

West Side Wine Club

September 2013

Monthly Rant



Drink Responsibly.
Drive Responsibly.

Scheduled Meetings

January 12, 2013

Annual Gala

January 16, 2013

Crush Talk / Planning

February 20, 2013

Bordeaux Tasting

March 20, 2013

Aroma Kit / Faults & Flaws

April 17, 2013

2012 Barrel / Carboy
Sample Tasting

May 11, 2013

Joe Dobbs Winery Tour

May 15, 2013

Speaker – James Osborne,
OSU Wine Research
Institute

June 19, 2013

“Best Practices of Amateur
Winemakers”

July 13, 2013

Annual Picnic, Home of
Dennis & Marlene Grant

July 19, 2013

Colene-Clemens Winery /
Vineyard Tour

August 21, 2013

All Whites Tasting

September 18, 2013

Other Reds Tasting

October 16, 2013

Pinot Noir Tasting

November

No Meeting

December 4, 2013

Planning, Tours, Speakers,
Events, Elections

It's finally here. Harvest is beginning in just a few days at some of the Willamette Valley vineyards, and out in the Columbia River AVA as well. In a year of early warm and dry weather, which has pushed the picking dates up a couple of weeks almost everywhere, September came as a mixed bag, and looks to continue that way. Beginning with heat and humidity, then significant rain, now back to heat, and next week some cool rainy periods, its not a textbook finish but likely will do fairly well in getting fruit to target Brix values and decent flavor development. Botrytis pressure is up a bit, but berry counts are a little down. That coupled with careful vineyard spray programs should keep rot to a minimum at most sites. Still, for those looking for longer hang times there is still a chance for trouble should it turn wet. But at this point most people I talk to are fairly confident we will have a great vintage.

Bring it, I say, and good luck to everyone as we head into the best time of the year to be a winemaker.

Phil

Importance of rehydrating yeast

How important is it to rehydrate the yeast before adding it to the fermenter?

Very important! Extensive research shows that the yeast cell wall is very fragile during the first few minutes of rehydration. Some of the components of the yeast are going from a dry crystalline form to a gel like state and can go through this transformation successfully if rehydrated properly. With rehydration water at lower temperatures the transformation from crystalline to gel is less successful, the cell wall becomes porous and leaches out vital parts of its insides. Rehydration in 60°F water can result in a loss of 60% of the yeast viability.

Rehydration in distilled or deionized water is lethal to the yeast. The cell walls require the presence of some minerals, sodium, calcium, magnesium and or potassium, during rehydration. Tap water at 250 ppm hardness is optimum. Most tap water has enough hardness to do the job. The presence of 1/2% yeast extract, yeast hulls, autolyzed yeast or peptone in the rehydration water will give the yeast an added boost that will get it through its lag phase quicker. After the yeast cell wall has been reconstituted, the yeast returns to its normal ability to be selective.

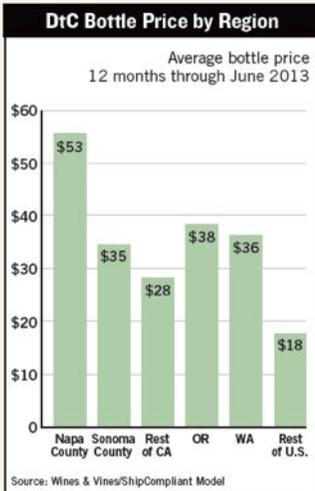
Most fermentations should start with an inoculation of 3 - 4 million viable yeast cells per milliliter of must. A normal healthy fermentation will reach the stationary phase with a cell population up to 100 - 150 million viable yeast cells per milliliter. Because of this significant increase in biomass, it is critical that the active dried yeast gets off to a good start.

Winemakers that carefully rehydrate their active dried yeast are taking a key preventative step to avoiding stuck and sluggish fermentations. Remember to use only clean 104°F tap water.

Refer to the [Scott Laboratories Fermentation Handbook](http://www.scottlab.com/) for detailed rehydration instructions available online at <http://www.scottlab.com/>

Information & Trivia

There's a fine line between fishing and just standing on the shore like an idiot.



Napa County wines continued to dominate DtC shipments in price per bottle during the 12 months through June. Note that average prices in Oregon and Washington ranked second and third, beating Sonoma County and other parts of the country.

The Los Angeles "Cellarmasters* wine club will probably hold an Amateur wine competition this Fall. See this web site:

<http://cellarmastersla.org/us-amateur-wine-competition/>

[TTB Says Alcohol Content Can Move to the Back Label for Wine](#)

Announced today, and effective August 9, 2013, the Alcohol and Tobacco Tax and Trade Bureau (the TTB) has announced changes to its labeling requirements for wine. Amending 27 CFR 4.32, the alcohol content for wine no longer must appear on the brand label, and instead it may be printed on the brand label or on other labels affixed to the bottle, including the back label.

The next meeting is scheduled for Wednesday, September 18 at 7:00 p.m. at Oak Knoll Winery.

