# WINE BUSINESS MONTHLY

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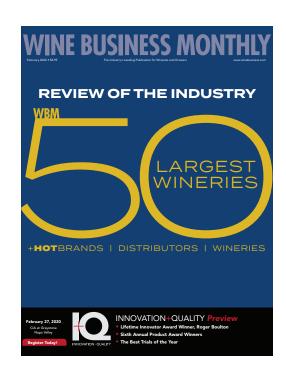
#### Getting Ready for Unified and Innovation + Quality

FEBRUARY. As this issue heads off to subscribers, the Wine Business Monthly staff is getting ready for the annual Unified Wine & Grape Symposium in Sacramento, California, and for the Innovation + Quality conference in Napa Valley. Trade show season is upon us, with these and several other important gatherings of wineries and growers slated across the country.

One of the highlights of the Unified Wine & Grape Symposium is the annual "state of the industry" session, when speakers review and analyze what happened the past year as well as offer their outlooks for the future. Likewise, Wine Business Monthly takes the opportunity to interview the leaders of the nation's largest wineries for the February issue to see what they are thinking as we head into 2020. So far, there's some trepidation and concern about the future of the wine industry, both regarding the consumer marketplace and the grape market—but some are positive that the industry will persist and work through grape gluts and bring new wine drinkers into the fold.

As part of our Review of the Industry, we're also taking a look at distributor consolidation and the top 10 distributors in the country, thanks to an article from our sister publication, the Wine Analytics Report. The number of wineries continue to increase, and we're close to hitting the 10,500 mark. Our annual Hot Brands feature profiles 10 brands that are making a statement and represent a new trend in the American wine production world.

Wine Business Monthly doesn't always do profiles (in fact we very rarely write them), but when we do, we focus on innovators. This month we recognize Roger Boulton, a UC Davis professor now transitioning to emeritus status. As a driving force behind some of the research into winemaking techniques and the creation of the Teaching and Research Winery at the Viticulture & Enology Department, he's influenced two generations of winemakers. Dr. Boulton has been a mentor when it comes to understanding wine chemistry, as well as a visionary on sustainability and wineries of the future. Dr. Boulton will be honored with this year's Lifetime Innovator Award during the upcoming Innovation + Quality conference.



Innovation is at the heart of Innovation + Quality (IQ), and the best way for winemakers to improve quality is through experiments, including controlled trials. At IQ, we've made some changes to ensure the focus is on vineyard and winery trials. This issue includes a review of some of the past year's most noteworthy trials.

Many don't realize winery trials such as these can generate tax savings. In this issue, Jim Gordon explains how wineries are taking advantage of a research and development tax credit that encourages business innovation. The federal R&D tax credit for businesses was established in 1981, a temporary benefit that expired several times. In 2015 Congress made the tax credit permanent—a more reliable incentive for innovation. Many large wineries are already claiming the tax credit, but though they may be conducting trials, many smaller wineries don't know about it and don't apply.

Whether you're claiming the tax credit, sharing your trials, or keeping experiments within the walls of your winery, just keep on innovating.

Cyril Penn – Editor

#### WINE BUSINESS MONTHLY

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#### WINE BUSINESS MONTHLY

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February 27, 2020

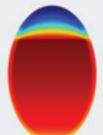
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Linda Jones McKee





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#### grape growing

Mark Greenspan



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#### Tom Steffanci, president, W.J. Deutsch & Sons, "Outlook & Trends," page 22

"In our five-year strategic plan, we don't have any expectation we're going to see much better than flat wine volume. We're expecting dollar growth in wine in the 2 to 4 percent range. It's going to become a fight for share and a fight over which brands can better meet consumer needs."

#### Andrew Browne, CEO, Precept Wines, "Outlook & Trends," page 22

"There's, beer, wine and spirits—then there's this sub-35-year-old community and fourth category: it can come flavored, it can come fizzy, in aluminum, tetra, or bag-in-the-box. Young consumers are embracing this dynamic category at a really fast rate."

#### Corey Beck, CEO, The Family Coppola, "Outlook & Trends," page 22

"We as an industry need to listen to Gen Z and Millennials and what they want. And it's convenience. What are we doing to make sure that when that consumer moves on from White Claw, they're choosing wine? And, how are we communicating to them?"

#### Michael Moyer, director, Wine & Viticulture Technology Program, Lake Michigan College,

"Michigan Wine Industry Moves into 2020," page 130

"We're a relatively young winegrowing region, but we are all passionate about the potential for making great wines and being known as a world-class winemaking region."

#### Liz Thach, a distinguished professor of wine and professor of management, Sonoma State University,

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"Everything about marketing luxury products, in general, is done with a whisper, not shouted or bragged about. It's done with finesse. The true refinement and elegance of the luxury wine ultimately win the day—and the sale."

#### Bob Torke son, president and CEO, Trinchero Family Estates, "Outlook & Trends," page 22

"It feels like the wine-in-cans business is being looked at as the salvation for a lot of brands."



Critical thinking skeptic that you are, some gimmicky ad with shiny pictures and bold slogans probably won't even get your attention. Maybe a few cold hard facts and a little math will. Let's say your winery is crushing 1,000 tons of grapes, in turn aged in 1,400 French oak barrels to achieve 50% new oak. You sell 70,000 cases of wine each year, with an operating profit of \$3,000,000. Consider this: In the field of barrel alternatives StaVin is unrivalled, with 30 years of proven experience. Tirelessly hunting down vastly superior source product and continually innovating more efficient infusion techniques. Using StaVin will improve your wine and save you upwards of 94% in oak costs. Which means 33% more profit or \$1,000,000 go into your pockets, instead of directly into the trash. Got your attention now?







#### Top Stories from WINE BUSINESS.com - In Case You Missed It



#### **U.S. Wine Importers and Others Protest Proposed Tariff on European Wines**

The **Trump** administration has proposed a 100 percent tariff on European wines and other goods over a dispute about a French tax on digital services, resulting in dismay from U.S. wine importers, distributors and others in the industry. In October, the administration also began to levy a 25 percent tariff on wine imports from France and other countries over European subsidies that benefit European-based airplane manufacturer **Airbus**. As of mid-January, no final decision had been made on the proposed new tariffs.



#### Five New Varieties Highly Resistant to Pierce's Disease Released

In January, **UC Davis** researchers announced the release of five new winegrape varieties—three red and two white—that are highly resistant to Pierce's disease. They are the first new winegrape varieties UC Davis researchers have released since the 1980s. Pierce's disease costs California grapegrowers more than \$100 million a year, according to the university. The traditionally bred new grape varieties produce high-quality wines, according to UC Davis.



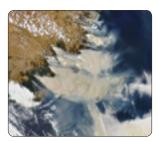
#### **Bonny Doon Sells to San Luis Obispo Wine Company**

Bonny Doon Vineyard founder and winemaker Randall Grahm has sold his company to WarRoom Ventures LLC, the parent company of Lapis Luna Wines of Santa Margarita, San Luis Obispo County. Grahm founded Bonny Doon Vineyard in 1981. WarRoom Ventures plans to scale four brands: Vin Gris de Cigare, a Provençal-styled Rosé; Le Cigare Volant, a red Rhône blend; Le Cigare Blanc, a Vermentino-based wine; and a Picpoul Blanc. Grahm is a partner and winemaker in the new venture, according to WarRoom Ventures.



#### **Merryvale Sues Sales Partner**

St. Helena-based Merryvale Vineyards is fighting V2 Wine Group LLC in Napa County Superior Court over the terms of its contract to sell wine, according to court records. Delicato Family Wines, which has purchased V2 Wine Group, has also been named a defendant. As of January, the matter had not been resolved, according to representatives for both companies. Merryvale said Delicato allegedly "diluted Merryvale's prestige" by selling wine at a "heavy" discount to large warehouse retailers, according to the lawsuit. V2 countered, saying Merryvale's allegations are "trumped up" charges filed in order to avoid paying \$500,000 to terminate the contract, court filings allege.



#### **Bushfires Continue to Scorch Australia**

Hundreds of bushfires continued to burn across Australia in January, threatening wine regions and tourism, according to news reports. The fires began to burn in September. As of January, more than 20 people were killed and 2,000 homes destroyed. Among the regions hit the hardest was New South Wales. Australia's **Bureau of Meteorology** stated in January that 2019 had been the country's warmest and driest year on record, with the mean temperature of 1.52° C—or about 2.74° F—above average.



#### **Father of Ampelography Dies in France**

Professor Pierre Galet, recognized as the father of ampelography, died in December in Montpellier, France. He was 98. Galet taught at Ecole Nationale Supérieure Agronomique de Montpellier, now Montpellier SupAgro. His books include *Cépages et Vignobles De France*. In 2013, Galet received the Commandeur de l'Ordre du Mérite Agricole at Vinitech. In 2016, Galet received the OIV Grand Prix Award from the International Organization of Vine and Wine for his work. (See "A Tribute to Pierre Galet, Master Ampelographer and Mentor," *Wine Business Monthly*, Sept. 2019)



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# WINE BUSINESS MONTHLY SPECIAL REPORT

#### **REVIEW OF THE INDUSTRY**



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# **OUTLOOK&TRENDS**

#### Wineries Navigate the Changing Market

Wine Sales Growth Slows, Constellation Deals Brands to Gallo, Hard Selzer Disrupts, Bulk Market Oversupply, Tariffs Threat to Wine Trade, Fires Stun North Coast

Cyril Penn

**JUST GETTING THROUGH THE** year was an accomplishment for many in the U.S. winery, as 2019 has proven to be one of the toughest our industry has seen in a while. It was a pivotal year: There were bright spots, but people in the industry started to acknowledge a slowdown after three years of decelerating sales growth.

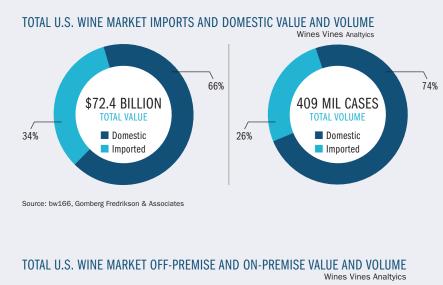
Spirits, hard seltzer and alternative beverages took share. Consumer expectations and demographics shifted. Growth in direct-to-consumer (DTC) sales wasn't as robust. Bumper harvests led to an oversupply of grapes and wine. Wildfires and power outages hit Sonoma County during harvest, at the height of the tourist season. E. & J. Gallo Winery inked a deal for a big chunk of Constellation Brands' wine business, but regulators held the deal in limbo, creating disruption and uncertainty. A merger agreement between Republic National Distributing Company (RNDC), aiming to compete with Southern Glazer's Wine and Spirits, and Breakthru Beverage Group—the second- and third-largest U.S. wine and spirits wholesalers—was nixed by the Federal Trade Commission (FTC); then RNDC agreed to acquire Young's Market Company. The Trump administration slapped 25 percent tariffs on wines imported from the European Union and as the year drew toward a close, trade representatives even threatened to levy 100 percent tariffs on EU wines in retaliation for EU subsidies for Airbus.

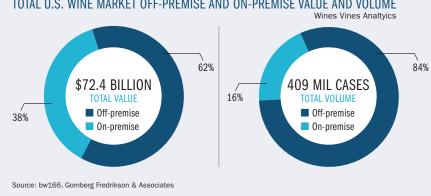
"It's the toughest market I've seen since 2008, one of the toughest markets ever. The consumer has so many different choices, and spiked seltzers took people by surprise. It takes a little share of experience from everything."

Carmen Castaldi, president, Rodney Strong Wine Estates

Change creates opportunity. Leading wine companies responded to the chaos, investing in innovative marketing and packaging while honing sales strategies. They managed their businesses more conservatively. The leading wineries focused on responding to changing consumer behavior and on answering the million-dollar question: How do we bring new customers into wine?

"The industry has had this 30-year run of Baby Boomers buying all the best wine—and lots of it," Duckhorn Vineyards president and CEO Alex Ryan said. "We're seeing that come to an end. There's opportunity and hungry, young, new consumers on the other side. What will they buy? How do they want us to deliver it to them? How much will they pay? We, as an industry, have a ton of opportunity but a ton of research and work to do to figure out how the next 30-year run gets set up."





#### **A Changing Market**

After two decades in which wine sales grew an average of 3.5 percent each year—while the total alcoholic beverage category grew more modestly in line with the drinking age population—wine's growth slowed. Wine took share from beer and spirits for years, but now the script has flipped. Overall wine sales are flat; beer as a category is tanking (except for booming sales of hard seltzers) and spirits sales are growing quickly.

Nielsen-tracked channels showed wine sales dropped 1 percent by volume but were up 1.7 percent by value as 2019 drew to a close. Gomberg, Fredrikson & Associates report editor and bw166 managing partner Jon Moramarco estimated overall wine sales volume could end 2019 up half a percent or up to 1 percent.

DTC sales were a bright spot, however, even if growth in overall DTC shipments was not quite as robust. In late January, Sovos ShipCompliant and Wines Vines Analytics released the annual DTC Wine Shipping Report that is available for download at: <a href="https://www.sovos.com/shipcompliant/resources/wine-dtc-report">www.sovos.com/shipcompliant/resources/wine-dtc-report</a>. Shipment value in 2019 exceeded \$3.2 billion, up more than 7 percent from the previous year. Case volumes for the year topped 6.6 million, up nearly 5 percent.

"It's the toughest market I've seen since 2008, one of the toughest markets ever," Rodney Strong Wine Estates president Carmen Castaldi said. "The consumer has so many different choices, and spiked seltzers took people by surprise. It takes a little share of experience from everything."

"In our five-year strategic plan, we don't have any expectation we're going to see much better than flat wine volume."

Tom Steffanci, president, W.J. Deutsch & Sons

"You have fewer Boomers drinking and more Millennials," Delicato Family Vineyards president and CEO Chris Indelicato said. "We're in for a few years of flat sales until that new set of consumers start drinking a bit more wine and start having a bit more disposable income."

"In our five-year strategic plan, we don't have any expectation we're going to see much better than flat wine volume," W.J. Deutsch & Sons president Tom Steffanci said. "We're expecting dollar growth in wine in the 2 to 4 percent range. It's going to become a fight for share and a fight over which brands can better meet consumer needs."

Demand has been seen better years. "I've looked at direct-to-consumer, retail, on-premise and off-premise—and data seems to be pointing in the negative direction in terms of growth being either in decline or less than what it was," Nielsen vice president of client services Danny Brager said.

#### What's Selling?

Wine sales above \$11 per bottle did much better than those priced under \$11 or under \$10, but growth above \$11 and over \$20 was stronger a couple of years ago. The trading-up trend continued in 2019, just not at the same level it once had.

Sparkling wine, especially Prosecco, did well. Sauvignon Blanc was a bright spot. Some of the big Cabernet Sauvignon brands did very well, though overall growth in Red Blends and Cabernet Sauvignon eased. Rosé continued growing but peaked during the summer. Cocktail-type drinks that were wine-based did well, as did sangria and sake. And three-liter wine boxes continued to do quite well.

"I wish I could say that there was something that was really hot, and I think that's one of the problems," the chief executive of one large winery said. "It seems like maybe there's a little complacency or a little bit of a staleness."

Wine in cans saw tremendous growth on a small base. Sales of cans in Nielsen-tracked channels rose 70 percent in 2019—just 1 percent of the category. Yet new canning lines were installed during the year, and it seemed as if every wine company was launching something in a can.

"It feels like the wine-in-cans business is being looked at as the salvation for a lot of brands," Trinchero Family Estates president and CEO Bob Torkelson said.

Though there are some critics of the packaging format, there are plenty of large winery executives that feel the opposite. Jim Mortensen, president and CEO for Ste. Michelle Wine Estates knows that quality wine is going into can and Indelicato went so far as to predict that 2020 would be the year of alternative packaging.

"One of the big things that has really defined itself in the last 12 months is a fourth category. There's beer, wine and spirits—then there's this sub-35-year-old community and fourth category. It can come flavored, it can come fizzy, in aluminum, tetra or bag-in-the-box. Young consumers are embracing this dynamic category at a really fast rate."

Andrew Browne, CEO, Precept Wine

#### White Claw the Disrupter

Hard seltzers changed the market for alcoholic beverages, with Mark Anthony Brands expecting to report sales of White Claw at \$1.5 billion for 2019. The brand has said on the record that production increases will allow for 200 million cases of capacity in 2020, and 250 million cases in 2021.

Hard seltzers are typically made with malt and taxed like beer, though E. & J. Gallo offers one that's grape based, and other grape-based hard seltzers are coming. Big beer companies all entered the hard seltzer market in 2019, eyeing White Claw-like growth. Hard



seltzers already represent 5 percent of the beer category.

Vintage Wine Estates was one of the wine companies that entered the ready-to-drink category with a line of wine coolers. CEO Pat Roney cited one analysis that indicated 40 percent of hard seltzer sales took business from wine. Nielsen's Brager cited research that indicated 42 percent of hard seltzer sales take share from other segments, including wine.

Corey Beck, CEO of The Family Coppola, said data indicates hard seltzers are often consumed by people that otherwise wouldn't have alcohol in the afternoon. "It's not like it's replacing a glass of wine at that time," he said. "The good news is people are consuming alcohol—it's like what Bartles & Jaymes did in the 1980s, getting people to drink wine. They graduated to the next thing."

"Oh my gosh, for 20-somethings and 30-somethings that's the rage right now," J. Lohr Winery CEO Steve Lohr said. "They don't start with a glass of wine, they start with a hard seltzer or spiked kombucha and finish with a brown spirit after the meal. Wine's seeing a lot of pressure from outside forces."

#### It's a Fourth Beverage Alcohol Category

"One of the big things that has really defined itself in the last 12 months is a fourth category," Andrew Browne, CEO of Precept Wines said. "There's, beer, wine and spirits—then there's this sub-35-year-old community and fourth category. It can come flavored, it can come fizzy, in aluminum, tetra, or bag-in-the-box. Young consumers are embracing this dynamic category at a really fast rate."

"Every day we're seeing more news on White Claw and things like it," Browne said. "They're calling it beer because it is malt based but the consumer doesn't think of it as beer: They consider that it's flavored, has bubbles, and the right calorie content. Tito's Vodka that's 'gluten free' is pushing new buttons we never talked about in terms of caloric and alcoholic content. I put the zero-alcohol beers like Heineken 0.0 in this fourth category. It's still adult, but it doesn't have to have alcohol. Down the road it could have CBD, marijuana or other things tied to it."

"I've never been more excited about our industry," Browne added. "It feels more dynamic than ever. It feels very fast paced. The trends are coming on quickly. It's going to be more difficult for people that maintain the mindset of, 'Well, we've been doing this for years, so we're just going to keep doing it.' The whole concept of creativity and thinking about what the consumer is looking forward to tomorrow or today, is more dynamic."

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Tom Steffanci, president, W.J. Deutsch & Sons

#### **Health and Moderation**

There's a perception that Baby Boomers are starting to drink less and that younger consumers aren't drinking as much alcohol for health reasons. Retailers have even created "healthy" retail sets that cross beverage alcohol categories.

"Surveys indicate moderation, drinking healthier and 'better' is starting more with younger generations," Brager said, while also pointing out that the spirits category is growing fast. "I wouldn't think that spirits are the health and wellness beacon for the alcohol industry."

Moramarco said people underreport what they drink on a daily, weekly or annual basis. "I'm not sure how much faith I put in some surveys reporting more health consciousness," he said. "I look at beer being 12 ounces, wine being 5 ounces, spirits being 1.5 ounces and, looking across the three, I'm not seeing a drop in per capita consumption. Per capita consumption has been flat for 25 years."

However it's being reported, the discussion around health and wellness abounds, and executives are taking note. "We'll probably need to talk more about the health benefits of wine that we all knew from the French Paradox and other discussions in the early 2000s," Lohr said. "Wine has tended to step back a little bit from promoting its health benefits, but maybe we need to do some more of that."

#### **Got Brand?**

More than a few industry executives mentioned the importance of building brands. In a competitive environment—one with fewer opportunities to create impulse purchases because of declining retail foot traffic and an increase in online shopping—wineries want to be top of mind.

Typical was a comment from Rodney Strong's Castaldi when he said: "In a time of oversupply and declining sales, you have to spend money on advertising and getting to the consumer."

Fetzer Vineyards CEO Giancarlo Bianchetti agreed, adding that those brands with a strong proposition for both the trade and the consumer will do well.

"Companies that have brands consumers love, who are willing to invest money to cultivate and curate that love, are going to have an advantage," Deutsch's Tom Stefanci said. "The case to invest in and build a relationship with our consumers is stronger than ever. It's helped us justify increased investment against our brands."

Several executives said they're focusing on digital marketing and getting more involved in mobile and social marketing than in the past, to the point of redirecting resources from traditional point-of-sale and print advertising into mobile platforms. At Ste. Michelle Wine Estates, president and CEO Jim Mortensen reports that the company built a marketing team focused on solely digital as part of its strategy.

"One thing that's going to be critical in this next phase is the simplicity of education in a quick sound bite. It can be through a phone or online," Browne said. "We saw what 19 Crimes did with the face recognition software. I think we'll also see that from a point-of-sale standpoint, where we have quick educational soundbites that allow the consumer enough of an understanding to make them feel comfortable about their purchase, especially over \$15 or \$20," Browne said.



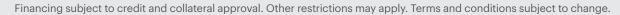
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"We need some sexy brands at \$7 or \$8 per bottle, and I'm not sure how many people in the industry want to try and do sexy things with \$7 or \$8 a bottle."

Jon Moramarco, managing partner, bw166

#### **Gaining Share Back**

Browne also said the industry collectively needs to be more like the beer industry and work together to ask retailers for more shelf space for still wines and cold space for sparkling, cans and Rosés.

"There's an opportunity with the current state of supply," Brian Vos, CEO of The Wine Group said. "Let's fight back against self-serve and some of these other things that are grabbing young consumers and give them a reason to continue to try wine, come into wine early and make it part of their regular routine."

In order to do that, Beck suggests a fundamental marketing principle: listening to the consumer. "We as an industry need to listen to Gen Z and Millennials and what they want," Beck said. "And it's convenience. What are we doing to make sure that when that consumer moves on from White Claw, they're choosing wine? And, how are we communicating to them?"

"They want transparency, sustainability and to know about calories. These are all really, really good things, and now it's up to us as an industry to be able to speak to them—not forgetting our core base: Baby Boomers and Gen X consume a lot of wine," he added.

It's not a hard proposition, as Moramarco pointed out: In 1989, the average Baby Boomer was 32 and the most popular drink was a wine cooler. As history has shown, those Boomers moved to traditional varietals and then on to premium wines. "If you think about Millennials, the good news is they've been introduced to wine by their parents," Moramarco said. "The bad news is we're not really doing as much for that younger demographic."

### Will Value Make a Comeback?

The argument is often made that U.S. wineries aren't producing enough products at affordable prices to offer value to the younger demographic who, generally, has less disposable income.

The industry has been very successful in raising prices and getting consumers to drink at higher price-point levels, but people often must spend \$12 or \$15 per glass to get something decent in a restaurant today. Moramarco pointed out that the average retail price per serving of wine is about \$2.40—White Claw and Modelo are about half that.

"We've lost ground, but I think the trends are reversing out there," Bronco Wine Company CEO Fred Franzia said. "Consumers are looking for more value."

The proof lies in the oversupply, said Vos, adding that the grape glut shows wine companies should be able to make wines at friendlier price points. "Why should we let hard seltzers take away Pinot Grigio consumers? I think we all got drunk on making more money, thinking premiumization is everything. The 21- and 24-year-olds start drinking wine and eventually they're there to buy the \$70 bottles of wine. Sometimes we forget that. Even retailers forget that," Vos said. "Look at the allocation of retail real estate. You can find studies showing there's not really an efficient allocation of shelf space relative to sales, especially as premium fragments."

