for as low as $35,000 per acre. Such a deal . . .

Note: The next regular meeting is scheduled for Wednesday, February 17, 2016 at 7:00 PM at Oak Knoll Winery.
Agenda: Bordeaux tasting. This will be our annual Bordeaux varietals & Bordeaux blends member tasting. Bordeaux varietals are Cabernet Sauvignon, Merlot, Cabernet Franc, Petit Verdot, Malbec, Carmanere or any blend thereof.

1.) Snacks: This will be a potluck; bring a small snack to share.
2.) . Everyone needs to sign a new waiver. If you didn't pay your dues at the Gala please remember to pay your 2016 dues at this meeting.
3.) Bring a wine glass for tasting member wines.
4.) The regular 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.

PWC Website: http://www.westsidewineclub.com/

January Meeting Minutes

Present = 25

• Barb Thomson said 37 attended this years Gala. After receipts and expenses we cleared about $338.
• Don Robinson said entries for the Newport Seafood & Wine festival amateur competition must be in Newport by the 29th of January. Also, entries for the Winemaker Magazine amateur competition must be in by March 11th.
• Marlene Grant says there is a shipper in Newberg that can ship you entries, or any wine. She will get more information. "Newberg Mailroom" in the Safeway Plaza, across from Rite Aid.
• Marlene also handed out 2 for 1 coupons for the "First Taste Oregon" event in Salem on January 22nd & 23rd.
• Barb Thomson says we have 8 sets of gift glasses left for speakers etc.
• Bridget Lopez would like suggestions for speakers or subjects you would like to have at meetings. Her e-mail is Bfosterpacific@gmail.com
• Phil thought we should think about what it would entail to have a couple public wine pours of member wines this year as a way to advertize the club.
• Lots of discussion about changing the club name: Phil mentioned that a new name should reflect the fact that we are winemakers and not just tasters or wine buyers. Ted Brunner and others felt the name should contain "Portland" or "West Portland" and "Winemakers". Other suggestions were Association, Society, PDX and the leaving it "West Side Wine Club". Phil Bard felt we need to consider and respect our long time club history.

The nominated names were:

West Side Wine Club
Portland Winemakers Club
Portland - West Side Winemakers Society
West Side Winemakers Club
Portland Winemaking Association
PDX Vintners Club
PDX Winemaking Club
PDX Winemakers 1968
West Portland Winemakers Club

In the first vote, everyone selected their three favorites. The resulted in only 2 clear favorites: Portland Winemakers Club & PDX Vintners Club.

The second vote between those two resulted in the winner: Portland Winemakers Club.

Ken Stinger … Secretary

Potassium Sorbate as a Wine Preservative

FEBRUARY 23, 2011 By COOK

Potassium Sorbate (K-sorbate) is a relatively recent wine additive (it only first started to be used about 50 years ago), used primarily as a preservative to help prevent re-fermentation of sweet or semi-sweet wines. It is widely used in many types of foods ranging from cheese and yogurt to dried fruit and meat. It is even used in cosmetics to help give them a stable shelf life. It is generally considered as safe, having about the same toxicity as table salt.

To be honest, I hadn't heard much of wineries using K-sorbate before returning to Minnesota, and had never used it in off-dry or sweet wines in either Alsace or Australia, and now I get questions about it on a regular basis. So, I've been doing a bit of research on it lately and figured I'd share with you what I have learned.

When added to water, K-sorbate breaks down into sorbic acid (sorbate) and ionic potassium (K). It is the sorbic acid that is active as an anti-microbial. **It doesn't kill yeast cells**, but only prevents them from growing and being active. It has no effect on lactic acid and acetic acid bacteria at the amounts added in wine. Therefore, it should only be added to wine that is already stable via its pH and free sulfur. Another important point to remember is that just as sulfur dioxide (SO2) is more active at lower pH, so is sorbate.

