THE SOMM JOURNAL



Where Art Meets Science

Phenolic Analysis

Proves Paso Robles's Bordeaux Potential



As growers and vintners develop a deeper understanding of terroir in each of Paso Robles's new AVAs, the region's potential for world-class Cabernet and Bordeaux varietals is being realized. "The best is yet to come," says Daniel Daou. "Stay tuned."

by Paul Hodgins / photos by Doug Young

ike any time-honored tradition, winemaking was always considered more of an art than a science, governed by instincts honed over many years in the vineyard and by dutiful adherence to longstanding practices. What to plant, where to plant, how much canopy to remove, the ideal moment to harvest, what to blend, how long to age—during much of our long history of winemaking, all of these decisions were made through a mix of hunches, received knowledge and empiricism.

But gradually, science has brought changes to the winemaker's world, and one area of analysis—phenolics—seems poised to revolutionize the way red wine is made, thanks to technological advances that make the process timelier and less cumbersome.

At its recent CABs of Distinction annual event in early May, the Paso Robles CAB (Cabernet and Bordeaux) Collective hosted a panel discussion on phenolic analysis that was a revelation to many of the sommeliers, wine retailers and other industry professionals who attended.

"The thing about Paso that's challenging [for winemakers] is that there's an element of surprise here because of the newness of the region, and I think as we get more familiar with its character it will be a very different place ten years from



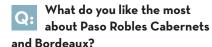
TALKING POINTS

Paul Hodgins had a Q&A with the Board Members of the Paso Robles CAB Collective



Jessica Kollhoff

General Manager,
ADELAIDA Cellars



The diversity, which is common to the region. With our new sub-AVAs, you're seeing the unique terroir and unique sites within the overall AVA. We have diverse styles. There is something for everyone—a price point and a wine for everybody. And it is such a welcoming environment.

Daniel Daou

Founder/Winemaker, DAOU Vineyards & Winery

What's the most important thing about Paso Robles Cabs and Bordeaux that people perhaps don't know?

That this area has an incredible potential to rival any place in the world. To do that requires a lot of work in the vineyard and the winery. We were aware three years ago that we need to do the work to get there. What you're seeing today is the result of three years of collaborative work. The best is yet to come. Stay tuned.

Michael Mooney

Founder/Winemaker, Chateau Margene

What makes this area so well suited to Cabernet and other Bordeaux varietals?

The consistency year to year is the weather here: the diurnal shifts, the warm days in summer and the cool nights. And there are so many different soil types and microclimates and elevations. You have now 11 different AVAs. It's amazing diversity that we have. We have no issue with picking either. I pick my grapes in late September, maybe early October. If I wanted to, I could pick six weeks later. But we get the balance points we want right around October 1. The right sugar content, the right acid. We get ripeness, balance. Bottom line is the quality of the fruit is consistently excellent here. It's hard to compare it to anywhere else. Paso Robles is Paso Robles. My personal feeling is this is the best place in the world to grow Bordeaux varietals.





Clarence Chia

VP of Marketing, JUSTIN Vineyards & Winery



Paso Robles as a region is so special. The soil type, the limestone calcareous soil and also the diurnal swings and the II AVAs that produce such great fruit. What we have that's special to us is the artisanal winemaking capability: hand-picking all our fruit, crafting it using French oak. All of that makes us what we are.

Your opinion of the new sub-AVAs?

They're great, but our focus will continue to be all about what makes Paso Robles special compared to Napa and the other wine regions of the world.

Cynthia Lohr

VP Marketing, J. Lohr Vineyards & Wines



Your father, Jerry Lohr, was a Paso pioneer. What was his vision?

To source the best sites for wines he wanted to make. It really was originally Cabernet Sauvignon and Chardonnay.

What do you like best about this area as a wine region?

For me what I always loved hearing about—and what I think is truly unique to Paso Robles—is the combination of diurnal temperature swings and the clay loam soils that force the vines to struggle in order to survive. That magnifies the intensity of the berries. We'll go two months without watering. For us, that concentration in the berries translates into fruit-forward flavor in the wines. Consumers don't necessarily understand what makes Paso Robles wines so delicious.

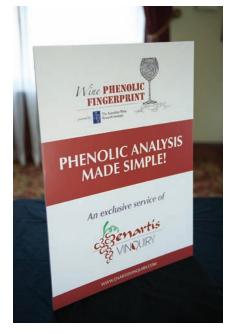
now," said Scott McLeod, moderator of the panel and co-founder of WineXRay, a company that provides rapid and precise measurements of the phenolic compounds found in red wine.

Phenolic measurement is particularly helpful for winemakers in a region such as Paso Robles, whose II newly named sub-appellations are only beginning to be assessed and understood. "Our system is a way for winemakers to really increase their knowledge of their wine very quickly. It allows them to make informed decisions about the winemaking process," McLeod said.