Despite looming discussions of recessions and trading down, Indelicato pointed out that he's not heard of many retailers looking at lower-priced brands as part of their strategies going forward. And Roney doesn't think the \$10 and below category will re-emerge as strong as it once was, as consumers have upped their perception of quality and moved to taste levels and varieties that are hard to maintain at a low price point.

"We need some sexy brands at \$7 or \$8 per bottle, and I'm not sure how many people in the industry want to try and do sexy things with \$7 or \$8 a bottle," Moramarco said. "You have Gallo and the Wine Group and Bronco, but everybody else is going over \$10."



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"We'll never know how big this crush could have been if every-body crushed all the grapes that were grown this year."

Fred Franzia, CEO, Bronco Wine Company

#### The Grape Glut

Decelerating sales growth, coupled with two bumper harvests, put continued pressure on prices for grapes and bulk wine in 2019. Grapes went unpicked along California's Central Coast and even on the North Coast. That led to people offering bulk wines at incredible prices, including private label brands from good appellations at unheard of prices to clean up inventory.

"The big problem we have is just too many grapes this year from too many growers wanting to sell to us," Bronco's Franzia said. "We'll never know how big this crush could have been if everybody crushed all the grapes that were grown this year."

Supply cycles are nothing new, as Korbel Champagne Cellars owner Gary Heck was quick to point out. "It's called the farming business. You got good years and bad years. All we need is one bad year and everybody's going to go, 'Oh my God, grapes are going to go through the roof again.'"

Until then, wineries, like Castle Rock Winery, will continue to benefit from an overcrowded market. "We're having great luck now with the bulk wine and the grape market because there's an abundance, so we're able to notch up quality," president Greg Popovich said. "We're not even using anything from Central Valley. I feel bad for the grape growers who planted themselves to death."

As a result, less bulk wine is likely to be imported, prices for contracted fruit are expected to come down and there could be more exporting as prices fall. Growers in the Central Valley, meanwhile, have been switching to alternative crops, most often to almonds.

"In two, three years we'll be planting grapes again, assuming that almonds don't take over everything. Once they put almond trees in, they're not going to come out in two weeks or a year," Franzia said. "It's not a good time for bulk wine or grape growers, but we'll all get through it. It just takes grinding it through."

Terlato Wine Group president and chief operating officer Sandra LeDrew remained optimistic as well. "When these things happen, what usually happens from the wine business is innovation. All of us have to be better at what we do to work through challenges and offer great solutions," she said.

#### All Eyes on Constellation-Gallo Sale

Last April, Constellation Brands announced it had reached an agreement to sell 30 brands priced at \$11 retail and below to E. & J. Gallo Winery, along with some big winemaking facilities, for \$1.7 billion. When the FTC started asking questions, the deal was held up for an additional six months, creating disruption as the brands languished.

"Retailers weren't presented with these items for months and months," one industry executive said, noting Gallo and Constellation are probably not in the same distributor house anywhere in the country. "They just weren't getting represented—talk about being in a limbo period for too long. These brands have really gotten penalized."

By November, Constellation and Gallo announced changes to satisfy competitive concerns with a revamped deal at a lower price involving roughly 22 million cases of business expected to close in February 2020. The Young's Market-RNDC merger was also expected to close at roughly the same time on the West Coast.

"I think some of the downturn in the industry this year is disruption from the consolidation," one industry executive explained.

One can argue the Constellation deal is good for the industry because Gallo will take care of the brands, revive them and possibly use them to bring new wine drinkers into the fold. The flip side is that the deal means more concentration, with one producer dominating the less than \$10 per bottle market. One source suggested E. & J. Gallo was buying the brands not for volume, but as an outlet for their own vineyards, and said the deal will be disruptive for growers.

"This is a big deal for the whole industry with Gallo taking off that big of a bite," one source said. "They'll use their strength in category management to really control that under-\$9, and under-\$7 shelf space."

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### Winejobs.com Hiring Trends – A Decade in Review

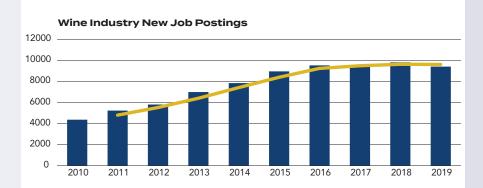
As the wine industry's leading online job site, *Winejobs.com* has a unique vantage point over industry trends. The latest report released by *Winejobs.com* included jobs posted through the end of 2019, which has provided an opportunity to review the hiring trends in the industry over the past decade. Taken as a whole, the industry saw a large year-over-year increase in jobs from 2010 through 2016, but this growth has plateaued over the past three years. The bulk of the postings on *Winejobs.com* come from wineries, distributors and wine retailers. Here is a look at their individual trends.

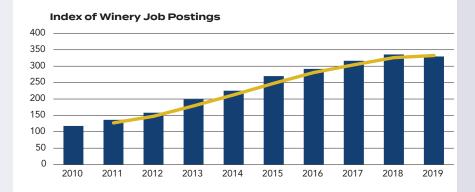
Job growth for wineries saw double-digit increases from 2010 through 2015, averaging 24 percent each year. That pace has slowed down dramatically in the past four years to an average increase of 5 percent each year. This slow-down has most affected DTC, tasting room and retail (hospitality) jobs as well as sales and marketing positions. By contrast, winemaking jobs in the past decade have seen steady and consistent growth each year, finishing 2019 with an increase of 4 percent over 2018.

The biggest news for wine distributors over the past decade was the number of consolidations of the industry's largest wholesalers. According to the September 2019 Wine Analytics Report, the top two distributors (Southern Glazer's Wine & Spirits and RNDC/Young's Market Co.) now account for more than half the total sales of domestic wine among U.S. consumers. With all this consolidation, it's not surprising that the recent trend in distributor job postings has declined over the past three years. Wine distributor postings peaked in 2016 after the first half of the decade saw a gradual increase in the year-over-year number of postings. From 2010 through 2015, there was an average of 8 percent growth each year. A spike of 41 percent in 2016 was followed by a gradual decline in postings from 2017 through 2019. Postings for wine distributor jobs in 2019 decreased by 15 percent from 2018.

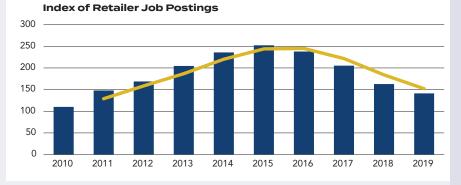
Over the last 10 years there have been several challenges for wine retailers, including changing regulations, competition from regional and national chains, as well as the expansion of e-commerce. Wine retailer job postings peaked in 2015 but have steadily declined in the annual number of postings since then. The number of wine retailer jobs posted in 2019 is 13 percent lower than those posted in 2018.











# The New Normal? Fires and Power Outages

Wildfires devastated areas of Sonoma and Napa in 2017, and they struck again in Sonoma at the end of the 2019 harvest. The local provider, Pacific Gas & Electric, scheduled involuntary power outages in Northern and Central California over a period of weeks. The outages and fires affected tasting room visitation at a peak time. Many wineries were more prepared in 2019 than in 2017, as many had learned from prior fires and purchased and deployed generators. Preparedness helped, but wineries in Napa and Sonoma were only just starting to see visitation beginning to recover from 2017 when the next fire event set them back again.

"How do we do business in the new norm of power shut-offs and power interruptions due to fires?" Alex Ryan from Duckhorn asked. "Our hospitality season and our harvest season are going to be forever and radically impacted."

"We're preparing for vacation rooms to be down in business and for our hospitality to be down for the next few years," one industry executive with wineries in Sonoma said. "Three years in a row of fires doesn't give you a warm and fuzzy feeling about coming out here. October is the biggest tourism month."

Several industry executives, Corey Beck from Coppola among them, said the industry did a better job with its messaging following the 2019 fires. Rather than use phrases like "Sonoma Strong" or "Rebuild

Sonoma," the messaging in 2019 focused on continued visitation to the many areas that did not burn.

"It's in everybody's best interest to keep telling the story and keep putting the good word out there that we're all still alive and well and that it's still a good experience," Torkelson said.

#### Trade Wars: Tariffs Seen as Grave Threat to Wine Community

In October, the Trump administration slapped a 25 percent tariff to the cost importers pay for most wines from EU producers. But as the February issue went to press, the administration was considering additional tariffs of up to 100 percent on wines from Europe. The tariffs are a serious threat to anyone who imports, distributes or sells these wines, as well as to ancillary businesses.

"I think a lot of people are looking at creative ways to get around mitigating some of it," one industry executive said. "There appear to be a lot of loopholes. I don't know that anybody's really got a firm answer yet on how it's all going to work, but some people are, for example, exploring bottling here in-country."

"It's a game-changer for imported wines from Europe," Moramarco said. "I can't figure out a way anybody can make the math work because,

"In today's market, anybody that tries to take a price increase from \$20 to \$30 is going to lose their business, and it'll be a bloodbath."

Jon Moramarco, managing partner, bw166

even if people don't take the extra margin and just pass on the duty, a \$20 bottle of wine could be over \$30. In today's market, anybody that tries to take a price increase from \$20 to \$30 is going to lose their business, and it'll be a blood bath."

California's Wine Institute issued a statement saying it has always supported the fair, open and reciprocal trade of wine around the world and voiced concern that the tariffs will lead to increased tariffs on U.S. wines and set back efforts to grow U.S. wine exports in the EU, its largest export market.

"If we put tariffs on their wines coming into the U.S. it's only going to be a matter of time before they slap retaliatory tariffs on California wine," Lohr said. **WBM** 



#### **REVIEW OF THE INDUSTRY**



As part of our review of the industry, *Wine Business Monthly* compiled its sixteenth annual ranking of the U.S. wineries by case sales. While this list always included the Top 30 U.S. wineries by volume, we've since expanded the list to include the Top 50 by volume.

Companies are listed in order of cases sold domestically of brands owned by the winery. This list does not include private labeling or custom crush wineries that make wine for others.

Though there are now more than 10,000 wineries in the U.S., the WBM 50 companies represent more than 90 percent of domestic wine sold by volume.

COMPANY	U.S. CASES SOLD
1.E. & J. Gallo Winery	70 million
2. The Wine Group	53 million
3. Constellation Brands	35 million
4. Trinchero Family Estates	20 million
5. Treasury Wine Estates	14 million
6. Delicato Family Wines	13 million
7. Bronco Wine Company	10 million
8. Ste. Michelle Wine Estates	8.2 million
9. Jackson Family Wines	6 million
10. Deutsch Family Wine & Spirits (Josh Cellars)	4.34 million
11. Viña Concha Y Toro (Fetzer Vineyards)	2.75 million
12. Precept Wine	2.7 million

COMPANY	U.S. CASES SOLD
13. Bogle Vineyards	2.5 million
14. Vintage Wine Estates	2.1 million
15. WX Brands	1.8 million
16. The Family Coppola	1.7 million
17. C. Mondavi & Family	1.7 million
18. Foley Family Wines	1.5 million
19. J. Lohr Vineyards & Wines	1.6 million
20. Korbel Champagne Cellars	1.5 million
21. Duckhorn Vineyards	1.1 million
22. Don Sebastiani & Sons	1.1 million
23. Rodney Strong Estates	950,000
24. O'Neill Vintners & Distillers	950,000

COMPANY	U.S. CASES SOLD
25. Boisset Collection	925,000
26. Pernod Ricard USA	900,000
27. NakedWines.com	821,000
28. Hess Family Wine Estates	750,000
29. Cooper's Hawk Winery & Restaurants	675,000
30. Wente Vineyards	660,000
31. Terlato Wine Group	650,000
32. K Vintners	650,000
33. Riboli Family Wines	625,000
34. Domaine Chandon Estates & Wines (Moët Hennessy USA)	625,000
35. JaM Cellars (John Anthony Family of Wines)	600,000
36. Mesa Vineyards	550,000
37. Scheid Family Wines	500,000

COMPANY	U.S. CASES SOLD
38. Michael David Winery	500,000
39. Ferrari-Carano Vineyards and Winery	480,000
40. Oliver Winery & Vineyards	480,000
41. Duplin Winery	450,000
42. Hahn Family Wines	450,000
43. Union Wine Company	400,000
44. Scotto Family Cellars	390,000
45. Purple Wine + Spirits	375,000
46. Crimson Wine Group	375,000
47. Castle Rock Winery	360,000
48. Sonoma-Cutrer Vineyards	350,000
49. Rutherford Wine Company	350,000
50. A to Z Wineworks	325,000

#### **2003** — The First WBM 30 List

#### Wine Company (purchased by)

- 1. E&J Gallo Winery
- 2. Constellation Brands
- 3. The Wine Group
- 4. **Beringer Blass Wine Estates** (Treasury Wine Estates)
- 5. Bronco Wine Company
- 6. Robert Mondavi Winery (Constellation Brands)
- 7. Trinchero Family Estates
- 8. Brown-Forman Wines
- 9. Kendall-Jackson (Jackson Family Wines)
- 10. Diageo Chateau & Estate Wines

- 11. Stimson Lane / Ste. Michelle Wine Estates
- 12. Allied Domecq (Beam Wine Estates/Constellation)
- 13. Delicato Family Vineyards (DFV)
- 14. **Golden State Vintners** (The Wine Group)
- 15. **Phillips-Hogue** (Constellation Brands)
- 16. C. Mondavi & Sons
- 17. Peak Wines (Beam Wine Estates)
- 18. Ironstone Vineyards
- 19. J. Lohr Vineyards & Wines
- 20. Chalone Group (Diageo Chateau & Estate Wines)

- 21. Don Sebastiani & Sons
- 22. Bogle Vineyards
- 23. Rodney Strong Vineyards
- 24. Barefoot Cellars (E&J Gallo)
- 25. San Antonio Winery
- 26. The Hess Collection
- 27. Round Hill / Rutherford Wine Company
- 28. Domaine Chandon
- 29. Wente Vineyards
- 30. Bonny Doon Vineyard



# WINERY PROFILES

#### 1. E. & J. Gallo Winery

Stephanie Gallo, Chief Marketing Officer
ANNUAL U.S. CASE SALES VOLUME: 70 million (WBM Estimate)
GLOBAL CASE SALES VOLUME (2019): 80 million
EMPLOYEES: 4.000

E. & J. Gallo Winery, the leading U.S. wine company, was scheduled to complete its purchase of a large portfolio of wine brands positioned at \$11 retail and below from Constellation Brands by March 1, 2020, a deal encompassing names such as Clos du Bois, Black Box Wines, and Ravenswood Winery, as well as six big winemaking facilities. Gallo plans to revitalize the brands. Wineries



included in the purchase are Mission Bell Winery in Madera, Turner Road Vintners in Lodi, Clos du Bois in Geyserville and Wild Horse Winery in Templeton, along with Washington state's The Hogue Cellars and Canandaigua Wine Co. in New York.

E. & J. Gallo also announced the purchase of two luxury priced Napa Valley brands in Nov. 2019: Pahlmeyer and Jayson by Pahlmeyer. E. & J. Gallo is leasing the Waters Ranch vineyard from the Pahlmeyer family and operating its tasting room.

E. & J. Gallo separately agreed to buy New Zealand-based Nobilo Wines and related assets from Constellation for \$130 million, subject to FTC and New Zealand regulatory approval. According to a Constellation Brands statement, the case volume, including Nobilo, being sold to E. & J. Gallo represents approximately 22 million cases.

In March 2019, E. & J. Gallo unveiled the newly restored Louis M. Martini Winery in St. Helena in Napa Valley, a renovation that updates the historic building built in 1934. Auction Napa Valley's Barrel Auction was held at the restored historic winery in the summer.

E. & J. Gallo recently reintroduced Bartles & Jaymes wine coolers, which were popular in the 1980s. The company also introduced High Noon Sun Sips, a hard seltzer with real vodka and juice, and, most recently, Barefoot Wine hard seltzers. The company partnered with winemaker Dave Phinney to become the importer for Department 66 wines: Grenache, Syrah, Carignan and Mourvédre from the south of France.

"The story of Gallo is about what we're doing to meet the ever-changing needs of wine consumers," chief marketing officer Stephanie Gallo told Wine Business Monthly. "We want to welcome new consumers to the category."

Chief operating officer Ernest J. Gallo, son of president and CEO Joseph Gallo, and grandson of co-founder Ernest Gallo, is assuming the role of president and CEO effective in May 2020.

#### 2. The Wine Group

Brian Vos, CEO

ANNUAL U.S. CASE SALES VOLUME: 53 million

EMPLOYEES: 1,200

The Wine Group continues to focus on leading in value while simultaneously growing its premium business. It is one of the large wine U.S. companies that realized sales volume increases in 2019.

New introductions include Cupcake Butterkissed Chardonnay which, as the name implies, is an oaky, butter-flavored, malolactic-style Chardonnay. The Chloe Wines line continues to grow and



now includes New Zealand Sauvignon Blanc. The Wine Group is building on its 2018 purchase of the 7 Deadly Zins brand and saw double-digit growth marketing and selling the McManis Family Vineyards line. The Imagery Estate Winery brand reached 150,000 cases last year.

Recent national brand launches have included Stave & Steel Wine Co. Bourbon Barrel-Aged Cabernet Sauvignon, and a commercial tier for Imagery Estate Winery—Imagery. The Wine Group purchased Benziger Family Winery and Imagery Estate Winery in Sonoma Valley back in 2015. Other major brands include Franzia Wines (which is, itself, a 20 million case brand); Mogen David Wine Co.; Big House Wines; Save Me, San Francisco Wine Co.; 10 Span Vineyards and Cocobon Wines.

"Value never goes out of style," Wine Group CEO Brian Vos said. Established in 1981, The Wine Group is based in Livermore, California, at the historic Concannon Estate.









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### 3. Constellation Brands

Robert Hanson, Executive Vice President and President,

Wine + Spirits Division

ANNUAL U.S. CASE SALES VOLUME: 35 million (WBM Estimate)

EMPLOYEES: 6,000 globally

Constellation Brands has stepped away from the wine category, pivoting toward beer, spirits and marijuana. The company agreed to sell a collection of brands priced below \$11 per bottle to E. & J. Gallo Winery that had accounted for roughly 22 million cases of volume.



The remaining wine portfolio includes such brands as Robert Mondavi Winery, The Prisoner Wine Company, Kim

Crawford Wines, Ruffino, Meiomi, SIMI Winery, Schrader Cellars, Mount Veeder Winery, Cooper & Thief Wines, 7 Moons Wine Co. and Crafters Union Wines. The Prisoner Wine Co. is introducing a luxury brand named Unshackled.

The deal involving Constellation's wine portfolio priced at \$11 retail and below had been delayed by the FTC because of concerns about competition in sparkling wine, brandy, dessert wine and concentrate. The revised transaction, scheduled to close in March 2020 and valued at \$1.1 billion, includes a \$250 million "earn out" tied to brand performance.

Constellation plans to divest brands that ultimately weren't included in the sale to E. & J. Gallo to "companies whose business strategies better align with the brands," including Cook's California Champagne, J. Roget American Champagne, and Paul Masson Grande Amber Brandy.

"We remain confident in our wine and spirits transformation strategy and we are committed to continuing to work with Gallo and the FTC to finalize this transaction," said Bill Newlands, Constellation Brands president and chief executive officer.

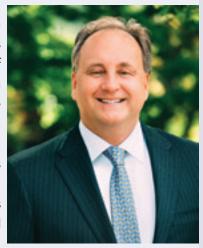
Robert Hanson was named the company's executive vice president and president, wine and spirits, in April 2019 after serving six years on Constellation's board of directors.

### **4. Trinchero Family Estates**

Bob Torkelson, President and COO
ANNUAL U.S. CASE SALES VOLUME: 20 million

EMPLOYEES: 1,000

As the largest family-owned winery in Napa Valley, Trinchero Family Estates continues to expand its portfolio of more than 50 brands with a focus on luxury and family-owned wineries. The Heritage Division, run by Carlo Trinchero, is dedicated to prestige luxury brands. Heritage added wines from Spain this year, partnering with Finca Allende, Finca Nueva, Quinta Sardonia and Terras Gauda, as their import, distribution and marketing representative.



Also new is Iron + Sand Winery, which produces a Paso Robles Cabernet made at the Trinchero Central Coast Winery, the facility Trinchero purchased from Fetzer Vineyards back in 2017. On the spirits side, the company announced a marketing, sales and distribution partnership with Hanson of Sonoma Distillery, producer of organic grape-based vodka.

Bob Trinchero and Roger Trinchero are not just known for building a sustainably minded wine company—they're also known for taking care of their employees and supporting their local communities. Their uncle bought the long-shuttered Sutter Home Family Vineyards in St. Helena in 1947, and the family business rose with the popularity of White Zinfandel, and then with the move toward higher-end wine. Now 81 and retired, Bob Trinchero continues as the company's chairman. He was honored at Wine Business Monthly's Business of Wine Leadership Dinner in 2019.





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### **5. Treasury Wine Estates**

Tim Ford, Chief Operating Officer
ANNUAL U.S. CASE SALES VOLUME: 14 million
ANNUAL GLOBAL CASE SALES VOLUME: 35 million

EMPLOYEES: 3,500 globally

Treasury Wine Estates (TWE) is one of the world's leading wine companies, and listed on the Australian Securities Exchange. The company has a portfolio of some of the world's most recognized wine brands, including Penfolds, Lindeman's, Wolf Blass, among others. In the U.S., TWE has wineries in Napa Valley, Sonoma and the Central Coast of California, including Beaulieu Vineyard, Beringer Vineyards, Chateau St. Jean, Sterling Vineyards and Etude.



In the U.S., TWE continues to focus on Stags' Leap, Beringer Luxury, Beaulieu Vineyard, Penfolds, 19 Crimes, Matua, The Stag, Sterling Vintners Collection and Beringer Brothers. Premiumization is part of its strategy and the company recently announced investments in French production and vineyard assets as well as in its Australian luxury winemaking capacity. In the Americas region, TWE completed its first full financial year operating under its new route-to-market model.

TWE's Living Wine Labels augmented reality app surpassed 4 million downloads globally. Living Wine Labels brings an interactive brand experience across the 19 Crimes, Wolf Blass, Matua, Beringer Brothers, Maison de Grand Esprit, Penfolds and Squealing Pig (Australia's No. 1 Rosé) labels.

Penfolds unveiled a new collaboration with family-owned Champagne House Thiénot. Three Champagnes from the 2012 vintage were created. This symbolically celebrated Penfolds 175th anniversary.

Beaulieu Vineyard (BV) celebrated the 80th anniversary of its first bottling of the notable Georges de Latour Private Reserve Cabernet Sauvignon. In addition, BV launched French-sourced Beaulieu Vineyard wine for the Chinese market to extend the portfolio and distribution and leverage the brand's French heritage.

TWE named Ben Dollard as president for the Americas region based in Oakland, Calif., effective Jan. 13, 2020. Dollard was previously with Constellation Brands as chief growth officer, chief marketing officer and head of international markets for the wine and spirits division, and president of the Canadian wine business.

Tim Ford is scheduled to become CEO in Q1 Fiscal 21, replacing Michael Clarke, who's stepping down after six years.

### 6. Delicato Family Wines

Chris Indelicato, President and CEO
ANNUAL U.S. CASE SALES VOLUME: 13 million

employees: 800

Delicato Family Wines, previously Delicato Family Vineyards, keeps plugging away and gaining share, driven in part by the momentum of Bota Box, an eight-million case brand. Delicato Family Wines is a fourth-generation, family-owned company founded in 1924.