Here are some more important points to know:

- Like SO2, **sorbic acid is detectable in wines** when it is added above certain levels, though the reported values vary from 135 to 400 mg/L. *
- Over time, **sorbic acid will be reduced to form ethyl sorbate**, which has been described as having **pineapple** and **celery** aromas. You cannot prevent this from happening in wine, as this reduction occurs naturally with the presence of ethanol. While these aromas aren't inherently objectionable, they will mask other fruity aromas in your wine. Some people may consider it a flaw. The concentration of ethyl sorbate will continue to rise over time, and is dependent on your initial sorbic acid concentration. Therefore, sorbate is generally added to wines which aren't destined to be aged.
- It **will not inhibit bacterial activity**. If you add it to wine before bulk storage or bottling, you need to be absolutely certain that the wine is stable. If there is any lactic acid bacteria present in your wine, it will still be there after sorbate is added. Potassium Sorbate must **ALWAYS** be used in conjunction with proper SO2 addition.
- If lactic acid bacteria is present in the wine, it will metabolize sorbic acid and produce a chemical that has a strong **odor of Geranium leaves** and is considered a major wine flaw.
- The amount of sugar in the wine has no effect on the amount of sorbate needed. The only concerns are pH, alcohol, and the initial population of yeast cells (which should be less than 100/mol – make sure the wine is very clear before adding K-sorbate).
- When adding K-Sorbate to wine, remember that it contains about 75% sorbic acid by weight (100 mg of K-sorbate contains 75 mg of sorbic acid).
- The BATF limits sorbic acid addition to wines to 300 mg/L (the European Union regulations limit its addition to 200 mg/L).
- Sorbate **SHOULD NOT** be added to dry red or white wines. There is no risk of re-fermentation when there is no sugar present. You are only adding the risk of off-odors from ethyl sorbate as well as risking the production of geranium taint.
- Sorbic Acid is not very soluble in water. Precautions need to be made when adding it to wine to ensure that it is properly dissolved in the wine.
- Sorbate is not allowed as an additive in production of organic wine
- Certain countries do not allow the import of wine containing Sorbate
- Lastly, and importantly, paper or cloths that have absorbed potassium sorbate may spontaneously ignite! So be very careful when cleaning up sorbate spills in your wine making area.

If you do spill and use paper towels or a cloth to sop it up be sure to rinse them thoroughly. I'd also be very reluctant to use this additive in a carpeted area as it would be difficult to remove it without a steam cleaner handy.

As for the recommended rates of sorbic acid that should be used in wine, there seems to be no clear consensus. The most cited recommendations come from Peynaud (1984), who notes that sorbic acid is half as effective at a pH of 3.5 than it is at a pH of 3.1, but then lists his recommended dosages based on alcohol content. Sorbic acid's action against yeast is reinforced by alcohol. The following are his recommendations for sorbic acid:

Wine at 10%	150 mg/L
Wine at 11%	125 mg/L
Wine at 12%	100 mg/L
Wine at 13%	75 mg/L
Wine at 14%	50 mg/L

These recommendations by Peynaud assume a pH < 3.5, and adequate SO2 protection. Remember, these numbers are the recommendation for ***sorbic acid***. If you are adding Potassium Sorbate, only 75% is sorbic acid. So you need to divide the sorbic acid amount by 75% to get the equivalent amount in K-sorbate. So 150 mg/L of sorbic acid would mean you should add 200 mg/L of K-sorbate (0.2 go/L).

Commercial wineries generally avoid the need to use potassium sorbate because their wines are usually sterile filtered at bottling, so the re-fermentation risk is eliminated (sterile filtering means all yeast and bacteria cells are eliminated). Wineries focused on the production of high-quality wines also tend to forgo the use of K-sorbate because they find the aroma of ethyl sorbate to be undesirable. In the end, I can't make any recommendations for or against it, as it is a preference choice for the winemaker. However, if you are *properly* sterile filtering your wines, the addition of sorbate is an unnecessary step in the process that comes with risks that should be addressed.

Winemaker Trials

Adelsheim Vineyard Tests Saignée in Pinot Noir
Michael S. Laski

TRIAL NAME:
2014 Pinot Noir Saignée Trial, Comparing 5 Percent and 10 Percent Saignée Levels.
WINERY: Adelsheim Vineyard, Newberg, Oregon
WINEMAKERS: David Paige, winemaker; Gina Hennen, associate winemaker

WINEMAKER SUMMARY: 2014 was a heavy yielding year in the Willamette Valley, and at one cluster per shoot we were frequently well above our preferred yield (2.2 to 2.5 tons per acre). Typically, under high-yielding conditions we will pull a saignée the day of processing to concentrate flavors and improve the skin-to-juice ratio. However, we haven't done much work on the appropriate quantity of saignée.