The Importance of Phenols

To those who doubted the importance of paying attention to phenolic numbers, McLeod pointed out that the stakes are high. "Why should we care about phenolics? Because phenolics give us the essential visual, textural, structural and sensory qualities of red wine."

McLeod added that phenolic analysis can also accurately predict a wine's market value, and whether you can charge \$15 or \$60 a bottle "is very helpful to know in advance." The winemakers on the panel nodded in unison: Daniel Daou. Winemaker/Owner of DAOU Vineyards & Winery; Michael Mooney, Winemaker/ Owner of Chateau Margene; Kevin Sass, Winemaker at Halter Ranch Vineyard; and



{ cover story }

Kevin Willenborg, Winemaker at Vina Robles Vineyards & Winery.

Phenols are the material other than juice that contributes to a wine's "essence." As McLeod describes it: "Phenolic materials are the essential building blocks that make red wines red, and great red wines great. The structure of a wine is made of tannins and other phenolic materials that are found in the skins, seeds and stems. They are essential for giving wine both structure and longevity, but if [they're extracted] over the desired amounts, they can produce the textural sensation of astringency and bitterness."

Phenolic analysis has been widely available since 2002. It measures anthocyanins, which give red wines their color, and tannins, which create a dry, astringent feeling on the sides of the tongue during a wine's finish. But the test could take as long as four hours—an eternity during the volatile early stages of fermentation.

WineXRay shortened and simplified the process. A small spectrophotometer analyzes many different compounds in a wine sample by employing ultraviolet light. The results come back in about one or two minutes.

Daou is now able to measure his numbers twice a day. "That makes a huge difference," he said, when a fermenting wine can change radically in 24 hours. "Timely phenolic [analysis] gives me the confidence to act quickly when I need to."

Running the Numbers

Measuring phenolics provides an ever-growing body of statistics that show established parameters and provide detailed analysis of each vintage in many different AVAs. In this way, outstanding vintages can be better understood and, when possible, their qualities emulated by winemakers (though the vagaries of weather and many other factors, of course, can't be controlled).

Crucially, phenolic testing reveals the levels of phenols that pertain to color, mouthfeel and structure. The larger the level of phenols, "the bigger the wine feels on your palate and ... the richer it feels," Halter Ranch's Sass said. High numbers are also a good indicator of a wine's aging ability, Sass added.

A vital statistic is the measurement of total phenols in parts per million. "When comparing wines, you can say that one wine is 'more extracted' than another based on the total phenols value," McLeod said. "It is a very useful summary of the extraction of a given maceration."

The most fascinating part of the panel discussion concerned the quality of Paso Robles reds, particularly its Bordeaux-style wines. (Despite its reputation as a major source of Zinfandel and Rhône wines, Bordeaux varietals still represent the largest share of cultivation and production in the Paso Robles AVA). McLeod said his company's numbers reveal that 2013 is shaping up to be a stellar year for Bordeaux varietals and blends of the Central Coast.

A recent analysis of Cabernets from Paso Robles has revealed the great phenolics that can be obtained in this region. Color, also known as bound anthocyanins, ranged between 200 and 300 parts per million with a few wineries like DAOU, Jada Vineyard & Winery, Le Cuvier Winery and Vina Robles exceeding 300 parts per million.



The Paso Robles CAB Collective's mission is to promote the world-class red Bordeaux varietals grown in the region. The highly anticipated phenolics panel discussion proved their point scientifically. Pictured left to right: Kevin Willenborg, Winemaker, Vina Robles Vineyards & Winery; Scott McLeod, moderator of the panel and co-founder of WineXRay, a company that provides rapid and precise measurements of the phenolic compounds found in red wine; Daniel Daou, Founder/Winemaker, DAOU Vineyards & Winery; Michael Mooney, Founder/Winemaker, Chateau Margene; Kevin Sass, Winemaker, Halter Ranch Vineyard.

Another parameter that is often looked at with phenolics is the ratio of tannins to overall phenols in the wine. This relationship will show whether the winemaker was able to manage the great levels of extractions that are possible in this region while making balanced wines. Ideally, this ratio should be in the 45–50% range. World-renowned wines will typically be in this range while still having a great number for color attraction. In the analysis made recently for Paso Cabernet wines, many wineries were able to extract a lot of color as well as manage to make a balanced wine when it comes to the tannin structure. The wineries that accomplished this included: ADELAIDA, Calcareous Vineyard, DAOU,

JUSTIN, Le Cuvier, Parrish Family Vineyard, Sextant Wines and Villa San-Juliette Vineyard & Winery. "The phenolic measurements analyzed by WineXRay of the 2013 vintage undoubtedly show that Paso Robles has a terroir that rivals the best terroirs in the world in producing Bordeaux varieties," Wine Business.com announced.