Delicato launched three new varietal wines under Bota Box's premium bag-in-box Nighthawk range last year: Nighthawk Black Bourbon Barrel Aged Cabernet Sauvignon, Nighthawk Black Lush Pinot Noir and Nighthawk Gold Vibrant Sauvignon Blanc. The Cabernet is the first bourbon-barrel-aged Cabernet Sauvignon in alternative packaging. Delicato is differentiating Nighthawk



from Bota Box as a range by offering bolder and richer flavor. Bota Box launched a multi-million-dollar digital advertising campaign last year with the tagline, "This Is How We Bota" to show how Bota Box wines "unlock the potential to find good times in everyday moments."

Delicato added Noble Vines Marquis Red to the Noble Vines Collection and redesigned packaging for Gnarly Head Wines. Three Finger Jack is a new line, a nod to an outlaw who operated in the Sierra Foothills in the Gold Rush, including a Cabernet in a short bottle. New wines under the Diora Wines label are launching.

Delicato integrated V2 Wine Group into a new fine wine division with agency brands joining the portfolio last year. The new division, Transcendent Wines, includes Black Stallion Winery, Diora Wines, Merryvale Vineyards, Starmont Winery & Vineyards, Profile Collection, Forward Kidd, Dobbes Family Estate and Wine by Joe. Transcendent represents imports such as Schloss Vollrads, Franz Keller, and Bischöfliche Weingüter Trier, Santa Rita's Casa Real and Triple C, and Torbreck Vintners of South Africa. A separate group represents Bota Box, Noble Vines, Gnarly Head, Z. Alexander Brown, Black Stallion Winery, 1924, Three Finger Jack, Toad Hollow Vineyards, Mercer Wine Estate, and imports Santa Rita 120 and Schmitt Söhne Wines.

### L'ESSENCE DE L'ART





### **7. Bronco Wine Company**

Fred Franzia, CEO

ANNUAL U.S. CASE SALES VOLUME: 10 million (WBM Estimate)

Bronco is a bulk producer with more than 100 million gallons of capacity and sells wine to 20 of the top 25 U.S. wineries. But the business may

be best known as the company behind Charles Shaw, nicknamed "Two-Buck Chuck." Bronco makes wine in Ceres and Napa, under contract to Barrel Ten Quarter Circle, which it owns. The Franzia family (which has no relationship to The Wine Group's Franzia brand boxed wine) has made wine in California for more than 100 years



The company operates as a distri-

bution company in California and has a shipping and logistics arm in a 150,000-square-foot rail shipping facility at its winery in Ceres, Calif., created to support Bivo Services LLC, its logistics, consolidation and rail freight service which is used by wineries with multi-store distribution in multiple markets.

The company's distribution arm, Classic Wines of California, represents a number of wine companies, including Treasury Wine Estates.

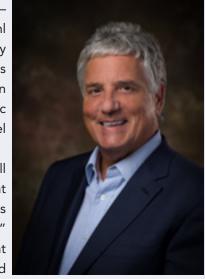
Bronco Wine Company makes wines under the ForestVille Vineyards, Estrella River Winery, Montpellier Vineyards, Grand Cru Vineyards, Silver Ridge Vineyards, Rutherford Vintners, Hacienda Wine Cellars, Foxhollow Winery and Napa Ridge Winery brands, among many others. The company has more than 60 brands, including Harlow Ridge Winery, Santa Barbara Landing, Fat Cat Cellars, Crane Lake Cellars, Forest Glen Winery, Fox Brook Winery, J.W. Morris Winery, Quail Creek Cellars and Sea Ridge Winery.

### **8. Ste. Michelle Wine Estates**

Jim Mortensen, President and CEO ANNUAL U.S. CASE SALES VOLUME: 8.2 million EMPLOYEES: 800

Ste. Michelle Wine Estate recently launched the ēlicit Wine Project, an innovation hub focused on developing new brands. New brands from the

ēlicit Wine Project thus far include Liquid Light Sauvignon Blanc; Fruit & Flower—which includes a Chardonnay in 750 ml bottles, as well as Sparkling, Chardonnay and Rosé wines packaged in two-packs of 250 ml cans; and Altered Dimension Cabernet Sauvignon, Sauvignon Blanc and Rosé, each of which includes a label with an immersive, visual experience.



"Over the past five years, virtually all growth in the premium wine segment has come from new products—products that didn't exist prior to that period," Ste. Michelle Wine Estates president and CEO Jim Mortensen explained when announcing the innovation hub.

"We've successfully introduced several products during this time, but this new team will enable us to move more quickly to bring innovative concepts to market and capture our share of this growth."

ēlicit Wine Project will manage new brands previously introduced under the Ste. Michelle Wine Estates portfolio: ANEW Wines, Borne of Fire, The Cosmic Egg Wine Co., Intrinsic Wine Co., Merf Wines, Prayers of Sinners & Saints Wine and Tenet Wines.

Ste. Michelle Wine Estates purchased Greenwood Vineyards, a 56-acre vineyard located north of the town of Calistoga last year, providing additional sourcing for the Stag's Leap Wine Cellars.

Ste. Michelle Wine Estates is known for a global, "string of pearls" collection of wine estates. The company has nearly 4,000 acres of vineyards in Washington and California. Chateau Ste. Michelle has partnerships with some of the world's distinguished winemakers. Col Solare Winery is an alliance with Tuscany's Piero Antinori, Eroica Wine Riesling is a partnership with the Mosel's Ernst Loosen, and Tenet is produced with Michel Gassier and Philippe Cambie of France.



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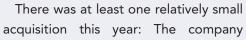
### .Jackson Family Wines

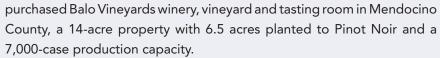
Barbara Banke, Chairman and Proprietor 2018 ANNUAL U.S. CASE SALES VOLUME: 6 million EMPLOYEES: 1,800

Jackson Family Wines, which has been aggressive in buying vineyards and smaller wineries that specialize in Burgundian wine styles, has been

concentrating on absorbing recent purchases while honing sales and distribution. The company continues to focus on the premium side of the business.

Speaking at the 2019 Wine Industry Financial Symposium, produced by *Wine Business Monthly*, chief executive officer Rick Tigner said, "We acquired some amazing properties in the last five to seven years. Let's get back to focus ... It takes some time to absorb them."





Vérité Winery, a brand that makes Bordeaux blends, is building a new winery next to an existing winery on its Healdsburg estate.

Familia Torres of Spain and Jackson Family Wines announced their intention to create a working group of wineries, called International Wineries for Climate Action, to combine efforts for the reduction of CO<sub>2</sub> emissions. The goal is to galvanize action within the global wine community to mitigate and reverse the effects of climate change by decarbonizing the industry. "Our common goal is to move beyond conversations around the urgency of climate change by collaborating on scalable solutions to reduce our global industry's carbon footprint," Katie Jackson, second-generation proprietor and senior vice president of corporate responsibility at Jackson Family Wines, said.

# 10. Deutsch Family Wine & Spirits (Josh Cellars)

Tom Steffanci, President

ANNUAL U.S. CASE SALES VOLUME: 4.34 million cases

ANNUAL GLOBAL CASE SALES VOLUME: 11.5 million

EMPLOYEES: 300

Founded in 2007 by Joseph Carr and introduced in 2009, Josh Cellars has been owned by Deutsch Family Wine & Spirits, marketer and importer of wine and spirits, since 2011—back when it was a 60,000-case brand. Josh Cellars continues as one of the fastest-growing premium wine brands and saw double digit growth in 2019, reaching 3.4 million cases. Priced between \$13 and \$19, the wines are sourced from California and made at the Vintage Wine Estates facility in Mendocino. New line extensions are coming under Josh Cellars: a California Pinot Grigio,



Prosecco, and bourbon barrel-aged Reserve Cabernet Sauvignon.

Gray Whale Gin is the latest project launched by Deutsch Family Wine & Spirits. The company entered into a 50/50 joint venture partnership on the Gray Whale Gin brand with founders Jan and Marsh Mokhtari.

Deutsch Family Wine & Spirits was founded in 1981 by chairman Bill Deutsch to market wine and spirits from family-owned companies around the world. Deutsch works almost exclusively with private or family-owned companies.

The business includes a roster of international brands: [yellow tail] wine, Peter Lehmann Wines, Bellacosa Wine Company, Eppa SupraFruta Sangria, Girard Winery, Joseph Carr, Josh Cellars, Kunde Estates, Layer Cake Wines, The Calling Wine, Andre Lurton, Cave de Lugny, Fleurs de Prairie, Hob Nob Wine Company, Sauvion, Skyfall Vineyard, Barone Fini, Villa Pozzi, The Crossings, Quinta Do Vale Meão, Mar De Frades, Bodegas Cruz de Alba, Ramón Bilbao, Clos de los Siete, Ruta 22; and award-winning spirits Redemption Whiskey, Bib & Tucker Bourbon, Masterson's Rye and Luksusowa Vodka.

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### 11. Viña Concha Y Toro (Fetzer Vineyards)

Giancarlo Bianchetti, General Manager, Fetzer Vineyards ANNUAL U.S. CASE SALES VOLUME: 2.75 million ANNUAL GLOBAL CASE SALES VOLUME: 35 million **EMPLOYEES: 370** 

Fetzer Vineyards continued to incorporate Excelsior Wines into its portfolio last year, making it not just a producer of 2.75 million cases of California wine, but the nation's leading supplier of South American wines too. Excelsior's portfolio includes the Chilean wines of Viña Concha y Toro, Argentine property Bodega Trivento Argentina. The portfolio also includes California Central



for the U.S. It was co-managed by both companies before Viña Concha y Toro committed to fully acquiring Excelsior. The addition of Excelsior's wines doubled the Fetzer Vineyards portfolio in size because, counting imports, the company's total volume comprises of roughly 5 million cases.

Following this, Fetzer created a fine wine division focused on higher priced offerings. In addition to its own fine wine brands, which include Sanctuary, the Elysian Collection by Bonterra Organic Vineyards, Fringe Collective, and the estate biodynamic vineyard line from Bonterra, Fetzer Vineyards oversees U.S. marketing and distribution for the fine wine portfolio of its parent company, Viña Concha y Toro, headquartered in Chile. Stephanie Peachey was named vice president of Fetzer's newly formed fine wine and spirits division after leading brand strategy and DTC for Kosta Browne Winery.

Fetzer unveiled a new Elysian Collection under the Mendocino-based Bonterra Organic Vineyards brand, starting with an organic Merlot retailing at \$25. Bonterra also added three luxury priced biodynamic single vineyard wines. Bonterra launched its canned wine last summer, 2019.

### 12. Precept Wine

Andrew Browne, Founder and CEO ANNUAL U.S. CASE SALES VOLUME: 2.7 million ANNUAL GLOBAL CASE SALES VOLUME: N/A EMPLOYEES: 450

Seattle-based Precept Wine purchased the Callaway Cellar Selection and is focusing on a complete relaunch with three tiers of Chardonnay and Cabernet for wholesale distribution with California, Paso Robles and Napa tiers. The reinvigorated brand, which dates back to the early 1970s, will build on the Callaway name and the heritage of the Callaway Golf Company.

Precept has also ramped up its exclusive label business. In 2018 Precept Wine acquired Truett-Hurst's wholesale business unit and portfolio of national and exclusive brands created for



retailers such as Albertsons, The Kroger Co., Trader Joe's, Total Wine & More and others. It is the fastest-growing private wine producer based in the Northwest.

Precept owns and maintains nearly 5,000 planted vineyard acres across Washington, Idaho, and Oregon; leading wine brands as Waterbrook Winery, Gruet Winery, Browne Family Vineyards, Canoe Ridge Vineyard, Original House Wine, Pendulum Wine, Primarius Winery, Washington Hills, Battle Creek Cellars, Ste. Chapelle, Cense Wines, and Colby Red, plus tasting rooms and hospitality throughout the Pacific Northwest and in New Mexico.



### **MEMO**

**DATE:** October 21, 2019

**TO:** Concerned Grape Growers

FROM: Rick Burnes, President

Sunridge Nurseries is excited to announce our improved clean plant protocols for 2020. In September of this year, the Sunridge team has partnered with CSP labs to evaluate over 75,000 vine samples from our certified mother block for grapevine pathogens, including Red Blotch associated virus (GRBV).

In Northern California, Foundation Plant Services has been diligently testing their foundation material since 2013 and has recently encountered an increase in the infection of GRBV at the Russell Ranch Vineyard in Davis. In response to the concern this may cause growers planning on purchasing vines for new developments, we are happy to report that all test results from our isolated certified Sunridge mother blocks in Cuyama Valley have tested completely virus-free.

Reach out to any of our field service team if you would like more information. We welcome any of our growers to visit our facilities. Your success is our success and we want every grape grower to feel good about their future vineyard investments.

Sincerely,

Rick Burnes President Sunridge Nurseries Inc.

Andrew Jones - Wine Grape Sales Manager - 805-234-4920 - andrew@sridge.net

Julian Clymer - Northern California Vineyard Representative - 707-974-2642 - julian@sridge.net

Sebastian Traviesa - Pacific NW, East Coast, Canada and Mexico Vineyard Representative - 707-975-3646 - sebastian@sridge.net

Kevin Payne - San Joaquin Valley Vineyard Representative - 530-320-8223 - kevin@sridge.net







### 13. Bogle Vineyards

Ryan Bogle, Vice President and Chief Financial Officer ANNUAL U.S. CASE SALES VOLUME: 2.5 million

**EMPLOYEES: 100** 

Bogle continues to crank out high-quality wines at a competitive price point. One of the latest projects is the "Proud Roots" collaboration with the Sacramento Kings, celebrating the team's new arena while highlighting the region's agricultural ties and farm-to-fork movement.

Bogle introduced Juggernaut in 2018 with a California Hillside Cabernet Sauvignon priced at \$20 per bottle.



Bogle's wines include Essential Red, a mix of Zinfandel, Syrah, Cabernet Sauvignon and Petite Sirah. Bogle's leading wine is Chardonnay, though the winery makes a considerable amount of Petite Sirah as well.

The Bogle family has been farming since the mid-1800s, and in 1968, the father and son team of Warren and Chris Bogle planted their first winegrapes in Clarksburg, California. Bogle Vineyards farms more than 1,200 acres of wine grapes in the Delta region. Warren Bogle, president and vineyard director, is the sixth generation of Bogles to farm in California's Sacramento Delta. Ryan Bogle currently serves as vice president of the company and oversees accounting. Jody Bogle serves as director of public relations.

### **14. Vintage Wine Estates**

Pat Roney, CEO and Founding Partner ANNUAL U.S. CASE SALES VOLUME: 2.1 million

EMPLOYEES: 420

Vintage Wine Estates again expanded with acquisitions in 2019, bolstering its presence in the Northwest through the purchase of critically acclaimed Owen Roe. Owen Roe makes wine in Yakima, Wash., where it has a winery, vineyards and a tasting room; as well as in the Willamette Valley, where it operates an additional tasting room. Besides directing winemaking and operations for



Owen Roe, co-founder David O'Reilly was named regional winemaking director for the Pacific Northwest. This includes Firesteed Winery & Tasting Room in Willamette Valley, where Bob Cabral was recently named consulting winemaker, as well as Washington's Tamarack Cellars and Buried Cane, headed by Danny Gordon.

Vintage Wine Estates also announced the acquisition of aluminum can innovator Alloy Wine Works in 2019. Alloy Wine Works was founded by Central Coast winemaker and grower Andrew Jones, creator of Field Recording Wine. The Alloy Wine Works portfolio includes Everyday Red, a Chardonnay, Pinot Noir and a Rosé.

Vintage Wine Estates introduced 'ready to drink' beverages last year: GAZE Wine Cocktails in Blueberry-Pomegranate Moscato and Coconut Water-Chardonnay-Moscato. GAZE Wine Cocktails are billed as quality California wine with natural ingredients popular with wellness-minded consumers. They are packaged in aluminum bottles with twist-off closures and bright, silkscreened graphics.

Vintage Wine Estates partnered with Napa Valley wine consultant Paula Kornell to introduce the inaugural vintage of her Napa Valley Blanc de Noir, carrying on the work of her father, California sparkling wine producer Hanns Kornell, who passed away in 1994.

### 15. WX Brands

Peter Byck, President and CEO ANNUAL U.S. CASE SALES VOLUME: 1.8 million

Founded in 1999, WX Brands established itself as a preferred producer of exclusive brands for key retail partners—this means the company does everything from managing sourcing, to production and marketing, and even compliance and distribution. WX Brands has been named an "Outstanding Supplier" by many retail customers.

15 within the price segment.



expanded its model by investing in a national brand portfolio through a series of strategic acquisitions. This national portfolio is anchored by the popular Bread & Butter wine brand, which WX acquired in 2017. Comprised of Chardonnay, Pinot Noir, Cabernet Sauvignon and Rosé, Bread & Butter is now the fastest growing Top 100 brand in the \$12 to \$14.99 price segment, with its Pinot Noir as the No. 1 Pinot Noir in dollar and sales volume within the segment. In addition, the Bread & Butter Cabernet Sauvignon,

The company's nationally available portfolio also includes Chronic Cellars, acquired in 2014; Jamieson Ranch Vineyards brands (Double Lariat, Reata, Whiplash, and Light Horse) acquired in 2017; Reckless Love Wines and Jelly Jar Wines, both acquired in 2018; and Our Daily Wines, the leading USDA organic wine in the U.S.

launched in 2018, is the fastest growing Cabernet Sauvignon in the Top

Today, WX Brands sources from 14 countries and is sold in 20 countries around the world.

# FRENCH OAK ELEGANCE WEST COAST STYLE



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### **16. The Family Coppola**

Corey Beck, CEO and Winemaking Chief ANNUAL U.S. CASE SALES VOLUME: 1.7 million EMPLOYEES: 425

Francis Ford Coppola purchased the old Vista Hills Winery in Oregon at the end of 2018 and in March 2019 unveiled Domaine de Broglie. The reimagined tasting room exudes a casual, yet upscale, vibe with artifacts honoring award-winning physicists Louis de Broglie and Maurice de Broglie. Of course, movie memorabilia looms large, including a Citroën from "Is Paris Burning?" the French-American film Francis Ford Coppola co-wrote with



Gore Vidal based on the 1944 Paris Liberation.

The Family Coppola launched Oregon Pinot Noir under the Diamond Series this year while continuing to ramp up the Diamond Series canned wines. Another project saw Francis Ford Coppola Winery joining forces with Becker Vineyards of Texas to launch the 2017 Unita Blends Cabernet Sauvignon, available in tasting rooms and in Texas grocery stores.

In 2019, The Family Coppola focused much of its attention on its growing Great Women Spirits collection of California-crafted spirits, including vodka, gin, brandy and amaro.

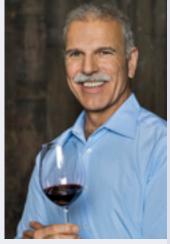
Francis Ford Coppola Winery produces a variety of wines that can be found nationally, primarily under the Diamond Collection, Sofia, Votre Santé, Director's, Director's Cut and Gia Coppala Wine labels. Eleanor and Archimedes are the company's small production Cabernet-based blends; Francis Coppola Reserve wines are limited-production, single-vineyard designate wines.

### 17. C. Mondavi & Family

Peter Mondavi, Jr., Co-proprietor, Charles Krug Winery ANNUAL U.S. CASE SALES VOLUME: 1.7 million

EMPLOYEES: 120

The six Mondavi cousins who make up the "G4," or fourth generation of the C. Mondavi family, are increasing their roles within the family business. Last year, C. Mondavi & Family introduced Flat Top Hills, spearheaded by Angelina Mondavi in partnership with head winemaker Randy Herron, marking the first time a member of the "G4" has been involved in winemaking under the family-run company banner. The new brand is inspired by family vineyards in the Dunnigan Hills AVA of Yolo County which are planted over "flattopped" summits.



Meanwhile, Riana Mondavi, who joined the business in 2011, was named director of chains off-premise, West last spring.

Charles Krug Winery, the first winery founded in Napa Valley in 1861, is owned by the children and grandchildren of Peter Mondavi, Sr. CK Mondavi's diversified portfolio includes luxury-priced Charles Krug wines and popularly priced CK Mondavi wines, the latter of which are made in much larger quantities.

CK Mondavi operates in a competitive segment of the market against a focused group of competitors and has redesigned its packaging while emphasizing 750 ml bottles.

Charles Krug produces roughly 80,000 cases. The winery recently released its second series of library wines from its collection of Vintage Selection Cabernet Sauvignon, which includes its 1979, 1989, and 2009 Vintage Selection Cabernets. The complete collection, which is housed in the winery's St. Helena Estate, dates back to 1944 and is considered the oldest library of Cabernet Sauvignon in the Napa Valley.

### 18. Foley Family Wines

Courtney Foley, Vice President of Business Development ANNUAL U.S. CASE SALES VOLUME: 1.5 million ANNUAL GLOBAL CASE SALES VOLUME: 1.7 million EMPLOYEES: 400

Courtney Foley, daughter of Foley Family Wines founder Bill Foley, assumed a new role as vice president of business development this year and is emerging as the face of the company after leading the winemaking at Chalk Hill. She's focusing on crafting the culture of the company, DTC, tasting room operations and three-tier sales.

Hugh Reimers left his position as president of Foley Family Wines last year. Shawn Schiffer was hired to be president of Foley Family Wines and CEO of Epic Wines & Spirits, Foley's distribution company.



Foley Family Wines recently acquired Healdsburg-based Banshee Wines and Oregon's Acrobat Wine, a King Estate Winery brand based in Eugene, Ore. The Foley Family added a line of aluminum cans under the Acrobat label. This year, the company will focus on supporting the properties it has already acquired and pushing those brands forward.

Foley Family Wines also acquired additional vineyards last year: one in Sonoma County and another in Oregon. The company acquired the 64-acre Chalk Ridge Vineyard, located in the Chalk Hill AVA, from Silverado Investment Management Co. Foley Family Wines is the ninth largest vineyard owner in Sonoma County by planted acreage, with roughly 1,100 acres owned. The winery purchased Huntington Hill Vineyard in Dallas, Ore., located in the Van Duzer Corridor AVA, a 165-acre property with 21 acres of planted vineyards and room to add another 85 planted acres.



# Diam Bouchage Innovates with Nature in Mind

"A real innovation is one that respects the planet."-Dominique Tourneix, CEO, Diam Bouchage

Years ago, Diam Bouchage committed to continuously improve its performance while lessening its impact on the environment. Over the years, that commitment evolved into a company policy. Today, that policy has become the guiding principle in how Diam Bouchage does business and it is integrated into all facets of the company.

This dedication led to the development of Diam wine closures including the award-winning Origine by Diam's<sup>®</sup> "green" cork which is considered by many wine makers and industry professionals to be one of the most innovative, sustainable wine closures. Origine by Diam<sup>®</sup> just earned international recognition with the prestigious "SIMEI Technology Innovation Award" for 2019 as the best among some of the most innovative and cutting-edge product offerings available today in the wine industry.

The Origine by Diam® closure is composed of natural elements including a binder made from plant-derived polyols, a renewable resource, and beeswax emulsion. This makes the corks totally watertight, protecting the wine against any capillary migration and protecting the integrity of the cork elasticity. Origine by Diam® is a real technological breakthrough, combining efficiency with respect for the environment.

Diam Bouchage proudly supports the association Un toit pour les abeilles to help protect bees and encourage the development of bee colonies.

### Diam is reducing carbon footprint in all business activities.

It is a fact that cork oak forests act as "carbons sinks" capturing and storing atmospheric carbon dioxide (CO2). This helps reduce the amount of carbon dioxide in the atmosphere thereby helping reduce global climate change. According to climate experts, this carbon sequestration is estimated to be as much as 10 to 15 tons of CO2 per ton of harvested cork.