• **Agenda "Other Reds".** Member wines taste and critique - This will be red varietals other than the Bordeaux varietals or Pinot Noir (e.g. Tempranillo, Syrah, Petite Sirah, Zinfandel, Sangiovese, Nebbiolo, Barbera are not Bordeaux varietals).

• **Snacks: This will be another potluck; bring a small snack to share.**

- 1.) Please bring a couple wine glass for tasting wines.
- 2.) Waivers will be present at the meeting. If you have not previously signed a waiver for, please do so at the meeting. You may also pay your 2013 dues if you have not already done so.
- 3.) The meeting will begin at 7pm and end by 9pm. If you can get there a little early to help set up, please help to put away chairs and tables at the end.

WSWC Website: <http://www.westsidewineclub.com/>

Message Board: <http://groups.yahoo.com/group/Westsidewineclub/>

August Meeting Minutes

Members present = 22

- Phil congratulated the WSWC members who won ribbons at the Washington County Fair.
- Phil thanked Dennis & Marlene Grant for hosting the WSWC picnic.
- Phil reminded everyone that our commitments to purchase wine grapes from a vineyard should be considered a contract to buy and that backing out of the agreement reflects badly on our club.
- Phil attended a recent ETS seminar. One of the topic concerned stuck fermentations in musts that have high pH & high sugar. Lactic acid bacteria was found to have consumed most or all of the yeast-assimilable nitrogen (YAN) resulting in the stuck fermentation.
- Marlene Grant suggested that we consider holding our next Gala in January at a new venue. She recommends "Archer Vineyards" on Parrot mountain near Newburg. The advantages would be less cost, more open less cold and both inside & outside space with a great view. It was also suggested that we start earlier, say 4:00 PM till 9:00 PM. Bill Brown suggested that we get all the detail, put it in the next newsletter and vote at our next meeting.
- Jim Ourada and Paul Rogers offered to sell part of the Riesling grapes from 30+ year old vines they have contracted for from Fred Holmes' vineyards on Keizer Road in the Bethany area. Contact Jim at: jim.m.ourada@intel.com. Marj said that Riesling is among the last to ripen.

Phil Bard & Bill Brown conducted the blind tasting of white wines, The following is in order of tasting.

- | | |
|--|--------|
| #1 – 2010 Pinot Gris 1% sugar, John Hooson / Don Hoffard | Bronze |
| #2 – 2011 Pinot Gris 1.5% sugar, John Hooson / Don Hoffard | Silver |
| #3 – 40% Gewurztraminer, 40% Chardonnay, 20% Viognier 1% sugar
Jon Kahrs / Don Robinson | Bronze |
| #4 – 2012 Gewurztraminer, dry Ken & Barb Stinger | Bronze |
| #5 – 2011 Rose', (Pinot Noir, Mourvedre, Grenache) Jon Kahrs | Bronze |
| #6 – Rose' (Sangiovese) 18 hrs. on skins, saignée, Bill & Marilyn Brown | Bronze |
| #7 – Rose' Semi-sweet Concord, Jim Ourada / Paul Rogers | Bronze |

The Results are in from the 2013 Willamette Valley Amateur Winemakers Society Wine Competition.

Congratulations, the following WSWC members won medals:

Best of Show Jon Kahrs

2012 Chardonnay/Gewurztraminer/Viognier

Gold	Jon Kahrs	2011 Pinot Noir/Sparkling
Bronze	Jon Kahrs & Don Robinson	2009 Pinot Noir
Gold	Don Robinson	2009 Syrah/Sangiovese
Silver	Don Robinson & Jon Kahrs	2012 Chardonnay/Gewurztraminer/Viognier
Bronze	Don Robinson/Dana Blizzard/John Kahrs/ Laurence Gellert	----- 2011 Tempranillo/Syrah/Grenache/Cabernet Sauvignon
Silver	Don Hoffard & John Hooson	2011 Pinot Gris
Silver	Don Hoffard & John Hooson	2010 Riesling
Silver	Don Hoffard & John Hooson	2010 Riesling
Silver	Don Hoffard & John Hooson	2010 Cabernet Sauvignon/Syrah/Malbec
Bronze	Don Hoffard & John Hooson	2007 Cabernet Sauvignon
Bronze	Don Hoffard & John Hooson	2009 Cabernet Sauvignon
Bronze	Don Hoffard & John Hooson	2008 Syrah
Bronze	Don Hoffard & John Hooson	2010 Syrah/Viognier
Bronze	Don Hoffard & John Hooson	2010 Malbec
Silver	Michael Smolak	2012 Pinot Noir Blanc
Silver	Michael Smolak	2008, 2009, 2011 Port Style Solera Cabernet Sauvignon/Syrah
Silver	Ken & Barb Stinger	2012 Gewurztraminer
Silver	Ken & Barb Stinger	2011 Cabernet Sauvignon
Bronze	Ken & Barb Stinger	2011 Pinot Noir/Marechal Foch
Silver.	Terry Swan	Old Vine/Merlot/Cabernet Franc/Petit Verdot
Silver	Terry Swan	Cabernet Sauvignon/Cabernet Franc/Merlot/Petit Verdot
Silver	Terry Swan	2010 Sangiovese
Silver	Terry Swan	2008 Syrah
Silver	Terry Swan	2010 Syrah
Bronze	Terry Swan	Viognier
Bronze	Terry Swan	Cabernet Sauvignon/Cabernet Franc/Merlot/Petit Verdot
Silver	Scott Nelson	2010 Primitivo
Silver	Scott Nelson	2009 Barbera
Bronze	Scott Nelson	2010 Pinot Noir
Bronze	Scott Nelson	2010 Cabernet Sauvignon
Bronze	Scott Nelson	2010 Cabernet Sauvignon
Bronze	Dennis & Marlene Grant and Ted Johnson	2011 Tempranillo
Bronze	Dennis & Marlene Grant and Ted Johnson	2011 Sangiovese/Merlot