We split up one block of fruit into two identically sized fermenters. From one lot we pulled a 5 percent saignée and on the other we pulled a 10 percent saignée the day of processing. Both fermenters were inoculated with a commercial yeast. They had reasonably similar fermentation curves, they were pressed on the same day, and they went down to barrel as unique lots.

CONCLUSION: We found that there is indeed a difference between the percentage of saignée introduced. We found the higher saignée wine to be distinctly more concentrated and dense. However, this may not be most appropriate for our wine style.

Why this trial?

Gina Hennen: We do saignée in certain circumstances, primarily when we see yields coming in a little higher than we would like. We'll pull a saignée to try to concentrate the juice that's still in the fermenter so we're increasing our seeds and skins ratio to juice. We don't have a good metric for how much saignée to pull for a certain incoming yield, so we set up this trial to see if we could get away with a little bit less saignée than we typically would. We did 5 percent versus 10 percent. Ideally we would have had no saignée, but the lot wasn't large enough to split up into three different fermentations. For this trial we had about 3 tons total and split it into two 1.5-ton fermenters. This was no little on-the-side experiment. All the juice ended up in production wine, mainly our Willamette Valley Pinot Noir, an approximately 12- to 14-case blend.

David Paige: To give you some other background, in California where I was making wine for a while, I certainly knew people who saignée pretty much everything when they made Pinot Noir. That was part of their Pinot Noir protocol. I had always agreed with them that it concentrates the flavors but I had not agreed with them that that was a good thing all the time. There are times when it feels artificially concentrated. To me in kind of the same way when you go around choosing enzymes all the time, you get more extraction and it's not always pretty. It's not always an appropriate approach. Every now and then we get a big enough yield that we want to do some saignée, but that's why we've historically eyed it with a little bit of suspicion.

What was learned from the results?

Gina Hennen: I think the answer is less about blending than it is about the front-end side of production. So I think the results that we saw were that there's a sense of almost an artificial concentration at the 10 percent level of saignée, and the 5 percent seemed to give a little bit more of natural feeling to the wine. We need to look at this more, as this trial offered just one data point, but we're now less inclined to do a high percentage of saignée. We're more inclined to do a low percentage saignée and compare it to perhaps a 0 percent saignée. The reasoning for this was the flavor and quality of the wines. I think there was a large improvement by using 5 percent saignée, and I don't think we were all in agreement that we consistently preferred the 10 percent saignée.

It suggests that we should look at this more carefully and try to come up with a more nuanced approach to saignée. I think it would be interesting to create better parameters for understanding how and when to pull saignée, whether it's based purely on the pounds per linear foot and/or yield. Maybe it's based to some degree on the water content of incoming fruit, and I think another important learning for us is that we can make a large impact with a smaller percent of saignée overall. So whereas in the past we may have gone to a 10 percent saignée instinctually, now we're more inclined to go with a 5 percent saignée—or perhaps somewhere in between.

David Paige: At the beginning of the tasting, we were actually soliciting people's votes, so to speak; but after a while, the tasting got too busy to keep doing that. People were overwhelmingly voting in favor of the 5 percent. The comments tended to be that the 10 percent was just a little bit of an odd wine, and that's what we find when something is over-extracted in any way, whether it's because of saignée or enzymes.

Ultimately, the results of this trial followed my belief in restrained winemaking methods. That's where you're going to get your elegance and your subtleties. You're not going to get that by pulling out all the stops and using a bigger hammer—like 10 percent saignée.

North Korea: Kim Jong-un invents 'hangoverless' alcoholic drink

According to **a North Korean article**, he oversaw the production of Koryo **liquor** - a special mix of **alcohol** you can drink without getting a hangover. The hereditary dictatorship, now ruled by third generation leader Kim Jong-Un, is no stranger to making huge **claims** that can not be independently verified.

Good news for party-goers, **North Korean** scientists claim to have made a liquor that won't cause hangovers.