The carbon footprint of Diam closures is calculated from the sourcing of raw materials to the factory exit of the finished products. It also factors in the exceptional carbon sequestration capacity of cork oaks, in compliance with the recommendations of the European Commission.

We are proud that when it comes to our DIAM and MYTIK closures, they have a negative carbon footprint which helps lessen the impact on the carbon footprint of our customers who use these closures!

The innovative Origine by Diam® is a shining example of our commitment to preserve and protect the environment today and in the future. G3 is our exclusive distributor of Origine by Diam® closures and all Diam products in the United States, Canada and Mexico. G3 shares our commitment to adopting environmentally sound practices and products that minimize waste, maximize the use of materials and conserve resources. Together, we operate at the highest ethical standards to ensure that we achieve excellence

while reducing our impact on the environment. To learn more, visit *DIAM-closures.com* or G3 Enterprises at *G3enterprises.com*.

### 19. J. Lohr Vineyards & Wines

Steve Lohr, CEO and co-owner

ANNUAL U.S. CASE SALES VOLUME: 1.6 million

**employees**: 250

This last year, J. Lohr Vineyards & Wines introduced five winery-exclusive wines showcasing Bordeaux varieties from select estate vineyards under the J. Lohr Vineyard Series tier. J. Lohr launched the Vineyard Series tier in 1998 with Arroyo Vista Vineyard Chardonnay and Hilltop Vineyard Cabernet Sauvignon. Since that time, the series has grown to include Carol's Vineyard Cabernet Sauvignon, Tower Road Petite Sirah, October



Night Chardonnay, Fog's Reach Pinot Noir, Highlands Bench Pinot Noir and the J. Lohr Late Harvest White Riesling.

Second-generation co-owner and trade and brand advocate Cynthia Lohr was named chief brand officer this year. Brenden Wood was promoted from assistant winemaker to red winemaker after Steve Peck was promoted to director of winemaking. Alongside Wood and Peck, the winemaking group includes Kristen Barnhisel, winemaker, white wines; Karl Antink, production winemaker; and president and COO Jeff Meier.

The company also continued to plant its McCormick vineyard this past year, a newer vineyard on the western portion of Paso Robles used for J. Lohr's high-end wines.

J. Lohr Vineyards & Wines produces six tiers: J. Lohr Estates, J. Lohr Vineyard Series, J. Lohr Cuvée Series, J. Lohr Gesture, J. Lohr Signature, and J. Lohr Pure Paso. The company is also behind the brands Cypress Vineyards and Ariel Vineyards, the latter a series of non-alcoholic wines. J. Lohr also produces export-only wines, including Painter Bridge Vineyards.

### 20. Korbel Champagne Cellars

Gary Heck, President and Owner

ANNUAL U.S. CASE SALES VOLUME: 1.5 million ANNUAL GLOBAL CASE SALES VOLUME: N/A

EMPLOYEES: 360

Korbel Champagne Cellars accounts for roughly 15 percent of the total sparkling wine category and half of the premium *méthode Champenoise* category with sales reaching \$124 million in 2019. It's a strong category: sales of Korbel were up about 2 percent by volume this year.

Korbel most recently launched a Prosecco with a suggested retail price of \$14.99. Distributors had long asked for a Prosecco. Produced and bottled in the Prosecco DOC, in northeastern



Italy, Korbel Prosecco is made with 100 percent Glera grapes using the traditional Charmat method.

Korbel is continually pursuing creative ways to introduce consumers to sparkling wine, from serving their wines at major sporting events, to distinctive packaging that coincides with special occasions, and even pouring sparkling wine-based cocktails on premise at their Guerneville estate.

Korbel has been consistently advertising on TV for more than 40 years and plans to spend \$5 million on advertising in 2020. The company advertises on NBC Sports, Bravo TV, E!, Comedy Central, The Food Network, HGTV, The Travel Channel, USA Network and VH1—in addition to using digital campaigns on various social media networks including Facebook, Twitter, YouTube, Instagram and Pinterest

Korbel was established in 1882. The Heck family has owned and managed the company since 1954. The company owns 1,000 acres of vineyards throughout California.

### **21. Duckhorn Vineyards**

Alex Ryan, President and Chief Executive Officer ANNUAL U.S. CASE SALES VOLUME: 1.1 million EMPLOYEES: 375

former Starmont Winery and Vineyards in Carneros.

Duckhorn Wine Company, which purchased Kosta Browne in 2018, is opening a new winery and tasting room for its Migration brand at the

The company also recently announced opening a new tasting room for Canvasback in Walla Walla at the site that was formerly the home of Solemn Cellars and Doubleback Winery. It will be dedicated to Duckhorn's Washington state wines, including the Red Mountain Cabernet Sauvignon and Canvasback's pinnacle Grand Passage Red Mountain Cabernet Sauvignon. Canvasback's expanded lineup includes a Columbia



Valley Riesling, Walla Walla Valley Syrah and Cabernet Sauvignon and a single-vineyard Cabernet Sauvignon from the Ciel du Cheval Vineyard on Red Mountain.

The company is expected to launch a Decoy sparkling wine this year.

Duckhorn Vineyards finished up its third year of leadership under a second private equity firm, TSG Consumer Partners, in 2019.

Founded by Dan and Margaret Duckhorn with the launch of Duckhorn Vineyards in 1976, the company now consists of several brands, including Duckhorn, Paraduxx, Goldeneye, Migration, Decoy, Calera and Canvasback. Decoy continues to grow, accounting for about half of Duckhorn Wine Company's production. With 700 acres of estate vineyards, along with grapes from the finest growers, each winery has its own focused winegrowing program from which to make its wines. Duckhorn Wine Company wines are available throughout the United States, on five continents and in more than 50 countries.



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### 22. Don Sebastiani & Sons

Donny Sebastiani, Jr., President and CEO ANNUAL U.S. CASE SALES VOLUME: 1.1 million EMPLOYEES: 90

Don Sebastiani & Sons is moving up the price ladder and now sells more wines that retail above \$10 than below \$10. Three of the company's growth brands, B Side Wines, Simple Life Wines and The Crusher, account for roughly 200,000 cases.

Don Sebastiani, grandson to Samuele Sebastiani, who founded what is known today as Sebastiani Vineyards & Winery, began running his grandfather's company in 1986. He stepped down in



2000 to create a new wine company and soon recruited his two sons, Donny and August Sebastiani, to assist him in the creation of Don Sebastiani & Sons. Donny Sebastiani, Jr. now leads Don Sebastiani & Sons while August leads 3 Badge Beverage Corporation (formerly known as The Other Guys), which is a sizable wine company in its own right.

Don Sebastiani & Sons will take on representation of the wine portfolio of 3 Badge Beverage Corporation this year (Leese-Fitch, Plungerhead, Pennywise, The White Knight, Hey Mambo, Moobuzz and Gehricke), as 3 Badge Beverage expands its focus on sales of high-end craft spirits.

The Don Sebastiani & Sons portfolio of wines includes Smoking Loon and Pepperwood Grove, Don & Sons Sonoma Signature Series, Sivas-Sonoma, Il Donato, Gunsight Rock Wines and Americano and Custard Sonoma Valley Chardonnay.

The company has been expanding its private label wine business with custom labels for retailers such as BevMo!, Aldi and Wegmans Food Markets.

### 23. Rodney Strong Estates

Carmen Castaldi, President

annual u.s. case sales volume: 950,000

employees: 180

Rodney Strong Estates launched the Knotty Vines brand with an estate

Zinfandel, sourced from Russian River, Alexander Valley and Dry Creek vine-yards. Following its success, the company then released a California-based Knotty Vines Chardonnay and Cabernet Red Blend, focusing its efforts on retail distribution with a national release with The Kroger Co.



Upshot and Rowen Wine Company are in their second year of launch.

Upshot Red Wine Blend is a high-end Zinfandel-based blend that launched nationally at about \$25, made from grapes sourced from Rodney

Strong's Hubbard Ranch. The Upshot line also includes Upshot White Wine Blend, a blend of Chardonnay, Gewürztraminer, Pinot Noir, Viognier and Sauvignon Blanc sourced from several coastal California counties.

Rowen Wine Company focuses production on its 200-acre Cooley Ranch in northern Sonoma County. The Rowen Wine Company portfolio includes four wines: Rowen Red Blend; Cooley Cabernet Sauvignon; and two Cabernet-based blends, 2040 and 600L.

Rodney Strong Wine Estates produces wines from four Sonoma County appellations: Alexander Valley, Russian River Valley, Chalk Hill and Sonoma Coast. The Estate itself is responsible for farming 1,400 acres of vines from more than a dozen different estates.

Owner Tom Klein's family has been farming for more than 100 years in the Stockton, California area and has a diversified family farming business growing nuts, fruits and vegetables.

Rodney Strong Estates was founded in 1959 by Rodney Strong and was the 13th bonded winery in the county. The Klein family purchased, what was then called Rodney Strong Vineyards, from Irish brewing company Guinness in 1989.

### 24. O'Neill Vintners & Distillers

Jeffrey O'Neill, Founder and CEO
ANNUAL U.S. CASE SALES VOLUME: 950,000
EMPLOYEES: 230

O'Neill Vintners & Distillers is one of a handful of large wine companies now seeing strong growth—and it's mostly organic growth. Thanks to its Line 39 and Harken Wines brands, as well as its proprietary brands and control labels, the company produced nearly 1.6 million cases last year. The company doesn't have many stale legacy brands so it is investing in younger brands



with momentum. O'Neill Vintners & Distillers has also been investing in people; the company now employs roughly 40 sales people—double what it had two years ago.

One of the most significant new launches is Intercept Wines, made in partnership with Heisman Trophy winner Charles Woodson. The brand includes a single-varietal Cabernet Sauvignon, a red blend, a Chardonnay and a Pinot Noir, each produced from grapes sourced out of Paso Robles and Monterey County.

Recent launches have included Exitus Wines, a bourbon barrel-aged red wine blend consisting of Zinfandel, Petit Verdot and Cabernet Sauvignon that has been fermented in stainless steel and barrel aged in Kentucky bourbon barrels. Exitus Wines donated a portion of proceeds to the California Fire Foundation last September.

O'Neill Vintners & Distillers has invested heavily in its Parlier, Calif.based winery over the past several years. Through its vineyards and modern production facilities, O'Neill provides premium winemaking services to the industry, including proprietary brands and control labels.



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### 25. Boisset Collection

Jean-Charles Boisset, President

ANNUAL U.S. CASE SALES VOLUME: 925,000
ANNUAL GLOBAL CASE SALES VOLUME: 6.8 million

EMPLOYEES: 250 (1,000 globally)

At Boisset Collection, innovation is continual, and so are the newly created, memorable experiences. The company focuses on high-end, super- and ultra-premium wines. Among the new offerings and highlights this year:

Jean Charles Boisset embarked on the "Alchemy of Senses" tour in 2019, with 53 events in 12 cities, entertaining more than 3,000 guests. The tour included the



launch of JCB Passion Collection glasses and decanters by Baccarat.

In Oakville, Calif., Boisset enhanced Oakville Grocery with new products and a focus on organic and biodynamic producers. The company also launched Oakville-based 1881 Napa, a wine history museum and tasting salon that provides an in-depth look at 19th century Napa Valley winemaking history. Coinciding with the museum opening, JCB also launched the 1881 Napa wine label.

In Yountville, the JCB Tasting Salon is becoming a booming destination joining the company's other Yountville-based businesses, including SENSES by JCB, a boutique and spa; Atelier Fine Foods; and the JCB Privé Wine Bar.

Known for its broad portfolio of California and French wineries, Boisset Collection brands include DeLoach Vineyards, Raymond Vineyards and Buena Vista Winery. The company is largely focusing on the \$30 to \$50 and above price points, and on sparkling wines priced at more than \$20. It is continually rolling out new wines and labels.

### **26. Pernod Ricard USA**

**Jo-Anna Partridge**, Vice President Operations, Pernod Ricard Winemakers

ANNUAL U.S. CASE SALES VOLUME: 900,000

**EMPLOYEES:** 850 nationally

Pernod Ricard USA has been investing in American-made spirits brands that have perfected their craft and that seek a business partnership to help them to accelerate. This past year, Pernod Ricard acquired Castle Brands Inc., including Jefferson's Bourbon from Louisville, KY, as well as Firestone & Robertson Distilling. The company also recently partnered with Rabbit Hole Distillery in Louisville, KY.



The new spirits brands round out a lineup of American-made wines—including Kenwood Vineyards, which it purchased from Korbel back in 2014, and Mumm Napa.

Pernod Ricard employs 18,000 people worldwide. It is the world's second-largest spirits and wines producer. The corporation's spirits include such brands as Absolut Vodka, Tequila Avión, Chivas Regal, The Glenlivet, Jameson Irish Whiskey, Malibu Caribbean Rum, The Kahlúa Company, Aberlour Single Malt Scotch Whisky, Altos Tequila, Beefeater Gin, and on and on. Wines include Brancott Estate, Campo Viejo, Graffigna, Jacob's Creek Wines, Perrier-Jouët Champagne, G.H. Mumm Champagne and Mumm Napa. Pernod Ricard USA is based in New York, N.Y., and the corporation has roughly 850 employees across the U.S.

### 27. NakedWines.com

Nick Devlin, CEO

annual u.s. case sales volume: 821,000 annual global case sales volume: 2 million

**EMPLOYEES:** 100

NakedWines.com is an online wine retailer founded in the U.K. in 2008 by Rowan Gormley, employing a unique spin on crowdsourcing. Customers, called Angels, fund independent winemakers from around the world in return for wines at wholesale prices. The wine is shipped in the U.K., the United States and Australia. Sales in the U.S. grew by 20 percent last year.



NakedWines.com was acquired by Britain's largest wine merchant, Majestic Wine, five years ago. After founder Gormley stepped down, COO Nick Devlin, who had been running operations in the U.S., was named global chief executive.

The U.S. has emerged as the leading market for *NakedWines.com*. Last year, Majestic Wine sold its retail businesses in the UK to Japanese-owned U.S. equity firm Fortress Bank; it then sold its fine wine arm Lay & Wheeler Ltd. to Coterie Limited in order to concentrate on building *NakedWines.com* in the U.S.

NakedWines.com's collective team of winemakers are given freedom in the winemaking space. The company claims that in funding independent wine ventures, it is able to create a unique portfolio of wines as well as allow the participating winemakers to pursue their own, personal projects. NakedWines.com continues to bring new winemakers into the program—most recently Dave Harvey from Washington and Chris Baker from Oregon. The company is also working with Daniel Baron, the recently retired winemaker for Silver Oak and Twomey Cellar.



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### **28.** Hess Family Wine Estates

**Timothy Persson**, Chairman **John Grant**, President and CEO

annual u.s. case sales volume: 750,000 annual global case sales volume: 900,000

EMPLOYEES: 167

This year Hess Family Wine Estates purchased Iron Corral Vineyard, a 420-acre site with 186 acres planted to Cabernet Sauvignon. The acquisition of Iron Corral Vineyard is part of a long-term strategy to expand holdings in Napa County and zero-in on the production of luxury-priced wines. Iron Corral Vineyard is two miles from Hess Collection's Allomi Vineyard, another property the company owns in Pope Valley.



**Timothy Persson** 

Tim Persson, son-in-law to founder

Donald Hess, and his wife Sabrina took formal ownership of Hess Family Wine Estates in 2017 as part of the family succession plan and Donald Hess's retirement

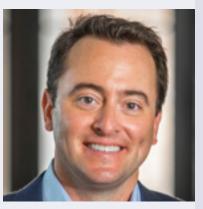
Hess Family Wine Estates continues to build on the momentum of luxury wines such as Hess Collection Lion Tamer Red Blend, and with their prestige estate wines The Lioness Chardonnay and The Lion Cabernet Sauvignon. The next generation of luxury wines under Persson's stewardship include Panthera Chardonnay, sourced from the Russian River Valley and retailing at \$45 as well as Lion Tamer Cabernet Sauvignon from the Napa Valley.

Hess Family Wine Estates is the importer, marketer and selling arm in the U.S. for Argentine wineries Bodega Colomé and Amalaya. The Hess Collection also owns MacPhail Wines, producing single-vineyard Pinot Noirs from Sonoma Coast and Anderson Valley.

### 29. Cooper's Hawk Winery & Restaurants

Tim McEnery, CEO and Founder ANNUAL U.S. CASE SALES VOLUME: 675,000 EMPLOYEES: 4,000

Cooper's Hawk Winery & Restaurants opened its Esquire Chicago location in November. This marks the company's 41st location in the U.S and its first foray into "urban" dining. An immersive experience, which spans more than 23,000 square feet, it is a celebration of wine. The venue features a 50-foot wine tower that includes a spiral staircase linking the second and third floors—



hundreds of temperature-controlled bottles in racks hang suspended from the tower's ceiling. Master Sommelier Emily Wines is Cooper's Hawk's vice president of wine and beverage experience.

Cooper's Hawk combines familiar elements—winery, restaurant, tasting room and artisanal retail market—for a new hospitality experience aimed at creating community. The first location opened in 2005, about 30 minutes south of Chicago. Since that time, the business has evolved to include locations in the Midwest, Northeast and Florida.

The company boasts the largest wine club in the U.S.: Cooper's Hawk has more than 287,000 wine club members who receive a bottle of wine each month—most of whom pick up their wines in person at a Cooper's Hawk location. The club combines retail wine discounts and a loyalty program with events—including a luxury travel platform for high-tiered club members.

Two years ago, Cooper's Hawk expanded and relocated its main winery, bottling and warehouse facility to Woodridge, Illinois in order to keep pace with the business's growth. The 125,000-square-foot winery supports an initial capacity of 685,000 cases, with room to grow, and includes a 60,000-square-foot warehouse that can store up to 300,000 cases of wine. Winegrapes and juice are mostly sourced from California, but Cooper's Hawk also sources from vineyards in Washington, Oregon, New York, Chile, Argentina, France and Italy.



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### 30. Wente Vineyards

Carolyn Wente, CEO

annual u.s. case sales volume: 660,000 annual global case sales volume: 740,000

EMPLOYEES: 550

Founded 135 years ago, Wente Vineyards, is America's longest continuously family owned and operated winery. Today, the winery is owned and managed by the fourth and fifth generations of the Wente family.

This past year, Wente redesigned the packaging for its portfolio of wines, and updated its fine dining restaurant, now called the Vineyard Table and Tasting Lounge, placing more of an emphasis on the wine and food tasting experience.



Located just east of San Francisco in Livermore Valley, Wente Vineyards is recognized as a premier destination, providing guest experiences including fine dining, concerts and championship golf. The winery sees 350,000 visitors each year at its property. Brands include Wente Vineyards, Murrieta's Well, Hayes Ranch Wines and entwine. One of Wente's newest brands is Ravel and Stitch Wines, a Central Coast Cabernet Sauvignon.

The winery also produces bulk and custom crush wine for other wineries. Wente farms approximately 3,000 acres of estate vineyards in Livermore and Monterey and continues to replant existing vineyards as well as plant new ones in order to fuel the company's growth.

Wente spearheaded a community-inspired initiative called Make  $\mathsf{Time}^{\mathsf{TM}}$ , aimed at inspiring people to unplug from their screens, create their own moments and focus on what matters most—each other.

### **31. Terlato Wine Group**

Sandra LeDrew, President and Chief Operating Officer ANNUAL U.S. CASE SALES VOLUME: 650,000 ANNUAL GLOBAL CASE SALES VOLUME: 2 million EMPLOYEES: 263 (84 in U.S. and 179 internationally)

Established in 1938, family owned and operated Terlato Wines continues to innovate.

The latest example is Dueling Pistols, a sub-brand of one of the company's highest performing brands, The Federalist. Dueling Pistols, which consists of two red blends of "competing varieties" (one equal parts Syrah and Zinfandel, the other equal parts Cabernet Sauvignon and Petite Sirah), incorporates modern technology into its package design in



order to reach its target audience. Consumers can plug into podcasts that describe the historical fiction behind the duel depicted on the label as well as learn inform listeners how the dueling varieties work together inside the bottle with an in-home tasting guide.

Big Max, another new brand from Terlato, priced above \$20, is a 100 percent Cabernet Sauvignon sourced primarily from California's Central Coast. The brand story involves Big Max, a brown bear spotted in California in the 1960s. Appropriately, the red wine is billed as having a big and bold flavor profile.

Back in 2016, the Terlato family purchased Klipsun Vineyard in Red Mountain, Wash. In Sept. 2019, the company officially announced the launch of its first vintage of new luxury Cabernet from the vineyard. Retailing for \$150, Terlato touts that the 2016 Klipsun Cabernet brand has limited availability with just 1,000 six-pack cases. Retired Chimney Rock winemaker, Doug Fletcher, is the consulting winemaker for the brand.

Terlato is also launching a new brand sourced from its 66-acre Mee Lane Vineyard in Napa Valley, while ramping up consumer experiences at Rutherford Hill Winery in Napa and Sanford Winery in Santa Barbara.

The Terlato family entered the wine business more than 75 years ago with a single retail store in Chicago. They went on to become major distributors in Illinois, moved on to importing and exporting wine, and eventually became winery owners and vineyard developers. The family's distribution business was sold in 2002. Today, the company focuses on sales and marketing, operating five divisions which sell roughly 2 million cases of wine and spirts each year.



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### 32. K Vintners

**Charles Smith**, founder Anna Moser, President

ANNUAL U.S. CASE SALES VOLUME: 650,000 cases

**EMPLOYEES:** 53

At the end of 2019, K Vintners launched POPUP, a sparkling wine priced at \$14.99, featuring a pop-off bottle cap and a colorful pop-art inspired label—the first wine from Charles Smith to feature a full color label.

Anna Mosier joined K Vintners as president in June 2019, leading the entire Wines of Substance portfolio of K Vintners, SIXTO, ViNO CasaSmith,



Substance and B. Leighton. She was previously vice president of finance for E. & J. Gallo's premium wine business and held prior roles at Gallo, including vice president of sourcing and co-manufacturing and director of finance for the value wine business.

Charles Smith, a former rock band manager, has had an amazing ride since moving to Walla Walla, Wash., and releasing 330 cases of his first wine in 2001—the 1999 K Syrah. Three years ago, Smith sold five brands (Kung Fu Girl Riesling, The Velvet Devil Merlot, Boom Boom! Syrah, Eve Chardonnay and Chateau Smith Cabernet Sauvignon) to Constellation Brands for approximately \$120 million. The deal included no assets.

Smith also has a joint venture with winemaker Charles Bieler, in partnership with Trinchero Family Estates, called Charles & Charles. Currently, Smith makes wines at four facilities. His newest winery is in Seattle, called Jet City, where he makes his higher-end wines.

### 33. Riboli Family Wines

Steve Riboli, Vice President

Annual U.S. Case Sales Volume: 625,000

Annual Global Case Sales Volume: 2.4 million

Stefano Riboli, the patriarch of Los Angeles' San Antonio Winery, passed away at his home on July 3, 2019. He was 97. Riboli was the nephew of Santo Cambianica, who founded San Antonio Winery in 1917.

The Riboli family has operated the San Antonio Winery in Los Angeles for more than 100 years. During Prohibition, the winery made sacramental wine, a niche that is still important to the winery. Fine wine labels include Maddalena Wines,



San Simeon, Riboli Family Wine Estates, San Antonio Winery, Opaque and Windstream.

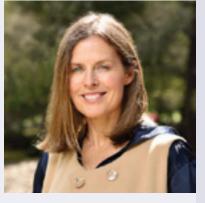
Riboli Family Wines created Stella Rosa 17 years ago, an imported, low-alcohol, semi-sweet sparkling wine from northern Italy. It has been reported that Stella Rosa is now the third-largest imported wine brand in the U.S. overall after [yellow tail] wine and Cavit Collection.