Go to <http://www.wvaws.org/> too see the complete list.



WSWC members Ken & Barb Stinger, Bill & Marilyn Brown, Scott & Kathie Nelson and Dennis & Marlene Grant attended "Pairings" at the Oregon State Fair on Friday, August 23. Wine tastes were provided by a number of commercial wineries all paired with food samples from various restaurants & caterers. We had a reserved table right down front for wine competition winners. Entertainment was provided by "Pepe and the bottle blonds".



Oregon Wine Continues to Draw Investment

Louis Jadot's purchase of Resonance Vineyard follows Jackson's acquisition of Soléna Estate.



Carla and Kevin Chambers sold the 20-acre Resonance Vineyard to Burgundy's Maison Louis Jadot.

McMinnville, Ore.—Oregon's wine industry is set for a banner year of transactions, with the past week seeing two more major winery purchases announced.

The latest deal sees Burgundy's Maison Louis Jadot acquiring Resonance Vineyard, a 20-acre property in the Yamhill-Carlton AVA, from Carla and Kevin Chambers for an undisclosed sum.

Originally planted to Pinot Noir in 1981, the vineyard is Jadot's first foray outside Burgundy. Grapes from the vineyard will go to Trisaetum Vineyards near Newberg, Ore., for processing this fall under the supervision of Jacques Lardiere, formerly winemaker at Louis Jadot's operations in France. Lardiere will also oversee vineyard operations.

"I can't think of a better steward to hand off the property to than the Jadot team," Kevin Chambers told Wines & Vines. "The timing was very good for us. The Oregon industry as a whole right now is on a new growth curve. We seemed to have survived the recession and are now back to flourishing, and there's obviously a lot of new investment here with the Jackson Family Wines moves, and the Precept move, and now, of course, the Jadot move. And I know there are more percolating." (See "Hot Spring for Northwest Acquisitions.")

International Wine Associates of Healdsburg, Calif., was initially approached by the owners of Maison Louis Jadot in the United States regarding potential acquisition opportunities. Resonance surfaced as a possibility, and the deal proceeded.

"They were looking for a small, world-class Pinot Noir property," Robert Nicholson, principal of International Wine Associates, said of what Jadot was seeking.

Oregon fit the bill.

'World-class producer' "

Oregon is graduating from small, boutique status to being recognized as a world-class producer of great Pinot Noir," he said. "They recognize Oregon as a world-class producer of Pinot, (and) this vineyard is a very high quality vineyard."

The sale doesn't mean Chambers, whose family has been farming in Oregon for five generations, is slowing down.

"I'm not retiring to a condo in the Pearl District, I can tell you that!" Chambers said, referring to the trendy quarter of Portland's inner city.

With most of the Chambers' resources invested in developing Resonance, the sale is yielding the couple proceeds that will fund the purchase of a new, 80-acre vineyard in the Eola-Amity Hills south of McMinnville that will also allow them to refresh their housing.

But given his farming heritage, the vineyard is key for Chambers.

"I bought it for the elevation," he said of the new property, which he expects to close on this week. "I'm going to be standing at about 900 feet—which I would have said, even a few years ago, was problematic. But I think for that area, and this time, that it's an excellent place to be, particularly for white varieties."

Chambers won't betray his love for Pinot Noir, which he'll plant at lower elevations of the new south-facing property, but he's keen to put Chardonnay and Riesling at the middle elevations, graduating to Riesling alone on the higher elevations. He hopes the new Jadot venture will eventually be interested in Chardonnay, a variety that has received keen interest in recent years. (See "Chardonnay Meets Promise in Oregon.")

The start of something

The investment from Jadot and other players is likely to be followed by other deals. Oregon still presents excellent value to international buyers, Chambers said, a point Mario Zepponi, a partner at Santa Rosa, Calif.-based Zepponi & Co., made to Wines & Vines earlier this year when discussing transactions in March.

"I think we're going to see increased uptick in investments from overseas buyers in the U.S. wine business," said Nicholson, who advised on the Mayacamas Vineyards sale to a private investor group earlier this year.

The deal making will reflect the strengths and interests of the buyer, however, rather than be a general influx that benefits all regions equally.