Last year, North Korean scientists also reportedly released a vaccine called Kumdang-2 that they **said** could reportedly cure HIV/AIDS, drug addiction, cancer, MERS and Ebola, **CNN reported**.

The ginseng drink has been in the works for years and has not become available on any global markets. That's in part because as the world's most isolated **state**, much of what goes on in North Korea remains mysterious to the outside world.

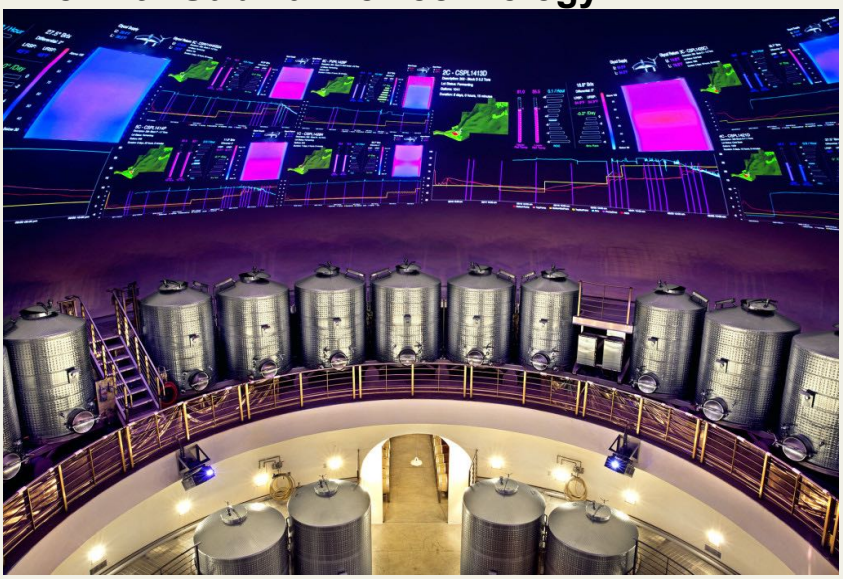
Ginseng root is used in Chinese medicine and some claim it boosts energy, lowers blood sugar and cholesterol levels, reduces stress, promote relaxation, treats diabetes - and cures sexual dysfunction in men.

They have now declared the process a success, saying that after years of working on different formulas they have finally stopped the drink being unpalatably bitter - with the added unexpected bonus of the drink being hangover-free.

ED. - But wait!, if you act now we will send you 2 bottles, just pay shipping & handling.

Napa's Fermenting Your Wine With Submarine Technology

Twenty-four tanks sit underground in a giant reinforced cave. When a winemaker enters the cave, they are greeted with the usual winey smells. But when they glance up, they see a curved dome of data displaying the status of each tank. If they're at home and something needs to be adjusted, they can manage it via an iPad app.



IN A TRADITIONAL wine fermentation tank, if the yeasts start acting weird, it might be days before anyone smells or tastes the damage. But **at Palmaz** Vineyards in Napa, California, staff can detect risk factors before they develop into wine-spoiling problems. That's thanks to the Fermentation Intelligence Logic Control System, a *Minority Report*–style setup that tracks the vino at a molecular level, giving the winemaker the information needed to adjust temperatures in different parts of the tank with incredible precision (control over heat = control over yeast). The system is based on a submarine--industry technology called sono--densitometry: A tuning-fork-like probe inside each tank measures vibrations 10 times per second, yielding millions of data points about the density of the liquid. That tells you the sugar and alcohol levels, and thus the rate at which fermentation is occurring. Then software slurps up this cloud of data to show, say, temperature variations. That's projected on the dome of Palmaz's fermentation cave—a curved display of charts and graphs showing an ancient process in far-out detail. A geotagging system means that the tanks even "know" exactly which person is standing in front of which tank, so the projections a particular winemaker is working on follow them around. It's like Big Brother for big cabs.

Ed. - Take that! NORAD.

A NEW STYLE OF SAUVIGNON BLANC

The market is full of bright, young, grassy Sauvignon Blancs, but winemaker Merry Edwards decided to take a different approach with her Russian River Sauvignon Blanc.