The Riboli family expanded in Paso Robles a few years ago, constructing a new winery and planting additional vineyard acres. The family farms about 1,000 acres of vineyards: more than 300 acres in Monterey, 700 acres in Paso Robles and 16 acres in Rutherford. They own three tasting rooms: one in Los Angeles, one in Ontario and one in Paso Robles.

# 34. Domaine Chandon Estates & Wines (Moët Hennessy USA)

Susan Caudry, Estate Director, Chandon California ANNUAL U.S. CASE SALES VOLUME: 625,000 (WBM Estimate, includes Newton)

Napa Valley's Domaine Chandon is part of Estates & Wines, the wine division of The Moët Hennessy Wine Division. In addition to U.S. brands Domaine Chandon and Newton Vineyard, Estates & Wines also owns Cloudy Bay Vineyards from New Zealand, Terrazas de los Andes and Cheval des Andes from Argentina and Bodega Numanthia from Spain.



Chandon continues to build on its legacy with both sparkling and still wine. In late 2017, the company purchased 60 percent of Colgin Cellars' Napa Valley winery from owners Ann Colgin Joe Wender. During that same time, Newton Vineyards introduced three single-vineyard Cabernets (from Spring Mountain, Yountville and Mt. Veeder) as permanent additions to its line.

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## 35. JaM Cellars (John Anthony Family of Wines)

John Anthony Truchard, Founder and CEO ANNUAL U.S. CASE SALES VOLUME: 600,000 EMPLOYEES: 50

JaM Cellars, part of John Anthony Family of Wines, released the inaugural vintage of Butter Chardonnay in 2010 and today it is one of the fastest growing domestic Chardonnays in the U.S. market. Other popular JaM products include California Candy Dry Rosé, a Rosé of Syrah and Grenache, Toast Sparkling and JaM Cabernet Sauvignon.



Besides JaM Cellars, the John

Anthony Family of Wines portfolio includes John Anthony Vineyards and Farm Napa Valley. Both John Anthony Vineyards and JaM Cellars operate tasting rooms in downtown Napa.

Second-generation Napa Valley vintners John Anthony Truchard and his wife Michele are the "J" and "M" in JaM Cellars. The couple recently signed a purchase agreement to acquire the Napa Valley Opera House for \$4.2 million.

John Anthony Truchard started a vineyard management business in the mid-1990s, growing grapes for other wine producers. He eventually saved enough money to plant his own grapes and celebrated his first vintage in 2003, opening JaM Cellars in 2008.

### **36. Mesa Vineyards**

Patrick Prendergast, Owner ANNUAL U.S. CASE SALES VOLUME: 550,000

Mesa Vineyards was founded in Fort Stockton, Tex. in 1984, built by a French company with the support of The University of Texas System, University Lands Office. Pat Prendergast, a veteran of E. & J. Gallo, purchased the winery in 2005. Jean-Michel Duforat, executive manager of Ste Genevieve Winery, has been with the winery since its inception.

Ste Genevieve is the main brand, accounting for nearly 400,000 cases annually, and the winery functions as a custom crush as well. Three-quarters of Ste Genevieve's sales are within Texas and about 60,000 of its annual case production is Texas-appellated, so the winery has considerable room to grow outside of the state. The brand produces everything from Chardonnay, Merlot and Cabernet Sauvignon to Sweet Moscato and red and white blends simply labelled "Red" or "White."

### **37.** Scheid Family Wines

Heidi Scheid, Executive Vice President Annual U.S. Case Sales Volume: 500,000

The Scheid family owns 11 vineyards along a 70-mile spread of the Salinas Valley in California's Central Coast, farming 4,000 acres of grapes, a third of which is used for its own wine brand, selling the rest to other wine producers. Scheid Family Wines has its own state-of-the-art winery with a crushing capacity of 30,000; it doubles as a custom crush facility as well as houses a more intimate



winery where small-production wines under the Scheid label are made.

Scheid was small brand for many years, but started building up business in the national marketplace in 2011, focusing on its national label, District 7, which includes a Pinot Noir, Cabernet, Chardonnay and Sauvignon Blanc. Today, Scheid Family Wines' nationally distributed portfolio also includes Scheid Vineyards, Metz Road, VDR Wines, Stokes' Ghost, GIFFT Wines (by Kathy Lee Gifford), Ranch 32 Wines and Ryder Estate Wines. Additionally, Scheid Family Wines produces more than 20 regionally distributed brands for specific clients or distributors.

### **38. Michael David Winery**

Michael and David Phillips, Co-Owners ANNUAL U.S. CASE SALES VOLUME: 500,000 EMPLOYEES: 180

Located on the west side of Lodi, California, Michael David Winery is run by two brothers (Michael and David Phillips) from a family that has farmed in Lodi for five generations. The winery operation started in 1984 in an old hay barn and was originally named Phillips Vineyards. That changed in 1999 after legal disputes over the name with R.H. Phillips Winery (now closed) and Phillips Distributing in Minnesota. The winery then became Michael David Winery.

Currently, Michael David Winery is completing an expansion of its Lodi production facility with new offices,

additional tanks, presses and infrastructure, along with the new Phillips Farms Café and Michael David tasting room.

First released in 2002, Michael David's popular 7 Deadly Zins started with an initial release of 700 cases of the 2000 vintage. The wine was named one of *Wine Business Monthly*'s Hottest Small Brands in 2004.



Michael David Winery sold the 7 Deadly Zins Lodi Zinfandel brand to The Wine Group in 2018, turning its attention to Freakshow, Earthquake, Inkblot, 6th Sense, Incognito (for The Kroger Co.), Lust, Rapture, Gluttony, Rage, among others.

To capture their target audience, the recently began using augmented reality on the Freakshow label: The Freakshow Maskerade app features six face-changing characters, enticing customers with three additional mystery characters they can unlock by scanning Freakshow wine bottles.

In 2017, Michael David purchased a winery in Geyserville from Silver Oak Cellars. The sale provided Michael David its first property in the North Coast region. It is permitted for 70,000 cases annually and has a 12-acre vineyard of Cabernet Sauvignon grapes. The plan is to create a North Coast brand for the Michael David Winery and release Sonoma County-appellated wines in the future.

# 39. Ferrari-Carano Vineyards and Winery

Rhonda Carano, Senior Executive Officer and Manager ANNUAL U.S. CASE SALES VOLUME: 480,000

Ferrari-Carano Vineyards and Winery, which owns roughly 1,900 acres of vines across three California counties, has become a leading producer with wine made at its Dry Creek Valley winery in Sonoma. While it's predominantly known as a white wine house, Ferrari-Carano continues to focus on Cabernet Sauvignon and Sangiovese. The winery recently hired Thomas Rivers Brown as a winemaking consultant for its premium Cabernet.



Rhonda Carano, co-founder of Ferrari-Carano Vineyards and Winery, alongside her late husband Don Carano, assumed the position of senior executive officer and manager for the Ferrari-Carano family of brands after Don passed away in Oct. 2017.

The Caranos fell in love with Sonoma wine country in the late 1970s, when they frequented the area to to source wine for their hotel and casino, Eldorado Resort Casino, which they co-managed from its inception in 1981. Rhonda Carano brings 40 years of experience to her newest position, having worked in business management, marketing, advertising and creative design for Eldorado Resorts Inc., as well as Lazy Creek Vineyards, Seasons of the Vineyard Tasting Bar and Boutique (Ferrari-Carano's tasting lounge in Healdsburg, Calif.), Vintners Resort and the resort's restaurant, John Ash & Co.

### **40. Oliver Winery & Vineyards**

Bill Oliver, CEO

ANNUAL U.S. CASE SALES VOLUME: 480,000

Founded by Indiana University law professor William Oliver, Oliver Winery is the largest winery in Indiana. Oliver was instrumental in getting the Indiana Small Winery Act of 1971 passed into law.

Oliver Winery opened to the public in 1972. Today, it offers a huge variety of wines, growing hybrids, native grapes and vinifera on its own 40-acre Indiana vineyard, as well as bringing in grapes from California, Oregon and a number of other regions. In addition to traditional wine styles, Oliver Winery also has an extensive list of honey wines and a few hard-fruit ciders.

Oliver Winery is a major player in the world of sweet wines, with recent product introductions such as Apple Pie (100 percent apple wine), Cherry Moscato and a whole host of other semi-sweet, semi-dry and dessert wines. While Oliver Winery does produce dry wines as well, last year, the company capped a three-year rebranding and redevelopment project, focused on relevant products that are well branded—that aren't Chardonnay or Cabernet.

### 41. Duplin Winery

David G. Fussell, Jr., Owner
ANNUAL U.S. CASE SALES VOLUME: 450,000

Many people don't realize there's a winery in North Carolina making more than 450,000 cases each year, but Duplin Winery has been focused on the Muscadine vines that are native to the state for decades. In fact, Duplin Winery is the oldest and largest winery in the South.

Duplin began in the early 1970s with 20 acres of Muscadine vineyards planted as a farming investment when demand and prices were high for the variety. By the time the vines were producing, however, prices plummeted as a tax incentive for farmers to grow those grapes evaporated.

Facing a loss, Duplin Winery founder Dave Fussell, Sr. turned to selling finished wines. The first vintage was in 1975. Over time, the winery expanded. It now produces 40 wines and farms more than 1,200 acres of grapes between estate vineyards and 49 contracted growers across four states. Leading wines include Hatteras Red (a sweet red Muscadine), Magnolia (a sweet white Muscadine) and Scuppernong (sweet white table wine).

By 1983, production levels reached 200,000 gallons per year. However, the rest of the decade would prove disastrous for the winery. Changes in tax laws and new legislation resulted in plummeting sales. The third generation took the helm at Duplin Winery in the early 2000s. Most recently, the winery added a new bottling line at its Rose Hill, N.C. production facility, increasing it bottling capability from 6,000 bottles per hour to 9,000 bottles per hour.

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### **42. Hahn Family Wines**

Tony Baldini, President

ANNUAL U.S. CASE SALES VOLUME: 450,000

EMPLOYEES: 75

Hahn Family Wines is a family owned winery located in the Santa Lucia Highlands appellation of Monterey County, Calif. Nicky and Gaby Hahn first purchased land in Monterey County in the late 1970s and began winemaking in the 1980s. Nicky Hahn is recognized as one of the leaders in establishing the Santa Lucia Highlands as an AVA. He passed away two years ago in Zurich, Switzerland. He was 81.



Today, Hahn Family Wines owns more than 650 acres, making it one of the largest owners of planted vines in the region. The winery recently relaunched its premium tier with all-new packaging and continues to grow the Hahn SLH and Smith & Hook brands. It also owns two tasting rooms, one at the Soledad winery and another in downtown Carmel.

Hahn Family Wines brands include Hahn, Hahn Estate, Hahn SLH, Lucienne, Smith & Hook and Boneshaker, an old-vine Lodi Zinfandel.

### **44. Scotto Family Cellars**

Anthony Scotto III, CEO

Annual: U.S. Case Sales Volume: 390,000

EMPLOYEES: 50

The family behind Scotto Cellars has been involved in the wine business for five generations, although the business in its present form really started about 15 years ago. Anthony Scotto III started Scotto Cellars in its current iteration with his father (Anthony Scotto II) in 2003. But the family has been in the wine business since the 1940s, when the original Anthony Scotto, along with his brother Sal, founded Villa Armando—a 60-year successful jug wine brand. The Scotto



family still produces a 4-liter jug wine that is sold in stores in New York, New Jersey, Connecticut, Rhode Island and Massachusetts.

Although the Villa Armando label is still sold in the U.S. market, the core of the Scotto Family Brand is with its newer labels: Cellars, Heavyweight, Napa by N.A.P.A, Scotto Family Cellars and A&D.

The company operates a winery in Lodi, Calif., as well as a tasting room in the city's downtown. It also conducts operations out of Sera Fina Cellars in Plymouth and Moss Creek Winery in Napa as part of the Scotto Family Cellars portfolio.

### **43. Union Wine Company**

Ryan Harms, Founder & Owner Annual U.S. Sales Case Volume: 400,000 EMPLOYEES: 30

Union Wine Company has grown quite a bit since it was founded in 2005, due in large part to the Underwood brand, which was one of the first wineries to package wine in cans. Other key Union Wine Company brands include Kings Ridge and Alchemist, and the company also owns Amity Vineyards, one of Oregon's pioneering commercial wineries.



Union Wine Company now owns a high-speed canning line and sells wine in 49 states and 12 countries and employs six regional sales managers. Ryan Harms created Union Wine Company after working in winemaking roles with Bergström Wines, Rex Hill and Torii Mor Winery.

### 45. Purple Wine + Spirits

Derek Benham, CEO

Annual U.S. Sales Case Volume: 375,000

EMPLOYEES: 160

Purple Wine + Spirits, previously known as Sonoma Wine Company, produces wine under the Raeburn Winery, Calista Wines, Flint & Steel Wines, Avalon Winery Inc., Four Vines Winery and Scattered Peak brands. The company makes more than 2 million cases of wine a year



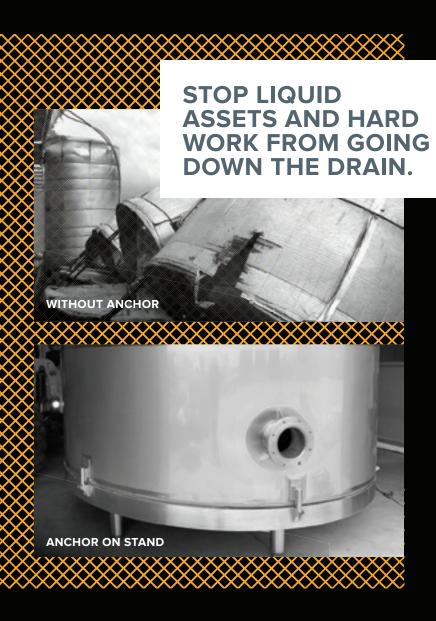
for dozens of clients on a contract basis, although it has the capacity to produce up to 4 million, via its three North Coast wineries.

Derek Benham started Purple Wine Co. in 2001, when his brother, Courtney, and he sold their Blackstone Winery brand to Constellation Brands, reportedly for \$144 million. Benham built Purple Wine largely with Mark West Wines, as well as the Avalon Winery Inc., BEX Winery, Blue Jean and Rock Rabbit Winery brands, which were eventually joined by Four Vines Winery in late 2011. In 2012, Mark West reached 600,000 cases a year, or more than half of Purple Wine's production—and that's when Benham decided to sell the label to Constellation.

Since selling the Mark West Wines brand to Constellation Brands, Purple Wine + Spirits has been regrouping and laying out the course for the future, with an eye toward new brands, including a foray into craft spirits. Its sister company, Graton Distilling Company, makes D. George Benham's Gin and recently launched a craft whiskey, Redwood Empire Whiskey.

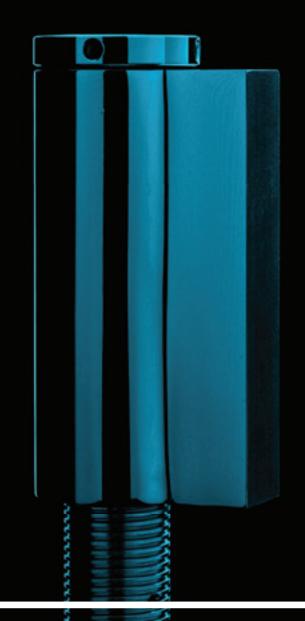
The company recently moved its headquarters from Graton to Petaluma, Calif. It now conducts business out of a 13,000 square-foot commercial complex at the Foundry Wharf.

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### **46. Crimson Wine Group**

Jennifer Locke, CEO

ANNUAL U.S. CASE SALES VOLUME: 375,000

Jennifer Locke joined Crimson Wine Group as chief executive officer in Dec. 2019, replacing Patrick DeLong, who

left Crimson after serving as CEO since 2014. She was previously senior vice president of the DTC team at Treasury Wine Estates in the Americas.

Based in the Napa Valley, Crimson Wine Group owns more than 870 acres of vineyards across five regions, including Pine Ridge Vineyards in Napa, Seghesio Family Vineyards in Healdsburg, Chamisal Vineyards in San Luis Obispo, Archery Summit Winery in Oregon and Double Canyon Winery in Washington.

The company was founded by Ian Cumming and Joseph Steinberg, founders of Leucadia National Corporation, now Jefferies Financial Group Inc., a conglomerate and investment holding company.

Today, Crimson's focus is on representing each of its wineries as best of class or the benchmark for their respective regions and specific varieties.

### **47. Castle Rock Winery**

Greg Popovich, Founder and President ANNUAL U.S. CASE SALES VOLUME: 360,000 EMPLOYEES: 11



Castle Rock Winery just released a 2017 Reserve Napa Valley Cabernet, its first Napa Cabernet release in seven years. Pinot Noir remains Castle Rock's flagship, representing 65 percent of annual sales. Castle Rock sells limited quantities of many different appellation-specific wines, including Merlot from Napa Valley and Pinot Noir from the Russian River. Castle Rock's success was all about timing. The brand started in 1994 when many in the trade were emphasizing more expensive wines, so it was well positioned when the emphasis soon shifted to value. The brand's focus on Pinot Noir was also fortuitous, as the popularity and sales of the variety surged in the early 2000s as Castle Rock continued to develop as a business. The winery is now focusing on expanding into the national retail chains, as well as cruise lines and airlines.

### 48. Sonoma-Cutrer Vineyards

Mick Schroeter, Winemaking Director ANNUAL U.S. CASE SALES VOLUME: 50,000

Brice Cutrer Jones launched Sonoma-Cutrer Vineyards in 1981. Twenty-five years later, he sold it to Brown-Forman Wines. Based in Louisville, Kentucky, Brown-Forman is part of Brown-

Wines. Based in Louisville, Kentucky, Brown-Forman is part of Brown-Forman Corporation, which markets Jack Daniels, El Jimador, Finlandia Vodka, among other spirit and wine brands. Sonoma-Cutrer is one of the most successful Chardonnay brands of all time. Sonoma-Cutrer Russian River Ranches Chardonnay is regularly placed in the number one or two position in *Wine & Spirits Magazine's* Annual Restaurant Poll.

### **49. Rutherford Wine Company**

Marko Zaninovich, owner

ANNUAL U.S. CASE SALES VOLUME: 350,000

This year, Keith LaVine joined Rutherford Wine Company as general manager, domestic operations, coordinating the domestic and private label business. Rebecca Geschwender joined Rutherford Wine Company as vice president of sales, national brands.

Based in Napa Valley's Rutherford appellation, Rutherford Wine Company's portfolio includes Rutherford Ranch, Scott Family Estate, Predator, Rhiannon, Lander-Jenkins, Silver Buckle, Four Virtues and Round Hill. These wines come from a family who is committed to sustainability, both at the winery and in the vineyard. The winery is certified as California Sustainable Winegrowing (CCSW) and the estate vineyards are a combination of sustainable, organic and fish friendly certified.

Rutherford Wine Company is owned by Marko Zaninovich, who also owns ASV Wines in San Martin, Calif., a producer of bulk wines, private label wines, as well as a provider of bottling, packaging and shipping services. The Zaninovich family also owns Sunview Vineyards, one of California's largest table grape-growing operations.

### 50. A to Z Wineworks

**Sam Tannahill**, Founder and Director of Winemaking & Viticulture **ANNUAL U.S. CASE SALES VOLUME:** 325,000

A to Z started in 2002, founded by Deb Hatcher, Bill Hatcher, Sam Tannahill and Cheryl Francis, when the group purchased bulk wine to produce a blend that was honored by *Food & Wine Magazine* as the best American Pinot Noir under \$20. Then they did it again, and again, and again. Recognition grew and production did too. In 2006, the group brought in Oregon wine



veteran Michael Davies as winemaker, and also partnered with Gregg Popovich, head coach and president of the NBA's San Antonio Spurs, to buy a production facility, REX HILL.

The company has worked with more than 100 vineyards across Oregon, offering grape growers assistance in achieving sustainability certifications. The company leases or owns about 300 acres of vineyards, sourcing from more than 4,000 acres within the Oregon state.

A to Z is distributed in 50 states and is still majority-owned by the four founding partners. The winery recently released its Bubbles wine, a sparkling Rosé, in 250 ml cans after having debuted the product on the market in crown-capped glass bottle back in 2017.

Production at A to Z dropped in 2019 as yields fell, largely a result of big temperature swings during budbreak.

This year, A to Z Wineworks promoted Amy Prosenjak to president and CEO and Bill Hatcher transitioned from CEO to chair the board. Prosenjak joined A to Z as CFO after its acquisition of REX HILL winery in 2007. **WBM** 

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# STATE OF DISTRIBUTION

### Big Distributors Harness Big Data

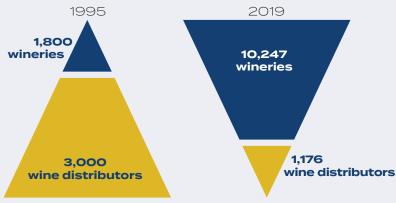


### Peter Mitham

Peter Mitham brings more than 20 years' experience writing about business, agriculture and wine to Wines Vines Analytics. He was previously the Northwest correspondent for Wines & Vines, and contributed to Opus Vino (2010) and 1,000 Great Everyday Wines (2011). College experience in the hospitality sector as well as a stint as associate editor of Vendor, a magazine for liquor retailers in Western Canada, round out the background he brings to his current role.

IT'S AN OFT-REPEATED fact as wineries consider their marketing options: Consolidation among distributors over the past 25 years has reversed the balance of power in the market and left small- to mid-sized wineries with limited options. The country's biggest distributors have greater reach and can handle more products, but with limited capacity for niche offerings. Southern Glazer's Wine & Spirits (Southern) and Republic National Distributing Co. (RNDC) are large enough to put the products they handle in front of almost the entire legal drinking age population, and each represents more than 1,000 of the country's 10,247 wineries.

#### **CONSOLIDATION OF U.S. WHOLESALERS**



SOURCE: DISTRIBUTOR SOURCES AND WINES VINES ANALYTICS. AS OF SEPTEMBER 2019.

Consolidation in any other category of consumer goods would lead to the centralization of distribution and a streamlining of real estate. But alcohol, and wine in particular, isn't like any other product. Its distribution faces a high degree of regulation and compliance checks, and the product itself is vulnerable to shipping conditions. Moreover, the rules keep evolving as do consumer tastes. Keeping pace with the expectation of just-in-time delivery requires steady investment in systems that can manage not just inventory and buyer relationships, but also the associated data it all generates.

### **Warehouse Efficiencies**

Unless wineries engage in direct shipping—a business now worth more than \$3 billion a year, or more than 6 percent of total domestic wine sales, according to **Wines Vines Analytics/ShipCompliant**—most look to distributors to make sure their wines reach buyers. Under the three-tier system, bottled wines typically go to a bonded warehouse under the control of the winery before being sold and transferred to a distributor.

The distributor, in turn, manages the flow of wines to retailers. (An exception is Washington state, where wineries can supply retailers directly, though most opt to work with distributors as a single point of purchase.) Retailers also hold a certain volume of inventory, meaning each tier of the distribution chain also engages in warehousing.

Tallying up all that space is no easy task, but it easily numbers in the tens of millions of square feet. The largest distributor, Southern, operates 14.5 million square feet of warehouse space across 42 distribution centers.