Artemis Wines' acquisition of Araujo Estate Wines was a natural fit with Napa, Nicholson offered as an example. "If you're a world-class Cabernet producer in Bordeaux, you're not so likely to go and buy a top Pinot producer in Oregon," he said. "But if you're a world-class producer of Pinot in Burgundy, you're pretty likely to look at Oregon."

” Meanwhile, the Jadot deal comes on the heels of this week’s announcement that Jackson Family Wines will purchase a 15,000-case winery and 35-acre vineyard from Soléna Estate, owned by Laurent Montalieu and Danielle Andrus Montalieu. Soléna sold the property in connection with its move to a new production facility in the Dundee Hills. The deal (for an undisclosed amount) gives Jackson Family Wines a small-scale facility that will serve its recently acquired vineyards in the area.

“In order to fulfill our vision for creating world-class Pinot Noir from the Willamette Valley, we need a winery capable of producing artisan wines,” Hugh Reimers, executive vice president and chief operating officer of Jackson Family Wines, said in a news release. “The Soléna winery is beautifully designed for boutique, small-lot winemaking.”



What is saignée and how will it affect my red wine?

G. S. Ritchie

Saignée (or bleeding) is the removal of juice from a red must immediately after de-stemming/crushing. Usually, it is performed to concentrate flavors and phenols in the wine made from the remaining must, or to counterbalance water additions, made to lower the potential alcohol and allow alcoholic fermentation to proceed in a timely manner (legal in CA). Sometimes it is carried out for the sole purpose of making a Rosé wine usually using white winemaking methods.

When the juice is first released from a crushed red grape, it mainly contains water, glucose, fructose and acids. It contains very little flavor compounds, phenols or anthocyanins (color compounds) because the majority is found in the skins. After 30 minutes to one hour, however, the skins start to release anthocyanins, a few phenols and some flavor compounds.

If we wish to concentrate flavors, phenols and anthocyanins, then we must carry out the saignée as soon as possible after crushing. Some de-stemmer/crushers are now designed so that saignée juice may be collected as soon as it comes out of the machine. Alternatively, a sump cart with screen can be used as soon as juice will flow from the bottom valve of the tank to which the must is pumped. With small lots, the juice can be collected using buckets and sieves. If we are only interested in making a rosé wine then we might leave the juice in contact with the skins for longer, depending how much color we want in our wine.

The amount of juice to remove depends on the quality of the grapes and the purpose for using the technique (Table 1). If it has not been possible for the grapes to reach optimum maturity, then the technique should be used with caution as one could also be concentrating undesirable vegetal flavors such as bell pepper and green bean as well as accentuating bitterness and astringency.

Table 1 Possible rates of saignée to be used with grapes of varying status

Reason for saignee	Status of grapes	Percentage of juice removed
Concentration of flavors and phenols	Average size berries that have not been excessively watered and were allowed to mature to optimum extent	5-10
	Large berries with low anthocyanin content even though matured to optimum extent	10-20
	Berries with excessive water uptake	10-30
To balance water additions made to ensure alcoholic fermentation completes in a timely manner	Berries with no raisining and were allowed to mature to optimum extent	5-10
	Berries with excessive raisining	<5

In some red grapes, the glucose/fructose concentration of the must may be so high that alcoholic fermentation may be sluggish or stop completely. When there is a danger of this happening, some regions allow water additions to allow alcoholic fermentation to complete in a timely manner. Such an approach has the disadvantage of diluting the concentration of acids, flavors, phenols and anthocyanins. However, we can carry out saignée during or just after crushing to counterbalance the addition of the water. The challenge is that the saignée step occurs before the water addition. The estimate of the true glucose/fructose concentration in the must needs to be accurate so that we can estimate the percentage of juice to bleed to counterbalance the desired water addition. The biggest error in making the estimation is non-uniformity of the must just after de-stemming/crushing.

Irrespective of the reason for removing juice, it is important to realize that it also contains yeast assimilable nitrogen (YAN). Hence, it is advisable to determine the YAN remaining in the must and make nitrogen additions accordingly. In addition, the titratable acidity (TA) of the must should be checked, as an acid addition may be required as well.



Nomacorc unveils 'zero-carbon' Select Bio

In the synthetic closure segment, Nomacorc unveiled its new Select Bio closure at this year's Intervitis Interfructa trade show in Germany. Malcolm Thompson, the company's vice president of strategy and innovation, said the new product is essentially a carbon neutral extension of Nomacorc's existing Select series. He said the firm has made sustainability a priority for some time. "It's embedded in our culture, you may say."

Raw materials account for 80% of the carbon footprint of Nomacorc's closures, and most of the polymer materials Nomacorc uses for its products are derived from petrochemical sources to create food-safe polyethylene packaging material. That meant the company's engineers had to seek out a natural source, and that search led them to Brazil, which is the world's second largest producer of sugar cane-derived ethanol. Thompson said the process of deriving ethanol from sugar cane could be modified to produce the materials needed to form its closures.