Edwards made her first Sauvignon Blanc in 1979, while she was the winemaker at Matanzas Creek in Sonoma County. She wasn't really fond of the prevailing style, so "I engaged in the challenge of how to make this varietal appealing to me personally,"

Edwards says. "The typical herbaceous character was intensified by the trellising systems of the day, which shrouded the grapes with leaves, promoting not only a high production of pyrazines, but botrytis and other secondary molds."

She had heard that barrel fermentation reduced the grassy, bell pepper aromas that she didn't like. "So I tried that technique as a first step, using primarily neutral and a small amount of new French oak," Edwards says. "Next, I researched lees-stirring and added this to my protocol. This resulted in a substantial increase in mouth feel." She also discovered the Sauvignon Musqué clone. "I used this to add floral notes to the aroma, further muting grassiness. Modern trellis systems and moderate leaf pulling encourage more fruit-forward characteristics. "Last, a full six months of barrel aging and time on cork during bottle aging broadened the wine's complexity. Now I have a wine that I enjoy!" She adds that the wine can age for 10 years. "We have a very, very good following."

How oak barrels affect wine

BILL ST. JOHN

The ancient Celts were a people of the forest. They used a lot of wood in their daily lives, for housing, cookery and art. Sometime around the 5th century B.C., they came up with an ingenious new way with wood. They formed it into barrels for storing liquids such as water, ale and, when this craft was bequeathed to the West after the Dark Ages, wine.

Wood buckets for food preparation and storage long predated the closed-end barrel, but nothing beat the latter for moving liquids from one place to another — just across the winery cellar, for example, or down river to an export dock. Wood barrels were large, hollow wooden wheels, strong and reusable.

The best came from forests of oak plentiful especially in France, but also scattered throughout Europe. Sometimes coopers made barrels from chestnut, sometimes acacia, but they always preferred oak and still do to this day.

But while, for millennia, oak functioned to store and carry wine, it's only in the past 100 years or so that have we cared about what it does to the wine it houses, especially how it flavors and matures it.

"The flavor of the barrel prior to the 20th century was considered a negative," says Larry Brooks, winemaker at Tolosa Winery in San Luis Obispo. "The taste of oak is a relatively modern phenomenon."

The very structure of oak (white oak, not red oak; and just three types of white oak, one from the United States and two from Europe) gives it its great strength and contains those elements that winemakers now seek.

An oak tree trunk is a bundle of tubes, vessels and fibers running parallel to and overlapping each other, hence the wood's strength, with groups of other fibers that run radially from the outside to the center. When cut into staves, these rays help prevent liquid from leaking around the longitudinal fibers.

An oak tree grows twice during each year, commonly called "spring growth" and "summer growth." Its rate of growth depends on where it grows, how many neighbor oaks compete with it for water and light, how cool its climate is and other horticultural factors.

The slower a tree grows, the tighter its grain. By and large, in cooler climates such as those in Europe, the spring and summer growth alternate in tightly packed rings. In warmer climates, such as in our country, the grain is wider or looser.

The contact of the wine with these growth rings determines what kinds of flavors and aromas get delivered to the wine, plus how much wood tannin.

Returns diminish, however. As a barrel ages, it gives less to its wine. Half of what it has is delivered to the wine in its first use, then 25 percent the second year, and so on, less and less each year of barrel use. (Hence, winemakers may use the neutral character of very old barrels as a substitute to fermenting in, say, stainless steel.)

Wine takes what the oak apportions it. In general, wider grained oak (most American and Limousin from France, for example) lends in-your-face aromas, typically vanilla or dill.

You'd think that tighter grained oak would squeeze out less; it doesn't. Because there are more growth rings, it gives more: more tannin, but of plusher sorts; quieter aromas, still the American's vanilla but embedded in cream or caramel.

Winemakers, then, choose their oak for it properties. For example, Silver Oak Napa Cabernet Sauvignon has long been aged in 100 percent American oak.

“At first, (using American oak) was convenient,” says David Duncan, president and CEO of Silver Oak Cellars in Oakville. “But we’re after its flavor profile and how marrying it with the wine lengthens the tannin structure.” The winery now owns its own Midwestern cooperage and ships about 30 barrels a day to California.