#### **DISTRIBUTORS BY STATE**

California	152
New York	103
Illinois	63
Florida	52
Virginia	48
Texas	40
Massachusetts	38
Washington	37
North Carlolina	37
Oregon	36
Colorado	34
Maryland	33
Michigan	29
Ohio	33
All others	441

SOURCE: WINES VINES ANALYTICS

The steady consolidation of distributors doesn't seem to have diminished the holdings, either. While some consolidation in space has occurred—Breakthru Beverage Group, for example, built a new state-of-the-art, warehousing facility in Denver in 2017 that brought three offices under one roof—the overall count of distributor premises hasn't fallen. The top 10 distributors still maintain more than 350 offices nationwide.

But as distributors have grown, routing incoming product to buyers has faced increasing demands, both from regulators and consumers. It can seem like a jungle out there, and the word on the top of everyone's mind is "Amazon." Online ordering and delivery of orders within 24 hours have raised the expectations

of consumers, forcing companies to rethink every aspect of the sales and distribution process.

Yet the larger the distributor and the longer its reach, the greater the potential for error. When a case of wine leaves the cellar, dozens of permutations and combinations exist for its route to market through dozens of warehouses to the hundreds of stores served by a major distributor. While centralized distribution is possible for some products, it's more difficult for alcohol because of record-keeping requirements; moreover, the product has to be kept at a controlled temperature. It all amounts to a lot of data. This has created opportunities for a host of companies to help wineries and wholesalers manage relationships with customers, delivery companies and the government.

#### **Small-scale Options**

Distributors now have opportunities to tap into similar systems to connect them with both suppliers and customers, whether they're retailers, restaurants or other on-premise accounts. These include offerings from **Seven-Fifty Technologies Inc.**, which was founded in 2011 and is now a partner of Breakthru Beverage Group and **Liberation Distribution Inc.** (LibDib), which launched in 2017 and recently entered a partnership with RNDC.

LibDib founder and CEO **Cheryl Durzy** says the company now operates in four states and handles 5,000 products, primarily small-volume craft beverages. But rather than having its own warehouses and staff, it uses its proprietary software to operate as a distributor within a distributor. It takes orders but subleases space within established beverage warehouses, operating from third-party warehouses in California and New York (its largest markets) and a **Capitol-Husting Co.** warehouse in Wisconsin. It's now expanding into RNDC's network of 33 warehouses across the country, starting in Colorado. "That's huge because not every state has a TPL option," Durzy said.

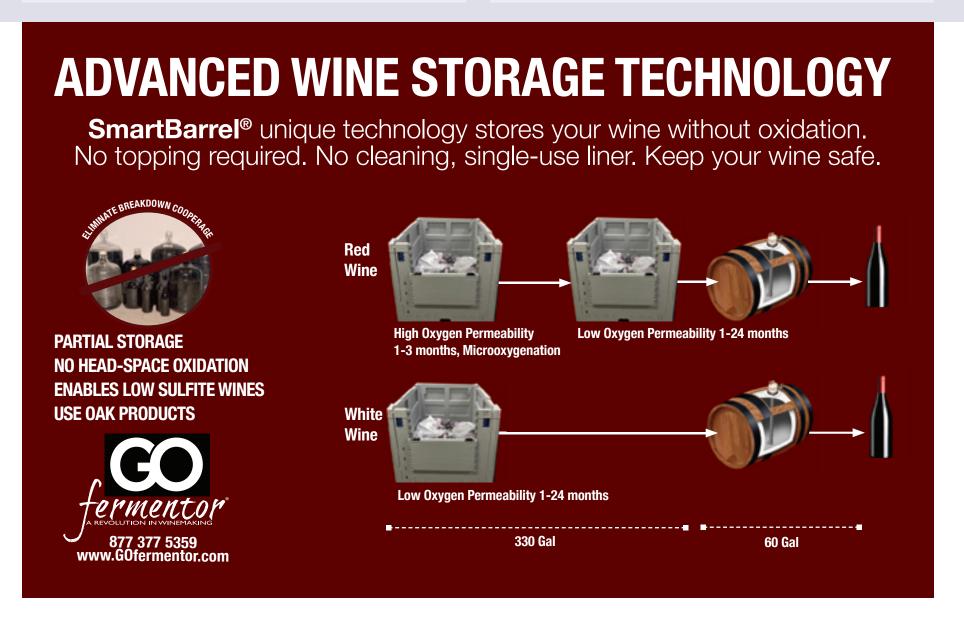
The arrangement with RNDC makes use of the bigger company's infrastructure while RNDC benefits by being able to deliver small-volume products that might otherwise get lost in the hundreds of large-volume products it handles. It has also taken the sales platform LibDib developed for its own business and customized it for its own purposes as eRNDC. LibDib's space in each warehouse is walled off and staffed by contract workers (in the case of Colorado, hired from RNDC). Small batches of product—as little as one case—move through in less than 24 hours.

"It's good for them because distributors take a lot of bets on new products without knowing how they're going to sell," Durzy said. "We can act as an incubator for that." Once the products have a toehold in the market, LibDib can transfer them to RNDC, while RNDC directs smaller producers to LibDib, which intends to grow its business. (Durzy declined to give numbers on current volumes, noting it's a private company.)

RNDC can also focus on handling the large-volume products, pallets of which dwarf the single cases that move through LibDib's space. But by improving ordering, tracking and the delivery process, it also builds trust in its systems and empowers its customers to know what to expect. SevenFifty is doing something similar with Breakthru, providing the platform that allows it to manage relationships with its suppliers and customers. As one company representative remarked, the more options there are, the more chances exist for something to go wrong.

Other companies are targeting the last mile, connecting product with consumers. Amazon has attracted a flurry of attention over reports of discreet storefronts attached to its warehouses that allow it to claim retailer status and so ship product to consumers within the state. This also positions it to leverage the recent loosening of shipping laws that allow retailers, like wineries, to ship across state lines.

The path has already been pioneered by **Drizly Inc.**, founded in 2012, which offers a sales platform that promises 60-minute delivery in select cities. The model depends on partnerships with local retailers that effectively become the micro-warehouses from which product is dispatched to buyers. **WBM** 



#### **Top 10 U.S. Wine Distributors**

#### Andrew Adams

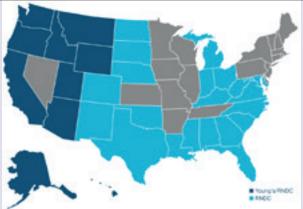
Andrew Adams is the editor of the Wine Analytics Report and was a writer and editor at Wines & Vines magazine from 2011 to 2018. Adams grew up in the city of Sonoma and graduated from the University of Oregon with a degree in journalism. In 2009, Adams left the newspaper industry for a harvest internship at Starmont winery in Napa. That internship led to a full time position in the cellar and laboratory where Adams worked for three harvests before joining the staff at Wines & Vines.

The biggest story in the world of wine wholesaling this past year was the megadeal that didn't happen. RNDC and Breakthru had announced plans to merge and form what would have been a national giant, with the reach and portfolio depth to compete directly with Southern, but the deal was quashed by the **U.S. Federal Trade Commission**. The companies cited a "protracted review process" in withdrawing their merger plans for review while the Feds cited concerns over higher prices and worse service for consumers and suppliers. RNDC did obtain federal approval for a partnership

with Young's Market Co. that solidified its No. 2 position on this year's list of Top 10 U.S. Wine Distributors. The list began in the pages of *Wines & Vines* magazine and has always been based on proprietary data from Wines Vines Analytics' Distributor Market Service, ranking wholesalers by the size, range and market share of their wine business alone. (Washington, D.C. has been included in the number of "states served" for wholesalers covering that market.)

#### STATE COVERAGE OF THE THREE LARGEST DISTRIBUTORS







Southern RNDC Breakthru

#### 1. Southern Glazer's Wine & Spirits

HEADQUARTERS: Miami, Florida

STATES SERVED: 45
OFFICES: 123

u.s. wineries represented: 1,108 chairman: Harvey Chaplin

**EXECUTIVE VICE CHAIRMAN:** Bennett Glazer

**CEO:** Wayne Chaplin **PRESIDENT:** Sheldon Stein

senior vice president, president of wine division: Mel Dick

Retaining its No. 1 position for the third consecutive year, Southern remains the largest wine distributor and largest beverage alcohol wholesaler in the United States. The private company is estimated to bring in nearly \$18 billion in annual revenues and is one of America's largest private companies, according to *Forbes* magazine. Since the 2016 merger of Southern Wine & Spirits and Dallas-based Glazer's, the combined company has only strengthened a dominant position in the wholesale business. In April, Southern launched a new B2B e-commerce portal called SGProof. com, designed to enable its clients with the ability to order and manage inventory as well as collect product information, reviews and scores from *Wine Spectator*, *Wine Advocate* and other publications. Southern also launched a new division focused on increasing its wine business in Canada and in October 2018 announced a renewed distribution agreement through 2024 with **Pernod Ricard USA**, the world's second-largest wine and spirits company.

#### 2. Republic National Distributing Co./ Young's Market Co.

HEADQUARTERS: Grand Prairie, Texas STATES SERVED: 33 OFFICES: 96 U.S. WINERIES REPRESENTED: 1,027 PRESIDENT AND CEO: Tom Cole

**EXECUTIVE VICE PRESIDENT AND COO:** Bob Hendrickson

cFo: Nicholas Mehall

While Republic National Distributing Co. may not have been able to merge with Breakthru, the company's expanded joint venture partnership with No. 4 Young's Market Co. was approved by federal regulators. In July, RNDC announced it would combine with Young's to form a company reported to be worth \$11 billion, serving 32 states and Washington, D.C. The expanded company is governed by a board composed of executives from both firms; RNDC manages all day-to-day operations. On Aug. 5, RNDC announced Young's would operate as a division of RNDC called RNDC West under the management of Jay Johnson, who has been with RNDC since 1991 and will now be based at the former Young's headquarters in Tustin, Calif., reporting directly to RNDC COO Bob Hendrickson. The expanded partnership is based on a joint venture first established in Arizona, the only state in which the two companies overlapped. On Sept. 4, the company also announced it had expanded its partnership with O'Neill Vintners & Distillers in Texas, Louisiana, Oklahoma and Indiana. O'Neill produces 950,00 cases of wine a year, according to the Wines Vines Analytics' winery database, and RNDC now represents the company's entire portfolio, including the Line 39, Robert Hall and Intercept brands in 17 states.

#### 3. Breakthru Beverage Group

**HEADQUARTERS:** New York, New York

STATES SERVED: 14
OFFICES: 41

**U.S. WINERIES REPRESENTED:** 688

co-chairmen: Charles Merinoff and W. Rockwell Wirtz

PRESIDENT AND CEO: Greg Baird

After being poised to be part of a company large enough to rival Southern Glazer's, Breakthru remains solidly in the No. 3 spot of the top U.S. wine distributors. Breakthru is the result of the 2016 merger between **Charmer Sunbelt** and Chicago-based **Wirtz Beverage**. In September 2018, Breakthru invested \$9.2 million Canadian dollars in **CannTrust Holdings Inc.**, one of Canada's top five suppliers of medicinal and newly legalized recreational cannabis. Breakthru formed a new subsidiary, **Kindred Partners Inc.**, to handle its Canadian cannabis business. Troubles at CannTrust led it to cease sales in July; Kindred has been freed from provisions that limited it to distributing CannTrust brands exclusively.

#### 4. Johnson Brothers Liquor Co.

**HEADQUARTERS:** St. Paul, Minnesota

STATES SERVED: 27
OFFICES: 37

U.S. WINERIES REPRESENTED: 420

**ceo**: Michael Johnson **coo**: Todd Johnson

Based in Minnesota and still owned by the same family that founded it in 1953, Johnson Brothers holds the No. 4 spot. The company announced an expansion into New Jersey in May 2019, a move that brought the number of states it served up to 27. In 2018, Johnson expanded its share of the Indiana market with its acquisition of part of Monarch's wine business, including E&J Gallo Winery, Terlato Wine Group, Treasury Wine Estates, Bogle Vineyards and others. According to the distributor, its growth has been supported by a new distribution center as well as a new data center that was built from the ground up, bringing all of the company's data storage, computing and networking together into one system. "Today, technology is critical to our business, from providing tools to our sales consultants, sharing market trends with our customers, as well as improving the efficiency of our distribution operations," said COO Todd Johnson in a press release on the investment in technology.

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#### **5. Winebow Group**

HEADQUARTERS: Glen Allen, Virginia

STATES SERVED: 20
OFFICES: 22

u.s. wineries represented: 642

PRESIDENT AND CEO: Dean Ferrell

In 2018, Winebow Group expanded into Oregon, thereby establishing distribution across the western United States and moving it from the No. 10 spot to No. 5 on that year's Top 10 U.S. Wine Distributors list. This year, the distributor stayed steady at No. 5 and claims to distribute to more than 70 percent of the total U.S. wine market. At the start of 2019, the company rebranded its various divisions, which included The Henry Wine Group in California, Noble Wines in Washington state and Stacole Fine Wines in Florida, under the unified Winebow brand. The move also included merging Martin Scott Wines in New York and New Jersey into Winebow operations. In the past year, the company also announced it expanded distribution of Hahn Family Wines into New York and Rombauer Vineyards into Florida.

#### 6. Empire Distributors

**HEADQUARTERS**: Atlanta, Georgia

STATES SERVED: Colorado, Georgia, North Carolina, Tennessee

offices: 13

u.s. wineries represented: 608

President and CEO: David Kahn

Empire Distributors joined the Top 10 list in 2018 after its acquisition of Noble Selections in Colorado. The company was founded in 1940 by Max Kahn in Atlanta and grew to cover the entire state before expanding to North Carolina in the 1980s. While Empire is still managed by the third generation of the Kahn family, in 2010 it was purchased by the trucking and logistics firm McLane Company Inc., which is a subsidiary of Berkshire Hathaway.

#### **7.**Opici Family Distributing

**HEADQUARTERS:** Glen Rock, New Jersey

STATES SERVED: Connecticut, Washington, D.C., Delaware, Florida,

Maryland, New York, New Jersey

offices: 8

u.s. wineries represented: 205

**CEO**: Linda Opici **PRESIDENT**: Dina Opici

Moving into the No. 7 spot is **Opici Family Distributing**, which was No. 9 in its debut on the list in 2018. Based in New Jersey, the firm is now managed by the third generation of the Opici family after expanding up and down the East Coast through acquisitions. **Hubert Opici**, whose parents started importing wines in 1913 and then formed a distributor-ship after Repeal, died in September 2018 at the age of 102. In 2014, he won *Wine Enthusiast* magazine's American Wine Legend Award. The family has also developed its own California wine brands and imports multiple wines from Europe and South America through a separate company, **Opici Wines**.

#### 8. Heidelberg Distributing Co.

**HEADQUARTERS:** Dayton, Ohio **STATES SERVED:** Ohio and Kentucky

OFFICES: 7

U.S. WINERIES REPRESENTED: 87

co-chairmen: Al Vontz III and Vail Miller Sr.

ceo: Vail Miller Jr.

Midwestern distributor Heidelberg Distributing Co. was founded by Albert Vontz, whose son would later buy the Budweiser distributorship in Cincinnati in 1959 and the Dayton Budweiser business in 1961. Following that start, acquisitions and mergers increased the size of the company to where it is today, serving two states and employing more than 1,600 people. In 2008, the wine distributor Wine Trends merged with Heidelberg's fine wine division.

#### 9. Wine Warehouse

**HEADQUARTERS:** Los Angeles, California

STATES SERVED: California

offices: 2

u.s. wineries represented: 76 chairman and ceo: Jim Myerson

SENIOR VICE PRESIDENT: Linda Myerson Dean

PRESIDENT AND COO: Greg Akins

Wholly focused on California, **Wine Warehouse** was founded in 1973 by brothers **Bob** and **Jim Myerson**. The company is now owned by Bob Myerson's son and daughter **Jim Myerson** and **Linda Myerson Dean**. The company's president and COO, **Greg Akins**, who joined Wine Warehouse as a chain sales representative and worked his way up to the post of president in 2012, celebrated his 30th anniversary with the company in 2019.

#### 10. Martignetti Companies

**HEADQUARTERS:** Taunton, Massachusetts

STATES SERVED: Massachusetts, Maine, New Hampshire, Rhode Island,

Vermont offices: 3

**U.S. WINERIES REPRESENTED: 270** 

co-owners and co-presidents: Carmine and Carl Martignetti

Debuting on the list this year but no stranger to the distribution business, the Martignetti Companies began in 1908 with a grocery store in Boston's North End. The family would later secure the first beverage alcohol retail license issued in Massachusetts after Repeal and formed an import/distribution business as well. In 1986, brothers and current co-owners Carmine and Carl Martignetti took over the family business and soon after launched a series of acquisitions of other distributors throughout the Northeast. In 2009, the company acquired Commonwealth Wine & Spirits, which included the E&J Gallo Winery portfolio, and in 2015 the Martignettis bought Vision Wine & Spirits, which imports into 42 states. In 2016, the company's operations were consolidated into a 680,000-square-foot warehouse and office complex in Taunton, Mass.; the complex reportedly cost more than \$100 million. WBM







### 10,476 WINERIES

#### **Number of Wineries Reaches New Milestone**

Kerana Todorov

**Kerana Todorov** is staff writer/news editor at *Wine Business Monthly*. She can be reached at *ktodorov@winebusiness.com*.

**THE NUMBER OF WINERIES** in the United States continues to grow steadily, according to the latest statistics from **Wines Vines Analytics**.

There are more than 10,476 wineries in the United States, 4 percent more than a year ago. That number includes 8,922 bonded wineries and 1,554 virtual wineries in all 50 states and the District of Columbia. Most states have more wineries than a year ago, with the exception of the District of Columbia and seven states which experienced no change—New Mexico, North Dakota, Utah, Alaska, Delaware, Wyoming and Hawaii.

The number of wineries in Canada grew by 6 percent over the past year. The provinces of British Columbia, Ontario and Quebec had the most wineries. There were 324 wineries in British Columbia—or 2 percent more than a year ago. There were also 253 wineries in Ontario—or 5 percent more than a year earlier and 157 wineries in Quebec—or 21 percent more than a year earlier.

Within the U.S., the states with the most wineries were California, Washington, Oregon, New York and Texas.

California is home to 44 percent of the country's wineries—3,622 bonded and 993 virtual facilities make up the state's total of 4,615. Washington ranks right behind California with 812 wineries followed by Oregon, with 809 wineries. There were 411 wineries in New York, which include 384 bonded and 27 virtual facilities.

Since inception, the *Wines Vines Analytics* winery database has categorized wineries as Bonded or Virtual.

Bonded wineries hold a Bonded Permit issued by the TTB. Wines Vines Analytics define Virtual wineries as those that contract with bonded host wineries for production. Primarily located in established winemaking regions, Virtual wineries contract with custom crush facilities or other bonded wineries with excess capacity. See METHODOLOGY for details.

#### **California**

There is some debate about the future of the number of operations in the country's largest wine-producing state. Some say that the number of wineries in California will decrease. Others suggest that it will only continue to grow.

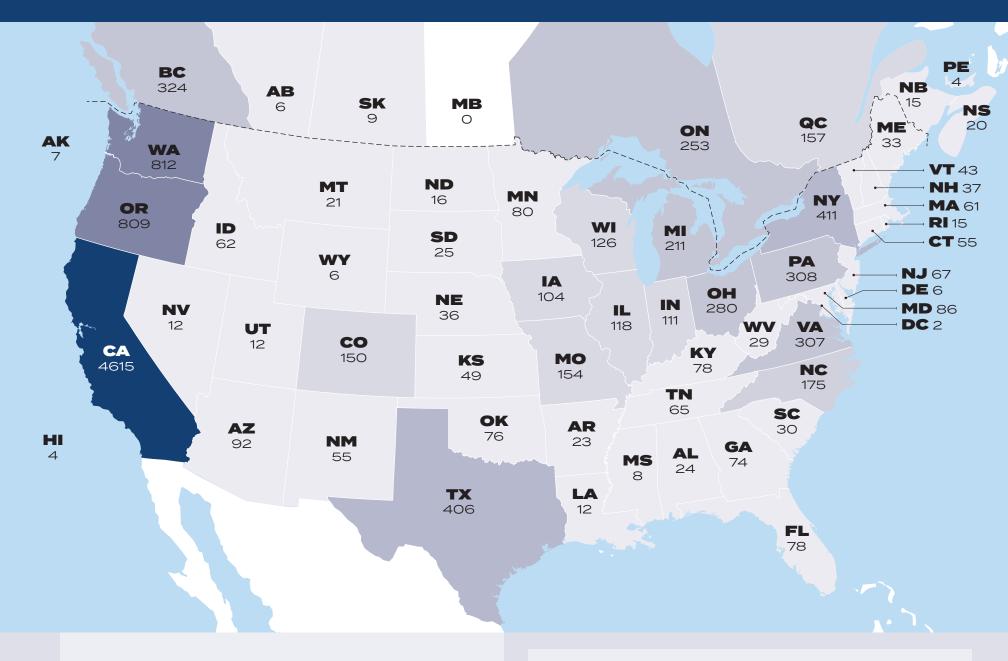
Wineries face a number of issues, depending on the jurisdictions where the companies are located. They also vie to grab consumers' attention. Pat Roney, chief executive officer and founding partner of Santa Rosabased Vintage Wine Estates, anticipates more wineries will open outside of California while the number of wineries inside California will decrease. The number of wineries in California "will decrease due to consolidations and fierce competition," Roney said.

#### **NUMBER OF U.S. WINERIES BY STATE**

Bonded, Virtual and Total U.S. Wineries (as of February 2020)

STATE	BONDED	VIRTUAL	TOTAL	STATE	BONDED	VIRTUAL	TOTAL
CA	3,622	993	4,615	MA	59	2	61
WA	772	40	812	СТ	54	1	55
OR	528	281	809	NM	53	2	55
NY	384	27	411	KS	49	0	49
TX	365	41	406	VT	42	1	43
PA	300	8	308	NH	37	0	37
VA	282	25	307	NE	31	5	36
ОН	270	10	280	ME	33	0	33
МІ	202	9	211	sc	26	4	30
NC	153	22	175	wv	29	0	29
МО	150	4	154	SD	22	3	25
co	145	5	150	AL	24	0	24
WI	125	1	126	AR	23	0	23
IL	113	5	118	MT	21	0	21
IN	110	1	111	ND	15	1	16
IA	102	2	104	RI	15	0	15
AZ	77	15	92	LA	10	2	12
MD	81	5	86	NV	10	2	12
MN	79	1	80	UT	11	1	12
FL	71	7	78	MS	8	0	8
KY	76	2	78	AK	6	1	7
ОК	67	9	76	DE	6	0	6
GA	70	4	74	WY	6	0	6
ИЛ	62	5	67	н	4	0	4
TN	60	5	65	DC	2	0	2
ID	60	2	62	total	8,922	1,554	10,476

WINES VINES ANALYTICS



#### Methodology

**Data sources:** Wine Business Monthly and Wines Vines Analytics database of North American wineries. Along with referencing federal permit holder data from the **Alcohol and Tobacco Tax & Trade Bureau** (TTB), proprietary research methods are utilized to ensure full coverage of wineries in the United States and Canada.

**Data period:** All data in this report reflects winery counts through February 2020.

Wineries included: U.S. and Canada winery counts represent grape and non-grape wineries. The winery database counts reflect winery closures as well as new winery openings. Multiple TTB permits or state permits held by a single winery are counted as a single winery in the winery database.

Bonded vs. Virtual: U.S. wineries are categorized as bonded or virtual in the winery database. Bonded wineries have been licensed by the TTB and are responsible for all production activities that take place on a winery's premises (including recordkeeping of all activities and filing reports to the TTB). The Wines Vines Analytics database defines a virtual winery as a winery that has a physical location (which may be shared with another winery), produces at least one brand and has its own management and winemaker. They use the services of a bonded host facility (winery or custom crush facility) to produce and bottle their wine. Canadian wineries are not broken into bonded and virtual categories because of their differing licensing regulations.