The Bio closure will be manufactured in Europe, where Nomacorc's production facilities are all powered with renewable sources. The company will be testing the Bio with certain clients through 2013 with the idea to launch it by bottling season in 2014. "The reception in the market has been amazing," Thompson said. He added the Bio would be produced in the United States soon.

The Bio is priced higher than the rest of Nomacorc's Select series. The closure is also slightly larger, although Thompson said it should just be a simple "drop in" on bottling lines.

Nomacorc's existing line of Select 100, 300, 500 and 700 series closures offer winemakers varying levels of oxygen transfer rates. The Bio will be available in the 100, 300 and 500 series— although not the 700 because Thompson said most wineries looking to use the Bio likely will have made "sulfite minimal" wines.

Like the rest of Nomacorc's line, the Bio is completely recyclable. The company is also currently rolling out its updated Nomasense oxygen analyzer, which can calculate total package oxygen, or TPO. Instead of measuring DO and headspace oxygen, then running over to a computer to input the amounts to find TPO, Thompson said winery staff can run the analysis right on the bottling line. "It's user-friendly and really kind of self-intuitive," he said. "We really think we've taken this to a next level."

Nomacorc claims to now close approximately 44% of all wine consumed in the United States and about 13% of the estimated global production of 18.5 billion bottles of wine per year.

Thompson said Nomacorc continues its research into improving oxygen management at all stages of winemaking. While the company has been focused on closures, Thompson said it quickly became apparent that oxygen management is a crucial but little-understood element of winemaking. "Even at bottling there still remains a tremendous opportunity to optimize that process," he said. "There's a lot we can do to help our customers and the industry with that."

Thompson said he couldn't be too specific, but he hinted the company would soon unveil better analysis technology to improve headspace oxygen management during bottling. "We're generally an innovation-driven company, and we're growing and continue to grow, and we've got a lot of things in the pipeline." As simple as sealing a bottle of wine may appear, the millions of dollars and research hours spent to improve and standardize the closure segment show that the only really simple thing about bottle closures is removing them.



Then again, from newer closures to a history of the old fashioned way. From Bill Brown's Burgundy newsletter.

Cork is extracted from the bark of the cork oak (*Quercus Suber*), a majestic and squat tree growing in the Mediterranean basin, able to regenerate easily.

During the 4th century BC, the philosopher Theophraste in his treaties on botany already mentions this capacity to regenerate after each extraction of its bark.

The major production of cork oak is concentrated in Portugal (725 000 ha).

The first extraction occurs between 25 and 30 years. The resulting cork is rough and irregular. It is used for various applications of which insulation products for building.

The lifespan of a cork oak where the bark is extracted varies between 150 and 200 years.

The following extractions take place at intervals of 9 years. When stripped for the third time, the cork becomes smooth, produces even the best elasticity level, and can be used for cork stoppers.

It's a 100% natural, fully recyclable and biodegradable product.

It is a genuine example of sustainable development. When extracted, it helps carbon to fix. A regularly extracted cork oak, with a forced bark renewal, can absorb 4 times more CO₂ than a non-extracted one.

Light, impermeable to liquids and gases, compressible and insulating, cork displays ideal qualities required to seal bottles.

Cork is the best partner for wine, it ensures a tight sealing and favors a good evolution of the wine inside the bottle just allowing a tiny quantity of oxygen to penetrate.

There are several qualities of cork and its quality, among other factors, will play a part in the quality of the wine.

The best corks are made from the best boards cut into stripes after a second « bouillage » (boiling).

The cork stripes are drilled with a machine carving out cylinders. They are cut, washed and sorted.

At the final stage, natural cork stoppers are heat impressed and treated to help the introduction and extraction of the cork into and out of the bottle.

At the Domaine Bertagna, where quality is most important, corks are made from the best types of boards.

Cork has been used all through the ages. Around 3000 BC, it was used in fishing equipment, in the 5th century, to close amphoras, and then in the 4th century for the barrel bungs.

In the centuries AD, the major evolutions concerning the use of cork appear in the 18th century.

The French Benedictine monk, Dom Pérignon, successfully used cork to close containers of sparkling wine (champagne). He noticed that the wooden bungs wrapped with foiled hemp leaves used to close the bottles used to regularly pop out. He then decided to replace wood by cork.

The use of cork stoppers developed together with the use of glass bottles to age and carry liquids.

In the second half of the 18th century, a report on the cork profession was published in The Encyclopedia of Diderot.

In the 19th century the first machines used to count and measure the corks appear. The form of the cork then evolves: at first cone-shaped (to compensate for the unevenness of the bottles), it became cylindrical, suited to more and more calibrated bottle necks.

Today, about one quarter of the cork production is used to make cork stoppers.

Refilling Carlo Rossi bottles

French, Chinese and Australian brands get the most press when it comes to fakes, but U.S. brands as diverse as Opus One, Screaming Eagle, Carlo Rossi and Marilyn Merlot also face intellectual property problems, says Jorge Sanchez, director of the U.S. consulate's Agricultural Trade Office in Guangzhou, China.