But fewer winemakers appear to interest themselves in the provenance of their oak wood. What they’re after these days are two things: tight grain and how the wood is seasoned (typically outdoors for two to three years rather than being kiln-dried.

“I think the tightness of the grain has more of an impact on flavor and tannin than anything else,” says Joel Aiken, winemaker at Amici Cellars in Calistoga and Aiken Wines in St. Helena. “Also, I think what’s more important than where (the trees) are grown is how they’re managed.”

And seasoning the oak outdoors for a long time is crucial, even for American oak destined for wine (not bourbon) production. That is a new advance for American oak.

“I do see from my experience the need for it to be well-seasoned,” says Mel Knox, a San Francisco-based barrel maker and broker.

“Studies in France indicate that molds and enzymes formed on and in the wood during seasoning can neutralize bitter phenolics in the wood. At the same time glucoses and polysaccharides are released from the wood. This process takes at least 18 months.” That’s something a kiln cannot do.

Sweet Wines 101

The world's finest dessert wines can be otherworldly. No surprise, then, that it takes superhuman effort to make them.
Ben O'Donnell April 10, 2012

When it comes to fine dessert pours, you always remember your first wine. Tasting a rich Sauternes changes a man's outlook on wine: Suddenly, "sweet wine" isn't just treacly plonk for the cola crowd, and the pink Moscato, white Zin and "Mad Dog" misadventures of college times are mercifully flushed down the memory hole.

Despite its grandeur, dessert wine certainly doesn't have as big a tent as Cabernet, and it's probably just as well, since there is a lot less of it to go around. That is because serious sweet wines only get sweet when a winemaker uses extra rigor and care in crafting them.

In Canada, for example, grapes for ice wine must be picked in a pre-dawn frenzy to get them to the crush pad before they thaw out. Hungarian Tokaji Eszencia, the most concentrated wine in the world, has reached sugar levels of 900 grams per liter, and it takes years to ferment; according to one winemaker emulating Eszencia in Spain, it takes 110 pounds of grapes—enough for 50 bottles of table wine—to make one liter. Other sweeties call for patience, too—there are Sherries, Ports and Madeiras that are aged 20, 50, even 100 years at the winery before release.

Here are a few of the ways winemakers can achieve sweetness in their wines:

Pour Some Sugar on Me?
Cranking sugar out of grapes can be a hell of a chore. Why not just add a giant bag of it to the wine? Alas, with few exceptions, top winemaking regions consider this cheating, and forbid it in the making of fine dessert wine. The technique known as chaptalization, in which non-grape sugar is added to the fermentation, is permitted in certain cooler regions during weaker vintages—generally not to sweeten a wine, but to raise the final alcohol level in a dry wine when the grapes did not ripen fully. However, where high quality is not the main concern, some winemakers do simply inject a little sweet grape concentrate after fermentation.

One place where the addition of sugar is not only permitted but also enshrined as traditional practice is in Champagne. After the wine has undergone its secondary fermentation in bottle to create the bubbles, Champagne is bone dry and very high in acid. To temper that and increase aging potential, most producers top off each bottle with a *dosage*—a tiny bit of sugar dissolved in wine, or naturally sugary grape juice–which determines whether it's dry (brut), semi-sweet, (sec or demi-sec) or sweet (doux).

Late Harvest
Intentional over ripeness may sound like an oxymoron, but this can be desirable for making sweet wines—as long as the grapes have enough acidity to balance the high sugar levels. Grapes destined for dessert wine are left on the vine as long as possible to increase the sugars, sometimes until they are shriveled—with harvest taking place as late as the end of November, or even early December, in the northern hemisphere.

Once the juice hits the vat for these wines, their residual sugar, as it is called, is preserved because winemakers do not ferment the wines to dryness, so the resulting alcohol levels are usually around 8 percent. It's not a secret trick: Even grapes

harvested on an earlier schedule can retain a touch of sweetness if their fermentation is cut short. (There was a market sensation in the 1980s made just so: Kendall-Jackson Vintner's Reserve Chardonnay.)