Anthony Truchard II, general manager at his family's Truchard Vineyards, which farms 270 acres and produces 20,000 cases of wine annually in Napa's Los Carneros district, does not expect many more wineries to open in the Napa Valley as the permitting process has become increasingly more difficult and much more expensive.

Truchard said that the agricultural side of the wine industry in Napa is sustainable as the majority of Napa has already been planted. While there may be an increase in the number of Napa Valley labels, there won't actually be much additional wine produced unless there is an exceptionally large vintage. "I believe Napa wines will always be sought after as Napa has a special place in the mind and heart of the consumer because of its long-standing reputation for quality in U.S. viticulture and winemaking," Truchard said.

**Bruce Cakebread**, co-owner and board member of his family's **Cakebread Cellars**, believes climate change may open up new possibilities for vineyard acreage in previously unplanted regions. "There has always been an extraordinarily strong gravitational pull to grow the best grapes, make the best wine and experience the joy of sharing that wine with family and friends that is unique, satisfying and difficult to compare to any other food or beverage products that you could produce," said Cakebread of Napa Valley's grape-growing and winemaking culture.

Karen MacNeil, author of *The Wine Bible*, said the number of wineries in California will continue to grow. "Although it's completely counterintuitive, I believe that the number of wineries will continue to increase," MacNeil said. "One would think that sky-high land prices, huge labor

problems and shrinking distribution channels would dissuade anyone from wanting to begin a winery. But owning a winery is a tangible part of the American dream, and part of our deepest desires to somehow reconnect with the land and with nature. The fact that people want to make wine in the face of huge obstacles is a testament to just how compelling wine is.

"The Napa Valley...will probably see somewhat slower growth because there's very little unforested available land left, and it's already a small place. But I'm sure there are a few proposals for new Napa wineries in the works right this minute," MacNeil added.

Acquiesce Winery owner and winemaker Susan Tipton expects more wineries to open in Lodi, which is already home to 387 wineries, according to the Wines Vines Analytics database. "Once a wine consumer visits our region, they are hooked," said Tipton, who produces 4,000 cases a year. "It's because Lodi reminds customers what the Napa Valley was like 30 years ago." She listed affordable prices, unpretentious wine tastings and other attributes as the reason for Lodi's optimistic future.

Tipton noted that more wineries will also bring more hotels, restaurants and tourism dollars to the region. "We have everything else in place here: a dedicated grower-funded winegrape commission, passionate family wineries, a charming downtown, bike trails, river access, 110,000 acres of winegrapes and amazing wines," Tipton said.

#### **Oregon and Washington**

Sally Murdoch, communications manager for the Oregon Wine Board, expects more wineries to open in Oregon but at a more moderate pace as the market absorbs new production and rebalances supply and demand. Oregon wine sales grew from \$550 million in 2017 to \$607 million in 2018, according to the trade association. The estimated value of Oregon's winegrape crop was \$208 million in 2018—or 8.8 percent more than in 2017, she said.

Heather Bradshaw, communications director at the Washington State Wine Commission, said the concentration of wineries is in Walla Walla and Woodinville though new hot spots are emerging, including the Columbia Gorge, Yakima Valley, Red Mountain and Lake Chelan.

**Ryan Pennington**, senior director of communications and corporate affairs at **Ste. Michelle Wine Estates**, noted that Washington state will see more winery businesses open due to, among other factors, the relatively accessible cost and availability of land. "The quality of Washington wines continues to attract consumer and investor interest, and the value and cost of entry are both very reasonable," he said.

Murdoch said Oregon welcomes the growth of the Washington wine industry, noting that increased interest in both states will build more awareness for wines from the Northwest around the world. The Oregon Wine Board and the Washington State Wine Commission are launching



"One would think that sky-high land prices, huge labor problems and shrinking distribution channels would dissuade anyone from wanting to begin a winery. But owning a winery is a tangible part of the American dream..."

-Karen MacNeil, author, The Wine Bible

the Pacific Northwest Wine Certification Program in Asia this month (February 2020).

"Plus, the two states share pockets of similar terroir," Murdoch added. Eastern Washington and southern Oregon are two regions where warmer-climate grapes, such as Cabernet Sauvignon, Merlot and Syrah, grow. "People may want to taste wines from both regions," Murdoch said.

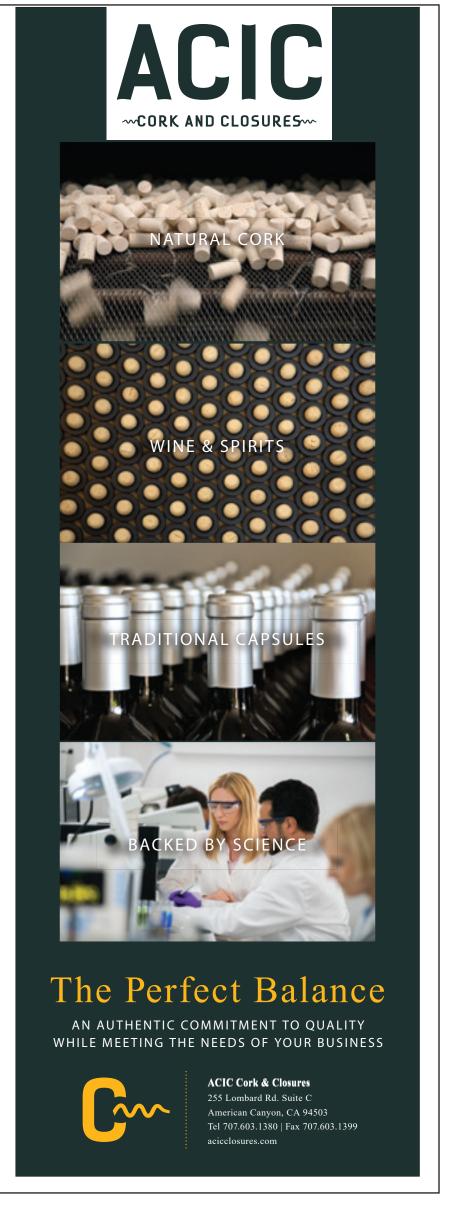
#### **New York**

New York state's wine and grape industries generate \$6.32 billion to the state economy, according to the 2019 Economic Impact Study of the New York Wine & Grape Industries commissioned by the New York Wine & Grape Foundation and Wine America. The industries create nearly 72,000 jobs and \$2.75 billion in wages, according to the report. The number of wineries in New York totaled 411 as of February 2020, 2 percent more than a year earlier, according to *Wines Vines Analytics*.

**Cornell University**'s research and support infrastructure has been key to the success of the wine industry in the state, particularly in the Finger Lakes. "We're a great place for cool-climate viticulture," said **Sam Filler**, executive director of the New York Wine & Grape Foundation in Penn Yan, N.Y.

Christopher Missick, owner and winemaker at Villa Bellangelo in Dundee, N.Y., anticipates more wineries will open in the state. Most of the visitors to Villa Bellangelo, which produces 6,000 cases of wine a year, come from New York, Ohio and Pennsylvania. Missick attributes the rise in wineries in the Finger Lakes area to a number of factors, including low vineyard land prices, which, he said, range between \$10,000 to \$25,000 an acre. He also cited tourism and the escalation of the local food movement; for residents of East Coast cities, like Rochester, N.Y., the Finger Lakes region is their closest wine country.

Missick and other East Coast wine industry professionals noted that the changing climate and increased severity of natural disasters have led those interested in entering the industry to consider alternative winegrowing locations. "The Finger Lakes is a fantastic alternative, with plenty of water and, generally, very strong growing seasons. We do have cold winters but, in the end, I think they contribute to the charm of this region, the sense of it being the frontier of American winemaking," observed Missick, a native Californian. "Should temperatures in the Central Valley of California continue to escalate and water issues continue to be problematic, the Finger Lakes will continue to be viewed as an amazing alternative location to growing a wine business."



#### Texas

The number of wineries in Texas reached 406 in 2019, 16 percent more than in 2018, according to Wines Vines Analytics. Of the 406 wineries, 365 were bonded.

Patrick Whitehead is the managing partner and winemaker at Blue Ostrich Winery & Vineyard in Saint Jo, Tex., and produces 4,000 to 5,000 cases annually. He said that urban dwellers look for an "authentic agritourism experience." Whitehead noted that other wineries are opening, including Hidden Hangar in the city of Denison.

In November, **Stormy** and **Richard Cansler** opened Hidden Hangar on the family's land in the Texoma American Viticultural Area, located in north central Texas. The winery is a repurposed, abandoned airport in the city of Denison. Stormy's mother, **Martha Lattimore**, planted the vineyard in the late 1990s on the family ranch. Opening the winery allows the family to keep the vineyard and take the business to the "next level," Stormy Cansler said.

**Bret Perrenoud**, general manager at **Becker Vineyards**, a 120,000-case winery in Stonewall, Tex., said more wineries will open in the Fredericksburg region in the Texas Hill Country. Perrenoud said most of his customers are from Texas' major metropolitan areas: Houston, Dallas, Austin and San Antonio. The biggest challenge for Becker Vineyards

remains the supply of fruit, Perrenoud said, due to the unpredictability of the weather: humidity, spring frost and periods of drought.

Whitehead, whose family farms 7 acres at Blue Ostrich Winery, agreed that grape growing can be challenging.

#### Ohio

Ohio's primary wine region is in the Grand River Valley, east of Cleveland. Visitors come primarily from Ohio, western Pennsylvania and western New York, said **Donniella Winchell**, executive director of the **Ohio Wine Producers Association**. Still, more and more visitors are starting to make their way from the rest of the Midwest region, Winchell said.

The number of wineries has grown by 10 percent in Ohio. Altogether, there were 280 wineries in the state, including 270 bonded and 10 virtual, according to *Wines Vines Analytics*.

Winchell expects even more wineries to open in Ohio; she has no saturation concerns, even for the Grand River Valley American Viticultural Area, home to 30 wineries. New research has led to the establishment of a wide range of cold-hardy varieties in Ohio, Winchell noted, which could make grapegrowing and winemaking in the state even more accessible and attractive.



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## **EXCELLENCE IN WINEMAKING**



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NUMBER OF CANADIAN WINERIES								
as of February of each year								
PROVINCE	2013	2014	2015	2016	2017	2018	2019	2020
British Columbia	239	257	275	299	309	312	317	324
Ontario	170	191	225	234	236	238	242	253
Quebec	79	79	95	95	95	94	130	157
Nova Scotia	14	15	15	15	20	20	21	20
New Brunswick	11	11	12	12	15	14	15	15
Saskatch- ewan	2	3	4	4	6	6	9	9
Alberta	4	4	4	4	4	4	5	6
Prince Edward Island	2	4	4	4	4	4	4	4
Newfound- land & Labrador	4	4	4	4	3	3	2	2
Total	525	568	638	671	692	695	745	790
	WINES VINES ANALYTI						ANALYTICS	

#### Canada

The number of wineries in Canada increased by 6 percent in 2019 to 790 wineries. In British Columbia, 90 percent of the vineyards are in the Okanagan Valley and Similkameen Valley, according to the **British Columbia Wine Institute**. "There is still room for growth," said **Laura Kittmer**, communications director for the organization.

Mark Sheridan, president of Hester Creek Estate Winery in Oliver, British Columbia, said wineries have been consolidating in Okanagan due to the lack of suitable land left to develop after years of massive growth, particularly over the past 14 years. He expects to see more wineries open but at a slower rate. Still the wine industry remains in a good position. "We've proven to be very sustainable," Sheridan said.

Okanagan attracts Canadian tourists—and patriotic wine consumers—from Vancouver and its surrounding areas to Calgary in Alberta, Sheridan said. One can see Washington state from Hester Creek Winery, Sheridan added.

The burgeoning young wine industry has gained a much better understanding of the terroir in Okanagan and of what variety can grow and where. There are very vast differences in the terroir within a very small geographical area, Sheridan said. **WBM** 





# HOTBRANDS

#### of 2019

Erin Kirschenmann



Erin Kirschenmann is the managing editor for Wine Business Monthly and has been with the company since 2012. In addition to production responsibilities for the monthly trade magazine, she writes about wine industry trends, including business, technology, sales and marketing topics and oversees content for WBM's eight conferences. She has spoken on industry trends at numerous conferences, including the Unified Wine & Grape Symposium and the World Bulk Wine Exhibition, and guest lectures on wine, media and public relations. Erin has served as a judge in the Concours Mondial de Bruxelles since 2016. She graduated from Sonoma State University with a bachelor's degree in communications with a journalism emphasis.

Representing the American wine industry in 10 brands isn't an easy feat, but it's a task that the editors at *Wine Business Monthly* set out to accomplish each year. With our annual list of Hot Brands, we're looking for wineries, winemakers, growers and others who are making some kind of statement within the industry. "Statement" can mean just about anything—trying a new variety in an established region, using new winemaking techniques, bucking the declining sales volume trend or voicing an unpopular opinion for the sake of moving the industry forward.

We're always looking for wines of quality, but Hot Brands is more than a list of the "best" or most interesting wines we've tasted during the year—it's our chance to explore new regions, varieties and new winemakers that, hopefully, embody some of the latest trends in an ever-growing, ever-complicated wine market.

The results never turn out quite how we expect it, and we often end up with a couple of wines that surprise us. Even so, every year we stumble on a couple of themes or patterns amongst our choices.

This year we proved, quite by accident, that the Central Coast wine industry is a force to be reckoned with: Four brands from the region made it onto our 2019 list. We've got a traditional Paso Robles red blend and a Pinot Noir from Sta. Rita Hills, but we've also included a Valdiguie and Viognier as well. We found incredible diversity all along the central California coast. We typically try not to choose so many brands from one region, but the wines asserted themselves.

A couple of brands have made inspired attempts to reach new consumers, whether through informative and creative labels, or collaborations with music streaming giants. Others are focused on building their local consumer base, creating blends, experiences and spaces for those nearby to enjoy themselves while engaging with the wine.

This year, we've selected wines from pioneers, newcomers, small and large producers—all of whom span the industry spectrum when it comes to winemaking styles, reflecting the diversity that is the U.S. wine culture, and that innate winemaker desire to produce something they, and the consumer, will love.







### **HOT**BRANDS of the Past

2018 · Acquiesce Winery & Vineyards · Alara Cellars · Aridus Wine Company · Elk Cove Vineyards · Intrinsic Wine Co. · Lagier Meredith · Onesta Cellars · Sangiacomo · Sans Wine Co. · Smith Story Wine Cellars · 2017 · Alexandria Nicole Cellars · Amista Vineyards · Ankida Ridge Vineyards · Band of Vintners · Bella Grace Vineyards Winery · Parrish Family Vineyard · Stewart Cellars · Syncline Winery · Vidon Vineyard · Winery Sixteen 600 · 2016 · Amavi Cellars · Dan Cohn Cellars · Fujishin Family Cellars · Illahe Vineyards · Infinite Monkey Theorem Winery · LVVR Cellars · Mi Sueño Winery · Presqu'ile Winery · Senses Wines · Sleight of Hand Cellars · 2015 · Napanook (Dominus) · Guffy Family Wines · Kinero Cellars · Lovingston Winery · Mathis Wine · Naked Wines · Post Familie Vineyards · Savage Grace · Sonoma Collection, District 3 · Cacciatore Fine Wines · 2014 · Brys Estate Vineyard & Winery · Concrete Wine Company · Fiddlebender/Cellar 433 · Halter Ranch · Keller Estate · La Chertosa · McIntyre Vineyards · Skinner Vineyards · Treveri Cellars · Union Wine Company · 2013 · Cowhorn Vineyard & Garden · Drew Family Cellars · Frogtown Cellars · Lake Sonoma Winery · LangeTwins Family Winery and Vineyards · Matthiasson · Rack & Riddle · Riverbench Vineyard and Winery · Rôtie Cellars · Vino Noceto · 2012 · Ca' Momi · Carr Winery · Hidden Ridge Vineyards · Jefferson Vineyards · Kunin Wines · Milbrandt Vineyards · Red Caboose Winery · Tinhorn Creek · Troon Vineyard · Two Shepherds • 2011 • Wine by Joe • Cecchetti Wine Company • JC Cellars • Truett Hurst · Barnard Griffin · Bennett Valley Cellars · Talbott Vineyards · Veritas Vineyard & Winery · Barrister Winery · Lone Madrone · 2010 · Cameron Hughes · Crew Wine Company · Dusted Valley • Twisted Oak • Black Ankle Vineyards • Salinia Wine Company • Bella Vineyards and Wine Caves · Persimmon Creek Vineyards · Willakenzie Estate · Gloria Ferrer Caves & Vineyards · 2009 · Pacific Rim · Wines of Substance · Cambiata · Abacela · Cinder · Swanson Vineyards · L'aventure · Marynissen Estates · Bartholomew Park Winery · Raffaldini Vineyards And Winery · 2008 · Graziano · Four Vines Peasant · Becker Vineyards · Red Tail Ridge · Sojourn Cellars · Domaine Drouhin · Jeff Runquist Wines · Marilyn Remark Winery · Trio Vintners · Purple Wine Company · 2007 · Willamette Valley Vineyards · Ceja Vineyards · Tangent · Clos Du Val · Kutch Wines · Coro Mendocino · J.R. Storey · L'ecole N° 41 · King Family Vineyards · Gruet Winery · 2006 · A to Z Wineworks · House Wine · Liberty School · Shannon Ridge · Twenty Bench · Cycles Gladiator · Bedell Cellars · Artesa Vineyards & Winery · Black Star Farms · Buena Vista Carneros · 2005 · Parducci Wine Cellars · Solorosa · Cheapskate · Velvet Red · Incredible Red · Hard Core · Kunde Estate · Hitching Post · Andretti Winery · Esser Vineyards · 2004 · Red Truck · Cartlidge & Browne · Seven Deadly Zins · Oliver Winery · Angeline Wines · Rock Rabbit · Three Thieves Bandit · Sofia Mini · Screw Kappa Napa · Graceland Cellars · 2003 · Hrm Rex-Goliath · McManis Family Vineyards · Sebastiani Vineyards & Winery · Castle Rock Winery · Black Oak · Jewel Collection · Tin Roof · Three Thieves · Jest Red · J Garcia Wines



Winery	Andis Wines	Early Mountain Vineyard	J. Wilkes	Land of Promise Wines	Obvious Wines	
Wine	2017 Barbera d'Amador	2017 Quaker Run Vineyard Tannat	2018 Viognier	2016 Patriae Fidelitas	No. 1 Dark & Bold	
Vineyard/Winery Location	Andis Estate, Hanna Vineyard, Amador, CA	Early Mountain Vineyard, Madison, VA	Paso Robles Highlands District, CA	Petaluma, CA	Broken Earth Winery, Paso Robles, CA	
Price	\$30	\$45	\$25	-	\$18	
Case Production	900 cases	52 cases	3,040 cases	-	2,000 cases	
Blend	100% Barbera	83% Tannat, 15% Cabernet Franc, 2% Petit Verdot (co- fermented)	100% Viognier	100% Pinot Noir	32% Cabernet Sauvignon, 30% Merlot, 25% Tannat, 13% Malbec	
рН	3.39	3.66 (3.29 at harvest)	3.29	3.51	3.77	
TA	6.8 g/L	6.2 g/L (8.6 g/L at harvest)	5.8 g/L	6.9 g/L	5.7 g/L	
Brix	24.1° on Sept. 8 and 23.5° on Oct. 17	26.4°	28.5°	24.6°	N/A	
Residual Sugar	0.1 g/L	0.42 g/L (dry)	0.80 g/L	0.07 g/L	Less than 5 g/L	
Alcohol	14%	15.3%	15.2%	14.8%	13.9%	
WINEMAKING DATA						
Picking Methods	Hand-picked	Hand-harvested	Machine-picked (Pellenc)	Hand-picked	Machine-harvested; Tannat hand-harvested	
Sorting Methods	Hand-sorted	Hand-sorted	N/A	Cluster sorted by hand; machine de-stemmed	Mechanical	
Crush Details	Full process line using shaker tables for berry selection and Oscylis 200 for destemming, then must pump to tank	Whole berry, 10% whole cluster	N/A	N/A	Fruit is tipped, destemmed and pumped; Some ferment tannins are added at the crusher to aid in color stability	
Cold Soak?	3 days	Fruit started cold and the fermentation started on its own	N/A	3 to 9 days	Fruit is picked cold and inoculated; ferment starts in 2 to 3 days	
SO <sub>2</sub> Applications	First post-ML, 2 to 3 months post-crush	30 ppm at crush	35 ppm added post-juice settling before innoculation, 30 ppm at bottling	35 ppm at de-stemmer, 35 ppm post-Malolactic Fermentation	Maintain sulfur levels to 35 ppm	
Yeast	F83, EC1118 and Barolo	Ambient then bayanus at 8° Brix to finish	VL1	60% indigenous yeast; 40% RC212	BDX	
Fermentation Temperature	Max at 75° F	Peak of 85° F	55° C	60% peaked at 77° F; 40% peaked at 90° F	65° F	
Fermentation Technique	Open and closed tank; Rack and return during primary; Average 18 to 21 days on skins	Open top stainless, 4-ton capacity tank	Standard	60% fermented whole berry in 228 L barrels	Closed fermenters, up to 45 minute pump-overs twice a day when the ferment is active	
Nutrients	Adjust Nitrogen as needed	None	None	None	Fermaid K	
Acid Additions	None	None	Added to juice before fermentation	0.35 g/l pre-fermentation	Adjusted with tartaric at crush	
Malolactic?	Full malolactic	Full malolactic	Blocked	Inoculated with MCW	Yes	
Punch-down/ Pump-over Methods	Both	Punch-downs once daily before fermentation, 3 times a day during active fermentation and once a day after 2° to 3° Brix	N/A	40% received gentle punch- downs 2 to 3 times per day once fermentation started; Barrel ferments roll twice daily	Two pump-overs each day of the ferment	
Oak Program	20% new oak, 100% French; 225L and 500L	1-year-old French oak, 500 L capacity	No oak	40% new French oak	Primarily French oak with the addition of some second- and third-use barrels	
Barrel Aging	16 months	16 months	N/A	18 months	12 months for Tannat	
Racking	1 to 2 times total	Once before bottling	Stored on light lees	Twice	Racked off lees after malolactic fermentation complete	
Filtration	Bug catcher	None	Pall Cross-flow (0.2 nominal)	None	Cross-flow filtration with a 0.2 micron filter then filtered again before bottling	

Winery	Domaine Drouhin Oregon	Tarpon Cellars	Thacher Vineyards	The Hilt	William Chris	
Wine 2017 Roserock Eola-Amity Hills Chardonnay		2018 Sauvignon Blanc	2017 Valdiguie	2016 The Hilt Pinot Noir Vanguard	Skeleton Key, V	
Vineyard/Winery Location  Roserock Vineyard, Eola-Am Hills, Willamette Valley, OR		Shifflett Ranch, Oak Knoll District, Napa, CA	Shell Creek Vineyards, Paso Robles, CA	The Hilt, Sta Rita Hills, CA	William Chris Vineyards, Hye, TX	
Price	\$35	\$50	\$36	\$65	\$30	
Case Production	2,600 cases	150 cases	118 cases	585 cases	1,930 cases	
Blend 100% Pinot Noir		100% Sauvignon Blanc— Musqué Clone	100% Valdiguie	100% Pinot Noir	56% Cabernet Sauvignon, 17% Merlot, 15% Zinfandel, 12% Sangiovese	
рН	3.25	3.33	3.64	3.5	3.88	
TA	6.5 g/L	7.93 g/L	0.52 g/100 mL	5.7 g/L	6.3 g/L	
Brix		21.9°	24°	23.5°	25°	
Residual Sugar	1.8 g/L	0.1 g/L	N/A	0 g/L	0 g/L	
Alcohol	13.9%	13.1%	14.5%	14.2%	14.7%	
WINEMAKING DATA						
Picking Methods	Hand-picked	Hand-picked	Hand-harvested	Hand-harvested	Machine-harvested with on- board destemmer	
Sorting Methods	Hand-sorted on sorting table	Cluster sorting in vineyard	N/A	Cluster sorting during processing	Hand-sorted	
Crush Details	Grapes were sent directly to press	Whole-cluster press to about 1.4 bars	30% whole-cluster, remainder de-stemmed	100% destem, no crushing	N/A	
Cold Soak?	N/A	N/A	7 days	5 days	Only for Sangiovese	
SO₂ Applications	2 to 4 g/L	30 ppm at bottling	N/A	10 ppm at crusher	Minimal SO <sub>2</sub> throughout aging Addition to 0.5 molecule SO <sub>2</sub> at bottling	
Yeast	Commercial yeast	ES181, Q Citrus, and ES Floral	Ambient	Combination of spontaneous fermentation and RC212	ES488 and ambient	
Fermentation Temperature	18° C to 20° C	About 60° F		Peak of 85° F	Average 82° F	
Fermentation Technique	Placed whole-bunch in a bladder press; Approximately 50% of the juice is put directly into tank, and 50% into barrel	Barrel ferment	Fermentors were sealed for a 7-day post-ferment maceration before basket pressing	3 ton ferments; 12 to 16 days total on skins	50HL foudres; Minimal amoun of co-pigmentation	
Nutrients	N/A	Nutriferm Arom+	None	None	None	
Acid Additions	N/A	N/A	None	None	Average 1.3 g/L tartartic	
Malolactic?	Malolactic in tank portion is generally blocked; Full malolactic in barrel	20% of barrels	Native bacteria	MLPN4	Natural malolactic fermentation in barrel took 2.5 months	
Punch-down/ Pump-over Methods	N/A	N/A	Gentle cap management	Few short pump-overs per day until around 10° Brix; 1 or 2 punch-downs about 10° Brix	Four punch-downs per day in foudre	
Oak Program	50% in tank; 30% of remaining in new oak, the rest in neutral	20% new oak, light toast; Seguin Moreau and Quintessence	Neutral, thick-staved, 265L Amerianc oak	228L barrels; French oak; 25% new	Blend of 30% new French oak and 20% new Eastern European	
Barrel Aging		10 months, stir daily at fermentation and twice per month until January	11 months	12 months	20 months, with bâttonage every 2 weeks	
Racking After malolactic		Once before bottling	Once	No racking	Twice; 80% of lot after malolactic, 100% of lot 2 weeks before bottling	
Filtration	DE filter	0.45	None	None	None	



#### **Andis Wines**

2017 Barbera d'Amador

#### Proving Barbera is More Than a Blender

Two words define **Andy Friedlander**'s move from a successful commercial real estate business in Hawaii to a vineyard and winery in Amador County: "Yes, dear."