"Carlo Rossi, for example, is the preferred wedding wine of Fujian citizens, with the empty jugs sometimes gathered, refilled with cheap wine—such as bulk wine from Chile or France—and sold as the real thing," he says. "In the case of Marilyn Merlot, the winery and distributors try to keep tabs on where the bottles go."

Such examples suggest a counterfeit problem that already bridges wines from entry-level to cream of the crop.

J.B.

TEMPERATURES OF WINE

By Wayne Stitzer

Sounds like a bit of an enigma; wine has temperatures? As wine drinkers we are all aware of the importance of storage and serving temperatures and how that affects flavors and aromas, but temperature also plays a major role in the production of wine, from the arrival of grapes at harvest until the final bottling at the end of production, making the thermometer a necessary winemaking tool.

We are most comfortable when temperatures are neither too hot nor too cold, and we check the weather every day to plan how we will dress and if we will even venture outside. The environment in which we live, work and relax is affected by temperature. Like humans, wine is not immune from the effects of temperature, especially while it's being made.

Most of the temperature effects in the winemaking process are either directly or indirectly influenced by yeast, the most delicate but essential part of the operation. When the grapes first arrive, either fresh from the vineyard or off a reefer (refrigerated) truck, you would think the Brix is the first number to confirm. Almost. Before you can get a reliable Brix reading you need to determine the temperature.

Whether it is by refractometer or hydrometer, if the temperature is not compensated for then the Brix reading will be off. So just to know the sugar content you need a thermometer and I suggest having more than one: a non-glass liquid filled and a digital version, both in dual scales of Fahrenheit (°F) and Celsius (°C) to save you from having to cipher the difference.

BEFORE FERMENTATION

When preparing must or juice for fermentation it is important to know the temperature before inoculating with yeast. If the temp is too high or too low it could have an affect on the yeast related to shock. Two different factions come into play here. Along with doing your other preps and adjustments note the temp; if the grapes are "hot" coming from the vineyard in the afternoon and in the 80-90°F range, then starting fermentation at that temp could be a problem for white and even red.

Adjusting the temp down to about 65°F would be advisable so as not to start the fermentation like a rocket, letting the yeast work up to temp in red and holding in whites gives you better control. If the grapes are "cold" coming from a reefer truck at about 40°F then letting them come up in temp to about 65° is advisable to avoid having to adjust yeast below it's viability temp during the acclimation (the practice where hydrated yeast is adjusted down in temp to within about 10°F of the must or juice).

Just to be clear, it's playing with two different sets of numbers: that of the must/juice and that of the yeast/hydration. The manufacturers of yeast give temperature range recommendations and in the fine print they will remind you that they are just guidelines; you must understand stress points of yeast and how fermentation conditions all affect the outcome.

There are some generally accepted practices with regard to fermentation temperatures and yeast, but there are no exact protocols to follow, as there are too many variables involved.

The first decisions come from you, what type and style of wine will you be making and what yeast you will use to achieve the expected results. It's important that you understand the yeast influence on your style and be sure they are compatible. Also note that when you choose particular yeast for an expected result you must follow all related conditions; it will not happen just by itself.

I have spoken with many winemakers who were disappointed at the results of fermentations with new yeasts; only to find out later the application was wrong, usually following general rules rather than specific recommendations related to that yeast.

DURING FERMENTATION

Once you have made your yeast selection and inoculation then you must watch temperature control during fermentation. Here is where those guidelines come into play. In most cases, white wines are fermented cool, while red wines are fermented warm to hot. Sounds simple, but here is where it gets complicated; many variables have to be considered when trying to control fermentations. First is the container itself. A stainless steel (SS) tank open or closed top, plastic tub or bin, glass, barrel and so on -- those are just the most common.

Is the container designed to help control temperatures, such as a SS tank with a cooling jacket? Do you have a cooling coil or plate that can be inserted into a container? Next would be the batch size, number of gallons of juice or pounds of grapes. The larger the batch, the greater need for temperature control. The heat source comes from the escaping carbon dioxide; the faster it ferments the hotter it can get. The larger the batch, the more catalytic heat you will have to exchange.

Starting with a temp just hot enough to support a healthy yeast population is best; it is easier to keep an even temp than to lower an out of control high temp, even with a heat exchanger.

Once whites get out of range, above 55-65°F, then you risk losing delicate volatile esters that contribute to the aroma and flavor. If the room smells good most likely the wine will not. Although it is important to control both the temps of whites as well as reds, most people are familiar with the theory behind cool fermentation of whites. The difference between knowing it and actually doing it is where the challenge lies.

Let's start at the most basic level, the common carboy (glass container) used by many home winemakers that can be found in the back rooms and labs of wineries just about everywhere. I was asked once by an attendee of a seminar how best to get the brown crusty stuff off the inside top of a carboy. I answered that I didn't know because I never had a carboy with brown crusty stuff stuck in it. He continued to explain how inverted rinsing and even a brush didn't get it all out. So I asked what he fermented in it. He answered, "white wine." I asked how it tasted; he said: "not so good."