Perhaps the most famous late-harvest wines come from Germany and the French regions of Alsace and the Loire, and showcase grapes such as Riesling, Gewürztraminer, Pinot Gris, Muscat and Chenin Blanc. If you're shopping for a sweet release, you can usually identify these wines by a label term like "late harvest," *vendange tardive* (French: "late harvest"), spätlese (German: "late harvest") or auslese ("select harvest," even later). In Germany, however, these terms correlate with a grape's must weight at the time of harvest rather than the final sweetness of the wine. Thus, even sugary auslese harvest can be fermented into a dry, or nearly dry, wine. (The designation "trocken" on the label indicates a wine with little or no residual sugar.)

Botrytis
Responsible for many of the most famed dessert wines of the Old World, *Botrytis cinerea* is better known as "noble rot." This is not an infelicity of translation; even the more mellifluous *pourriture noble* is just a French way of saying "good stuff, but rotten." That's because this is a fungus—a sometimes-beneficial form of gray rot that, on healthy grapes, concentrates the sugars for a complex, honeyed character in the wine.

The fungus tends to hang out in damp areas and grows on the skins of grapes, which become thinner and more porous, shedding some water from the pulp and transforming into shriveled, furry-looking growths. Red grapes generally become unusable with the rot, but white varieties, such as Sémillion, Sauvignon Blanc, Riesling and Chenin Blanc, produce rich, unctuous sweet wines instead.

You may have to pay out for a taste of that nobility, however: With so much of the grape mass lost, it can take a whole vine's worth of shriveled fruit or more to produce one glass of wine at top estates. The list of wines that owe their existence to botrytis reads like a monarch's after-dinner menu: Sauternes and Barsac from Bordeaux (made with Sémillon and Sauvignon Blanc), German beerenauslese and trockenbeerenauslese (typically Riesling), Hungary's storied Tokaji Aszu (mostly Furmint) and Quarts de Chaume (Chenin Blanc) out of the central Loire.

Dried Grapes
One of the oldest methods known to winemakers, the process of drying out grapes to concentrate their sugars naturally, arose in the hot Mediterranean *terroirs* where Greeks, Phoenicians and Romans plied their vines thousands of years ago, and this technique has remained basically unchanged since antiquity. There is more than one way to dry a grape—leaving them to raisin on the stalk, or placing picked bunches on a straw mat in the sun, in a warehouse hanging from a rack or on a roof—but all yield similar results, a rich wine that requires a lot of grapes.

Examples of these "straw wines" or "raisin wines" include the *vin de paille* of France's Jura region, the Commandaria wine of Cyprus and *passito* wines from Italian regions such as Tuscany (Vin Santo) and the Veneto (Recioto della Valpolicella or Recioto di Soave; Amarone is made from dried grapes but fermented to dryness). Some of the best sweet Sherries—which undergo additional steps—are made using dried Pedro Ximénez and Moscatel de Alejandría grapes.

Frozen Grapes
Chilly climes, such as those in Canada, can’t depend on botrytis or, well, heat. But if you can’t cook the H2O off, you can always freeze it up!

Ice wine follows yet another means to the same end as other dessert wines, concentrating the grape sugars by freezing the water to separate it out. As sugar does not freeze, the icy grapes can be pressed—with, it must be noted, a great deal of difficulty—to produce a viscous sugar-liquid. For the most part, true ice wine (or eiswein) production is limited to the wine world's frostier extremities, and Canada and Germany, the primary sources of it, maintain strict regulations on sugar and levels and temperatures: The grapes must undergo a hard freeze—17° F or 19° F, for Canada and Germany, respectively, at the time of picking. In other countries like the U.S. and Austria, the grapes must merely be frozen.


Late-harvest Riesling grapes on the vine at Weingut Fritz Haag, in Germany's Mosel region. The shriveling causes


Port wine grapes are traditionally crushed by foot, as at Quinta do Noval, in Portugal's Douro Valley

Growing ice wine grapes is a bit of a cat and mouse game, where the cats, in this case, are birds. A mild winter can mean no frost until as late as February, so winemakers throw nets over the vines to keep avian snackers away; the nets also catch grapes that begin to fall from the vines.

In areas that don't often dip to such icy lows, wineries are sometimes permitted to freeze their stock mechanically, and press off the concentrated remains. There's even an ice wine appellation near Barcelona, where the average November temperature is around 60° F.