"We don't often get a year like 2013," said Mooney, who founded Chateau Margene and has been producing respected Bordeauxstyle wines since the '97 vintage. "The weather was as perfect as you could hope for: no freezes in the spring, no late temperature spikes in the fall, no unexpected rain but just enough precipitation."

Even in less unusual years, Paso Robles Bordeaux-style wines compare favorably to their counterparts from France and Napa. In a tasting held before the seminar, two 2010 vintage Paso Robles Bordeaux-style icons, JUSTIN Isosceles Reserve and DAOU Soul of a Lion, performed excellently against names such as Saint Julien's Château Léoville Barton and Château Ducru Beaucaillou and Napa's Dominus and Joseph Phelps Insignia.

"Paso Robles Cabernet Sauvignons have a distinct expression in the canon of Cabernet Sauvignons grown throughout the world," said Mike Madrigale, Head Sommelier of New York City's Bar Boulud, who moderated the tasting panel. "The velvety texture, richness and freshness are what set it apart from other Cabs."

My Tasting Experiences

My tasting experiences confirmed the winemakers' rosy reports (see sidebar). Mooney's 2013 reds were beautifully balanced and structured, and his intelligent use of new technologies and practices with oak barrels has added intriguing subtlety to his wines. J. Lohr's extensive Cabernet Sauvignon line-up is similarly strong for the '13 vintage, and Daou said he expected his 2013s to deliver strongly as well. All the winemakers on the panel agreed there's a huge amount of punch to the vintage, though some added that great phenolic numbers don't automatically translate into great wine. "It's up to us as winemakers to make the most of that potential," Mooney said.

A strong and unrelenting message underscored the Paso Robles CAB Collective's presentation: Paso is superb Cabernet and Bordeaux country—among the world's great regions.

True, it's not a surprising message to come from the Central Coast's principal promoter of Bordeaux blends. But wine industry professionals who have tasted recent vintages are generally in agreement: Among Paso's best, the flavor profile is superior, with less assertive tannins, more luscious fruit and greater complexity than many Napa Cabs with bigger price tags. In terms of soil, climate, meteorological consistency, hang time and diurnal swing, parts of Paso are very well suited to Cabernet Sauvignon, Petit Verdot, Merlot and other Bordeaux varietals.

To those who know the history of Paso Robles, this isn't much of a revelation. It was the area's potential for Bordeaux varietals that attracted Dr. Stanley Hoffman and other winemaking pioneers back in the 1960s and '70s, long before the Zinfandel and Rhône crazes swept through.

STAND-OUT BORDEAUX REDS FROM THE PASO ROBLES CAB COLLECTIVE

Chateau Margene 2012 Cabernet Sauvignon (\$60) Winemaker Michael Mooney's Cabernets are sophisticated, elegant and balanced. His 2012 Cabernet is suffused with blueberries, blackcurrant and a hint of red cedar on the nose. The long finish is marked by pleasant, soft-shouldered tannins that suggest age-worthiness. This wine is a blend of five different vineyards and benefits from Mooney's deep knowledge of Paso's soils and microclimates. 79% Cabernet Sauvignon, 16% Cabernet Franc, 5% Merlot.

DAOU 2012 Reserve Cabernet Sauvignon (\$65) A full-bodied yet balanced Cabernet with moderate tannins and notes of earthy coffee, tobacco, black currants and blackberry. An excellent expression of Paso Robles Bordeaux, its notably dark color is the result of a generous portion of Petit Verdot in the

blend. 78% Cabernet Sauvignon, 8% Merlot, 8% Cabernet Franc, 6% Petit Verdot.



Halter Ranch 2012 Cabernet Sauvignon (\$35) In addition to the expected notes of cassis and blackcurrant, the 2012 vintage captures the unique terroir of this beautiful, rolling Westside property with a lingering, underlying minerality and an elegant finish with supple tannins. 79% Cabernet Sauvignon, 18% Malbec, 3% Petit Verdot.

J. Lohr 2011 Cuvée PAU (\$50) Steve Peck, J. Lohr's red winemaker, says this blend was inspired by the Grand Cru wines of the Pauillac district of Bordeaux. You'll get hazelnuts with blue and red fruit accents in the nose and a slightly floral overlay redolent of violets.

> The finish is silky and balanced. 58% Cabernet Sauvignon, 17% Merlot, 17% Cabernet Franc. 8% Malbec.



JUSTIN 2012 Isosceles (\$72) The nose delivers pungent cherry and blackcurrant, supported by tobacco, cocoa, mint, coffee and baking spice. On the palate, you'll notice black cherry, cassis and jammy notes giving way to cinnamon, licorice, dark coffee and chocolate. The tannins are assertive but nicely rounded. §

DAOL