WAYNE VENTS

Further conversation determined that he had a runaway fermentation, blowing the airlock out of the top of the carboy and bubbling the wine all over the floor. Carboys are great; I had them in the winery, my clients have them, and I now have them stashed all around my house. I just don't ferment in them. I ferment small experimental batches in white plastic pails, so the heat has somewhere to go, then after fermentation I rack to a carboy.

Although perfect for the finishing stages of winemaking, carboys are very inefficient for fermentation because the heat has nowhere to go, so the narrow opening at the top holds it in. Even with the airlock removed, they still do not vent well enough to give you appreciable results. So if just fermenting five gallons is this tough, then imagine what's happening with 500 or 5,000 gallons.

Please don't take this to heart. Temperature control is the bane of home winemakers and professional wine-makers alike; there are no low-cost, efficient ways to do it. Yes, there are tricks, but fermentation is often the watched pot that doesn't boil; it only runs away when you are not looking. This is why so many home wine-makers make only red wine; it's easier to control, and I don't blame them.

WHITE WINE

When starting a small winery the question of how to control the temperature of white wine is a complicated one to deal with. It would be best to have SS tanks with cooling jackets and a mated chiller (refrigerated glycol heat exchanger) that is linked via a thermocouple (sensor) to the tank to monitor core temperature and turn on and off as programmed. These tanks are also fitted with an external analog or digital thermometer so you can also view the core temp at all times.

Ideally, once the winemaker sets the desired fermentation temperature for a tank the chiller would do the rest. In some very hot locations, chillers are even used at the press or inline from the press to the tanks. Although this type of system may be the best way to control fermentation, it is not so easy on the wallet. Jacketed tanks can sometimes be found at a bargain because most manufacturers consider them standard, but refrigeration has two costs involved: 1) the equipment itself and 2) the energy to run it. In many cases, these combined costs may be out of reach for a start-up winery and certainly for a home winemaker.

I recommend small wineries invest in jacketed tanks even if they will not have a chiller for a while. It is possible to get some degree of heat exchange just circulating cold water through a jacket. This would require manual monitoring but can be somewhat effective. With the cooling ability of cold water, other insertable devices such as cooling plates or cooling coils could be submerged down into variable top tanks; some even attached to lids to help control the temp. Using a device of this nature requires you have a thermometer that can measure the core temp of the tank, either a long probe digital or a cable digital would be helpful here.

It is the core of the volume where the fermentation energy builds up, and if not exchanged will continue to increase. Other things helpful here would be to vent the top of the tanks. Some winemakers recoil when I say this because of the perceived danger of oxidation. All fermentation tanks come with a vent, usually called an airlock, and are mostly designed to allow the escape of carbon dioxide which they do well, however they leave little room for heat to get out. If you do not have the aid of a refrigerated heat exchange then you should take advantage of any means that will help prevent the build-up of heat in the tank: running with the lid removed for a variable top tank, the top manway (hatch) open on a fixed top tank and so on down to the smallest container used.

As far as oxidation goes, remember this is at the peak of fermentation when high amounts of CO₂ are being produced and covering the surface of the liquid, using a light layer of cheese cloth above allows the escape of gas, heat and even condensed moisture and keeps bugs and other debris from falling in. When you see a noticeable drop in activity, a drop in heat and the Brix is now low (3 or less) then it would be time to replace the lid, close the hatch and resume with just the aid of the airlock. This principle will apply to something as small as a five-gallon pail.

I remind you here of two things because of their importance: If you are monitoring temps manually then you will be eating dinner in the winery and sleeping in shifts until it's over. Since it is easier to maintain a low steady temp even if it is not the most desirable -- like 65°F instead of 55° -- you still at least have control. To be successful, manual heat exchange requires vigilance. If you have the patience it can pay off and make you appreciate even more when you can finally get a chiller.

Home winemakers have gotten ingenious here also, using pieces of dry ice (frozen CO₂) as a heat exchanger, chips or small chunks added to the fermenter at just the right time will absorb heat and dissipate as gas not diluting the wine. The use of submerged frozen (clean) water containers can also help provided you left room for expansion by the displacement of those containers. A little ingenuity can go a long way.

AMBIENT TEMPERATURE

I am often asked about ambient temperature (temp of the room) and its effect on fermentation temperature control. Ambient temp does have an effect, however it could be difficult to determine a value because of the many variables that come in to play. Batch size, and large volumes can eventually overtake cool ambient temps due to the catalytic energy being greater than what the room can exchange. Even where there is air conditioning in the room and you can get a real low ambient temp, mass of volume could still override the setting.

Although both indoor and outside ambient temps do have an influence I suggest using an average ambient temp (controlling the room) where possible like 65°F as a standard so as to know how best to control fermentation, making ambient a “neutral” in the equation.

Always be aware of the ambient temps, as a real hot environment could help push up fermentation temps ahead of yeast which is why earlier I recommended controlling the starting temps of must or juice because that is much easier than fighting the air around you.

Short of having a control system, it's a tug-of-war no matter how you look at it.