Beefed-Up Grapes

Whoever first invented the process of fortification—adding neutral grape spirits to a wine—remains a mystery, but the style became immensely popular in the Spanish and Portuguese pours favored by the British, in part because the wines were hardy enough to ship to colonial outposts without damage.

Take Port, the jewel of Portugal's Douro region. More than 80 different grape varieties are permitted (though five are favored) to be used in its production. In the vat, the infusion of a brandy-like spirit kills the yeasts, halting fermentation before all the sugar is converted to alcohol. The result is a naturally sweet wine with high alcohol level, typically 18 to 20 percent. Port is made in a range of styles (requiring more detail than we'll get into here), and like Champagne, most Ports are a blend of vintages, to present a consistent house style. At the basic level are fruity ruby Ports, aged for two to three years. Aged tawny Ports—the blends are typically identified as 10, 20, 30 or 40 years—spend an extended time in wooden casks, imbuing the wine with a nutty, toffee flavor and its namesake hue. At the pinnacle is Vintage Port, made in the best years, entirely from one vintage, which are released young but should generally be aged in bottle for a decade or more before drinking.

Fortified wines are not always sweet. Sherry, from Spain's Jerez region is usually fermented dry before it is fortified, and the lightest, driest style, fino, stays that way. It is aged in barrels under a naturally occurring cap of yeast called flor to prevent contact with oxygen. Remove the flor during aging, and the wine takes on oxidative notes and a darker hue; this is an amontillado. Oloroso Sherries never touch the flor so they see even more oxygen; while technically still dry wines, their high glycerine content gives them a hint of sweetness. Sweet Sherries, such as cream, are made by adding sweetening to dry Sherry—typically juice from Pedro Ximénez and Moscatel grapes that were dried on mats, or wine fermented from it. These dried grapes may also be made into rare, rich, syrupy Sherries of their own.

One constant links all these styles: a system of barrel-aging called the *solera*, in which newly fermented wines are added to casks of older wines. Some of these wines are added to even older wines and so on, ending with the bottling of a pinch of wine from the oldest set of barrels. Same tango the next year, and year after: The blend in a *solera* can thus have traces of century-old vintages in it, and the highest classification of Sherries are sloughed from blends averaging at least 30 years of barrel age.

These are all tough wines, but the heavyweight champion in this style is Madeira, which is made on a small archipelago off Portugal of the same name. Madeira, like Port, is fortified mid-fermentation. And then, it is put through the wine equivalent of Navy SEAL training. Exposed to oxygen during aging, it is actually baked at temperatures of up to 130° F in the barrel or tank, giving it a caramelized character. ("Madeirized" is a wine term to describe what happens to more fragile wines accidentally ruined by these conditions.) The best Madeiras are made from one of four key grapes, which range in style, from driest to sweetest: Sercial, Verdelho, Bual and Malmsey (Malvasia). The amount of time they are aged before bottling ranges dramatically; for a good introduction, look for five-, 10- or 15-Year-Old Madeira, which indicates how long the youngest wine in the blend was aged. Vintage Madeira, which must all be from one vintage, is aged for at least 20 years in cask and another two in bottle.

The resulting wine, unlike most, isn't afraid of heat, air or age. You can open a bottle and then return to it again months later, or you can cellar it for centuries.

In truth, we don't know how long Madeira can age. Existing, perfectly drinkable samples date to the early 1700s. On the whole, the combination of sugar, tannins and oxidation—supercharged by extra alcohol—makes the finest fortified wines nigh-eternal.

With all these protocols and pitfalls to dessert winemaking, even the notoriously tricky Pinot Noir doesn't seem so hard in comparison. So here's to the winemakers who are sweet enough to make it for us.

Portland Winemakers Club
Leadership Team – 2016

• President: **Phil Bard** phil@philbard.com
• Set agenda for the year
• 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: **Bridget Lopez** Bfosterpacific@gmail.com
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• Review and improve club tasting procedures

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• Arrange tours
• Cover logistics (food and money)

Chair of Group Purchases: **Bob Hatt** bobhatt2000@yahoo.com
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• Grape purchases
• Supplies – These should be passed to the President for distribution

Chair of Competitions: **Don Robinson** don.robinson.pdx@gmail.com
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