Compared to white wines, the reds are much easier to control; heat is just as important however. In whites it is a bane, in reds it is an aid. Since most white wines are influenced by delicate flavors that can cook out at high temps, red wines are more dependent on extraction of flavors from the skins to get not just the familiar color but those deep complex flavors and aromas and heat can help with that exchange. Now this does not give you license to go and cook your reds like some weekend barbecue, it only means that heat can be used as one many tools to extract and set certain qualities.

RED WINE

Again it depends where you are in the winemaking chain as to what method will be best to control red wine fermentations. Big wineries have things like rotary fermenters, automatic pump over systems and hydraulic punch downs to do the heavy work for them. Everyone else can still do all these things they just have to do it manually and in some cases can achieve better and more intimate control resulting in some great reds. Although working with a different color it still comes down to patience and vigilance and some ingenuity.

Given your resources, understand to make even a basic red wine you will need some exchange between the fermenting juice and the skins. Other things besides heat also influence the extent of that exchange. Not to go into detail here, just be aware of what else goes on. Most of the theory of mass and volume and environment come into play here, however in most cases they will be working in your favor.

We'll focus by looking at the most common red fermentation that is done, in an open top tub, bin or tank. Volumes here can range from just a couple hundred of pounds of grapes to several tons of grapes. Regardless, the principle will remain the same. Crushed grapes usually referred to as must, go into their respected container assuming all necessary adjustments have already been done and the proper selected yeast is added to start the fermentation action. It is best to take and note the starting temp, as everything that happens next will come back to it.

Depending on individual conditions, visible signs of fermentation could happen in just hours or days. There is no correct time span, so watch for these signs and have the thermometer ready because that will tell you what's happening. As fermentation starts to take place, the skins suspended in the juice will start to rise to the top of the container. At this point take the temperature just under that cap. It should be rising above the starting temp so be aware of the viability of the high temp of the yeast chosen and work to stay below it.

Know that the size of the batch, shape of the container and thickness of the cap all will influence the rate the heat will increase. Don't assume anything -- use the thermometer to know for sure, because these decisions will determine the outcome of the finished wine. Breaking the cap (punching down) will do two things: 1) vent heat and Co₂, and 2) start an exchange with the skins and the juice. How and when you punch down will influence the rate of exchange and fermentation.

Now you are dealing more with an art than science. Some winemakers simply pick a set pattern to punch down, say two or three times a day. That will work, it will do some- thing, again this process is not carved in stone; it's a good thing it isn't because then we never would have great red wines. Since no one rule will apply here you need to find your own way. Know what you want as a finished product and how much work you willing to do to get it. Learn to finesse the cap based on heat rather than time of day; get clever and find that just breaking and pushing the cap below the hot service will give you a different exchange than a complete break up and submersion with the colder volume. If you are pumping over, try first pumping from just under the hot cap to break up and wet the top then pumping the colder volume from below. Have fun, keep notes and taste the results.

Venting controls the temp under the cap. If it starts to get close to yeast high temp then vent; note also that venting and punching down or pumping over in the early fermentation can help accelerate fermentation -- another reason to check temps often rather than depending on time of day. At best, you will only have about a 3-day window in the fermentation curve to work some magic. Once the fermentation energy starts to drop, noted by a fall in temperature and looseness of the cap, the window is closing. It will soon be ready to press off.

One of the most impressive red wines I have ever tasted was at the 2005 AWS National Conference in Las Vegas. It was a Petite Sirah from Paso Robles. When I asked the person pouring for some anecdotal information about the wine he said: "It's one of those winemaker lived at the winery wines," and it showed that in the glass.

I wish there was some magic bullet answer I could give you and my clients, but there is not. Controlling the temperatures of wine is a do and learn experience, some things will work better than others, some will not work at all, but every trial will bring you closer to making better wine and greater appreciation those made by others.



West Side Wine Club Leadership Team - 2013

- 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: **Scott Nelson** nelsonsw@gmail.com

- Collect dues and fees, update membership list with secretary
- Pay bills

Secretary: **Ken and Barb 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: **Mike Smolak** Mike@NWRetire.com

- Arrange speakers for our meetings

Chair for Tastings: **Craig Bush** pnoir1@hotmail.com & Phil Bard phil@philbard.com

- Conduct club tastings
- Review and improve club tasting procedures

Chair of Winery/Vineyard Tours: **Bill Brown** bbgoldieguy@gmail.com

- Select wineries to visit
- Arrange tours
- Cover logistics (food and money)

Chair of Group Purchases: **Jonathan Brown** jonabrown@gmail.com & Jim Ourada
jim.m.ourada@intel.com

Makes the arrangements to purchase, collect, and distribute

- Grape purchases
- Supplies – These should be passed to the President for distribution.

Chair of Competitions: **Don Robinson** don_robinson_pdx@yahoo.com

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

Chairs for Social Events: Marlene Grant denmargrant@earthlink.net Barbara Stinger & Mindy Bush – Helpers

- Awards Gala / Holliday parties

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