After more than 50 years in real estate, Friedlander and his wife, Janis Akuna, a certified financial planner and financial advisor on Wall Street, were ready to start planning the next stages of their lives. The couple made a trip out to Amador County and within just a few days fell in love with the open spaces and communal camaraderie—not to mention the opportunity to purchase great vineyard land and build a brand. The idea for a winery, though, was Akuna's, and Friedlander jokes that he "just obliged."

And so, Andis Wines was born.

Andis Wines completed construction of its 22,000 square-foot production and tasting facility in 2010. Today, the building, which is located on Shenandoah Road in Amador County, serves as a hub for visitors to the Sierra Foothills, hosting regional tastings and events.

The wine brand has grown since its conception, increasing production up to 8,000 to 9,000 cases, depending on the vintage, to match both direct-to-consumer and wholesale success—and now the brand has moved into the next phase, what it calls a "bold new era."

In 2016, Friedlander and Akuna contracted renowned winemaking consultant **Philippe Melka** and his company, **Atelier Melka**, to breathe new life into their brand, to produce more a modern style of wine from its estate vineyard, as well as the many vineyards they've purchased from. Andis Wines has always sourced from several heritage vineyards in the Amador County area, including the **Original Grandpère Vineyard**, owned and farmed by **Terri Harvey** in Upton, with its 150-year-old, gnarled Zinfandel vines.

For Melka, working with Andis Wines is an organic evolution away from Cabernet Sauvignon in California—Andis was the right place, at the right time. "The Foothills have a good microclimate, diversity of soils," said Melka. "It's very clean but shows depth of gravelly soils. It gives truth and is totally transparent."

Though Melka consults, it is **Maayan Koschitzky** who operates the day-to-day winemaking.

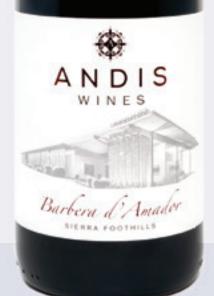
Inspired by Melka, Koschitzky and the rest of Atelier Melka, Andis Wines also re-designed their labels with the 2017 vintage release to express the winery's revived dedication to producing outstanding wine from the region. The new labels feature either the winery facility on those wines made from younger vines, or a twisted Zinfandel vine for those made from old vines. Another new concept came from national sales manager, **Lorenzo Muslia**, to help explain to customers what Barbera is and what it should taste like. It was his idea to lean into the Italian heritage inherent to the region and create the "Barbera d'Amador," a fun play on the traditional Italian Barbera d'Asti and Barbera d'Alba wines.

Viticulture in Amador began in the 1850s, when the area was flooded with eager Gold Rush hunters. Many of them were European and most Italian. These immigrants planted the first grapevines, and that Italian influence persists to this day. Zinfandel remains the most popular variety, and the Foothills is home to a few surviving vineyards that date back to the 1800s. But Barbera also took a strong foot-hold. Typically used solely as a blender variety until the late 1980s, this thin-skinned and vigorous grape grew well in the hot, arid Amador climate and is still successful to this day. High-yielding vineyards can consistently produce 10 to 11 tons per acre, when left unchecked.

Andis Wines never shied away from using it as a standalone variety. With its naturally high acid and low, smooth tannins, the red grape can produce a refreshing, food friendly wine from Amador—just like it can in Italy.

The 2017 vintage is the first that Koschitzky and Atelier Melka produced from start to finish. To make the Barbera d'Amador what it is today, Koschitzky built a new process line to deal with the softer skins, hoping to capture a fresher profile, control the tannins and tame the potentially overwhelming acid. He used a high percentage of whole berries and didn't crush in order to achieve that profile. The 2017 vintage is still a very young wine, and Koschitzky pointed out that it has the potential to age well and hopes that, whether consumed now or put down for a few years, the end product showcases the high-quality of Sierra Foothills Barbera.

Going forward, Andis will continue its focus on wines of site, highlighting the best of older vines and the diversity of Amador and Sierra Foothills viticulture. In addition to Barbera, Andis produces four Zinfandels (three in its Old Vine Series), a Painted Fields Series (blends of local varieties), and varietally labeled Semillon, Sauvignon Blanc, Schioppettino, Grenache Noir, Petite Sirah and Cabernet Franc.



# **Key Points of Brand Influence:**ONE AGENCY



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### Early Mountain Vineyards 2017 Quaker Run Vineyard Tannat

#### Open Minds, Open Hearts Lead to Beautiful Tannat

In so many regions of the world, laws govern which grapes can be planted as well as how they're grown. In others, land availability and pricing mean that only the most profitable varieties stand a chance.

Yet in others, where varietal notoriety isn't as strong and the climate and soils allow for a little experimentation, open-minded grape growers and winemakers are free to go against the grain and seek out which winegrapes are truly suited to their specific terroir.

At Early Mountain Vineyards, located in the foothills of Virginia's Blue Ridge Mountains, winemaker Ben Jordan and owners Jean and Steve Case are ready to see what viticulture in their state can offer.

"Maybe 10 years ago, it would've been more of a round-peg, square-hole situation, trying to make it into popular wine just because that's what was assumed the market wanted," Jordan said. "But now that the wine-drinking world is more openminded and wants to try a number of different styles, we, as an industry that is still growing and emerging, can be pretty nimble and make certain wines in certain ways and other wines in other ways. And I think that's been, even though we're relatively young, an important part of our quick evolution."

The Cases purchased the property in 2011 and, after some renovations and rebranding, re-opened as Early Mountain Vineyards in 2012. As part of the second wave of winemakers in Virginia, Jordan and the Cases were able to benefit from hindsight, learning from their predecessors what not to do. Instead of forcing Cabernet Sauvignon or other "top" varieties to grow on their property, they focused on site development and long-term vineyard viability, planting vines suitable to each individual site.

The idea to plant Tannat was Lucie Morton's. Morton is a viticulturist based on the East Coast, focused on the fundamentals of proper site selection, and putting the right vines in the right homes. Quaker Run Vineyard, where the Tannat is grown, features rocky soil with greenstone and granite. Vines are planted at altitude anywhere between 900 and 1,100 feet in elevation—so there's plenty of sun exposure and good drainage.

"We've been able to move away from just trying to bang our heads against the wall with Cabernet Sauvignon for instance, and move on to other things, like

Cabernet Franc and Tannat, as the fruit on the vine does really well in this climate," Jordan said.

Although the area is prone to strong winter storms, late spring frosts and humid summers—not typically ideal conditions for ripening grapes—

Tannat thrives anyway. "Sometimes I call Petit Manseng and Tannat 'Storm grapes,'" Jordan said. "They're grapes that don't mind having rain on them because they both tend to kind of race in sugar concentration. And that can sometimes be their biggest challenge. The sugar is getting away from you in the same way Californians have to deal with Zinfandel, where you have high

Jordan has nailed that delicate art. When the editors at Wine Business Monthly tasted the 2017 Quaker Run Vineyard Tannat, it was met with resounding approval. Perfectly balanced fruit, tannin and acidity achieved by a deft hand in a light touch of oak. It is a soft—but powerful—wine. The 2017 vintage was

> warm with drought-like conditions. Sugar levels increased rapidly, and Jordan had to take care to avoid over-ex-

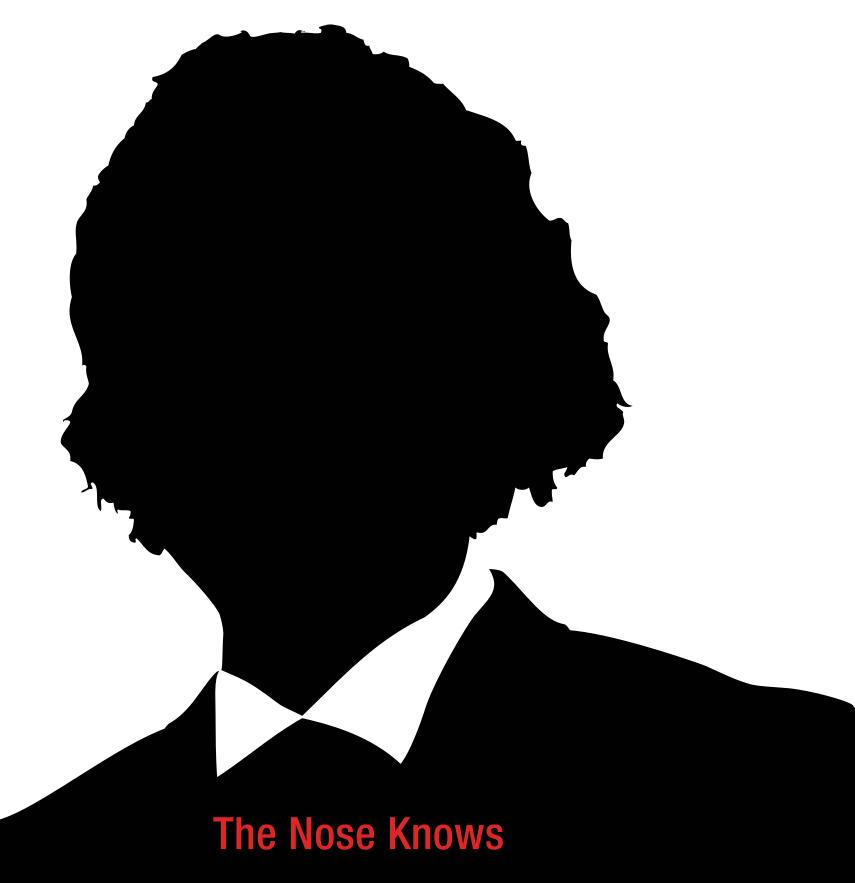
tractive winemaking.

"What I love so much about what you [Jordan] have done with this bottling is that it manages to somehow be elegant while also being so intense and so dense and powerful. And we've just had a really super positive response in the tasting room," said director of marketing Aileen Sevier. "In some ways we are so lucky because, as Ben said, there's such an openness, there's such a diversity of approaches, but on a whole, people coming into our tasting room are super open-minded."

Used for both blending and varietally labeled wines, the Tannat has served as an important part of Early Mountain Vineyards' portfolio. In fact, Tannat has been so popular, that Jordan is planting a few more acres to meet that demand.

"I think from a consumer standpoint, grapes like Tannat and Petit Manseng are going to be much further along in consumers' understanding because of vintages like 2018," Sevier said. "My assumption is that they'll be more broadly planted and planted appropriately but, also, my hope is that there'll be a greater discussion of different regional styles or what different sites are giving us."





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#### **Land of Promise Wines**

2016 Patriae Fidelitas

#### Pinot Noir and the Americana Dream

Charles and Diana Karren never set out to be in the wine business, per say. Their goal was to spend their days out in the vineyard, in the open air with acres of Pinot Noir surrounding them. Growers at heart, they simply wanted to enjoy the fruits of their labor—once someone else had turned it to wine. But when the wines made from their Pinot Noir started receiving high scores and selling out so fast the couple couldn't buy a

bottle, they thought it might be time to produce wines of their own.

Twenty years ago, the Karrens came to Petaluma and found an abandoned dairy farm for sale. That in itself isn't unusual for the area-Petaluma has a long history in the dairy and ranching businesses—but grapegrowing in the region was, at the time, unproven. That fact didn't hamper the two, who decided to plant Pinot Noir anyway. To help them in the farming endeavor, they brought in Diana Karren's family from Russia, and, with the last \$20,000 of their vineyard loan, purchased a used trailer for her parents to live in, made a down payment on a truck and staked an

American flag on their new property—which has become a symbol for all the family has built.

They named the vineyard **Terra de Promissio**, or Land of Promise, a nod to the pursuit of their American Dream and to the possibility each new vintage brings. Their first grape harvest was ready to sell in 2005; early buyers included **Lynmar Estate**, **Kosta Browne Winery** and **Williams Selyem**. Now, their Pinot Noir is vineyard designated on the labels of **Dutcher Crossing Winery**, **Castello di Amoroso**, **MacRostie Winery** and **Gary Farrell Vineyards and Winery**, among others.

"We don't nakedly market the Terra de Promissio name," Charles Karren said. "In order for them to put our vineyard name on the bottle, we have to taste it and approve it. If we approve it, they have to pay us a dollar a year. Not a dollar per bottle, but they pay us a dollar a year in royalty for the right to put our name on that label."

Over time, the Karrens were able to pick up on all the different ways in which winemaking style played a role in developing wines from the same fruit. "Williams Selyem is more Burgundian, or lighter alcohol. Then Kosta Browne is more fruit forward and California style. People always asked us,

'Which wine style do you like?' I say, 'Look, it's like our children. Some are good in the morning; some are good in the evening. One likes history, one likes math.' As long as they reflect the best of us, that's fine in a lot of our wine."

When it became impossible for the couple to buy their own vineyard-designated wines, they decided to try winemaking on their own. In 2013,

Diana Karren led the winemaking endeavor, producing just 100 cases, but in four different styles. The intention: to showcase the different areas of the vineyard as well as the different clones. The 2013 release included: Deo Favente, "With God's Favor" and the "Grand Cru" of the vineyard, made entirely of clone 777; E Pluribus Unum ("Out of Many, One"), a blend from all five clones grown on the property; Terra de Promissio, a tribute to their land, using clones 115 and 777; and Patriae Fidelitas, an intense, bold wine to honor the bravery of the U.S. Armed Forces.

"By doing this, I'm showcasing what our vineyard is able to do,

because when you think about it, it's the palette of different colors. I can choose navy, or I can make it sky blue, or I can use super dark blood red, or I can make it orange," Diana Karren said. "There are so many different areas of the vineyard, and I, driving it on my ATV and trapping gophers almost every morning, I know exactly how different areas ripen and the flavor profile of each block, and I have my favorites."

Now, there is a wait list for the Terra de Promissio fruit. While the Karrens plan to remain growers first, production of Land of Promise Wines doubled to 250 cases in 2014, grew to 350 cases in 2015 and today the winery produces 800 cases. The wines are sold in Texas, Louisiana, Massachusetts and Washington, D.C.

"I'm an immigrant to this country, and, for me, my vision is for it to be an all-American wine where people remember what America is all about," Diana Karren said. "America is a country of immigrants that believed in God, and that America is more than just a country. It is an idea, and people; brave men and women fought for this idea. The idea [behind the wine] was to unite people, and kind of remind them, and bring them back to basics. It takes an immigrant to do that."





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#### **Obvious Wines**

No. 1 Dark & Bold

#### Because it Doesn't Take a Doctorate to Understand Wine

The premise of **Obvious Wines** is simple: Wine should be easy to understand, approachable and enjoyable. With its line of eco-friendly wines sourced from around the world, founder **Brice Baillie** is trying to show consumers that purchasing wine can, and should, be straight-forward—it should be obvious what you're going to get in the bottle.

What makes understanding each wine so simple? Perhaps one of the most informative and aesthetically pleasing labels we've seen in a while.

Obvious Wines has six SKUs: No. 1 Dark & Bold (a red blend sourced from Paso Robles, Calif.), No. 2 Bright & Crisp (a Sauvignon Blanc from the Loire Valley), No. 3 Light & Lively (a red blend from Chile's Central Valley), No. 4 Rich & Oaky (a Chardonnay from California's Central Coast), No. 5 French & Bubbly (a Cremant de Loire made in the traditional method) and No. 6 Simply Rosé (a Grenache, Syrah, Cinsault Rosé from Provence).

Lessons from Baillie's time in the cosmetics industry helped propel the branding and design. Just browse the aisles of **Sephora** or **Ulta**, and you'll see that every lipstick, foundation and powder has a number, shade and name.

"The idea behind the numbering is really keeping things simple and easy for the consumer. The number, the color and

the name of each wine are just ways for people to remember. Often I've noticed that if you go to a restaurant and you enjoy a bottle of wine, you can forget about it unless you take a picture; but even if you take a picture, it's, like, where was this picture or what was the name of the wine? I don't remember at all," he said.

Aside from the flavor profile stated unmistakably in the product's name, each label features three food pairings, a map with the location the grapes were sourced from and a section that shows the acidity, body, tannins, and alcohol levels as well as the characteristic aromas and flavors associated with each wine.

"I think that they are very consumer friendly in terms of profile and because they are balanced wines. To be the balance of the different elements of taste—alcohol, body, acidity—is really what I'm looking for when I create the blend," Baillie said. It's a sentiment that is echoed by his consumers, and one that he hears at tasting events often. "I

think it's refreshing to have something that's just simple, clean; I think that the simplicity of it is what's appealing. When they look at the back label there's a humbleness, and they're happy to get all this information condensed in a simple way."

A Frenchman who moved to California in 2015, Baillie describes himself as a "reformed wine snob." As he got to know more Californians, he realized there was a gap between wine interest and wine knowledge, and

so set out build a brand that would help bridge that divide—simply by making wine simple. The Dark & Bold was Baillie's first wine. He sources the 51 percent Cabernet Sauvignon and 49 percent Merlot needed for the blend from **Broken Earth Winery** in Paso Robles, Calif.

Baillie is selective about the vineyards he works with and has a set of criteria he looks for. He wants to work with family owned vineyards who also produce estate wines from their fruit. A sustainably farmed vineyard is a must as well (certified organic or Biodynamic vineyards, when he can find them, are an added bonus) because he wants to ensure they have an eco-friendly mindset. Nearly all of the Obvious Wines brands are certified and/or guaranteed vegan.

Why the focus on "green?" His customers are asking for it. "People are very interested in the farming practices. I think they want to know what they are putting in their body the same way they are careful about what they eat. I think they're becoming more and more careful about what they drink," he said.

Baillie is serious about listening to his consumers too. While his current focus is expanding distribution of the brand into new states, he does hear from consumers that they are interested in trying new styles and new varieties. He's been given suggestions for obscure Portuguese varieties, Grüner Veltliner and even requests for a "natural" wine.

In all, he's trying to build a trusted brand that people can turn to with ease, one that doesn't require a lot of fuss. "The goal is really to be a household brand that people know and respect ... and to have people discover wine with us or learn more about wine with us," he said.

every year for the last four years, producing 10,000 cases in 2019. But he's hoping the brand, and the story of Jeff Wilkes and the Central Coast AVAs, will continue to expand to a 50,000-case production and reach consumers in every state.



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#### **Domaine Drouhin Oregon**

2017 Roserock Chardonnay

#### Rising Interest in Oregon Chardonnay

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In Northern Oregon, Pinot Noir is king. The Willamette Valley AVA has made its name on the grape, touting the benefits of its perfect climate and soils for growing such a fickle variety the world round. Consumers and trade across the globe have come to understand that Oregon is synonymous with Pinot Noir, and that good American Pinot

But there is another variety that does just as well there, and winemakers across the valley are starting to talk more about it. For anyone with knowledge of wine, the fact that Chardonnay does well in a region where Pinot Noir is happy is no surprise, but growers and winemakers in the area are starting to become more excited about the white wine, and vineyard plantings have increased—slowly, but surely.

One of the more prominent operations in the area is doing its part to promote Chardonnay as a quality option, though that wasn't necessarily its intention. At **Domaine Drouhin Oregon**, a chance to purchase a vineyard to bolster its Pinot Noir program also resulted in a stellar Chardonnay that could be sold at a consumer-friendly price point.

The original Roserock Vineyard was established as a sourcing operation, planted to Pinot Noir with the purpose of being shipped to other winemakers, including the **Drouhin** family. When the pension company that owned the land decided to sell in 2013, the Drouhin family, led by winemaker **Véronique Boss-Drouhin** and her viticulturist brother, **Philippe Drouhin**, immediately put in a bid. They had purchased Roserock Pinot Noir before, but never Chardonnay. However, the Drouhins found that nearly 11 of the 124 acres of vineyard were already planted to the grape.

"The first vintage of Roserock Chardonnay for us was 2014. That very first year already we thought, 'wow, this is an incredible wine.' I was very surprised by the complexity of the wine. So, I felt maybe we lucked out that first year," Véronique Boss-Drouhin said. "And then comes 2015, and again the wine is really surprising. There are three different locations

on the property. Phillippe had his favorite block and he said, 'I like these grapes, they look just so perfect.' So we kept these blocks separate and made wine. The final Roserock Chardonnay is the blend of those three."

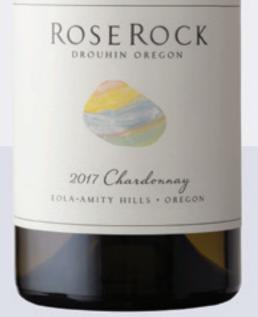
Roserock Chardonnay is made in the same style as the company's other brand, Domaine Drouhin's Chardonnay Arthur—lightly oaked, food-friendly yet complex. In the Roserock Vineyard, the fruit ripens a little more slowly and later than vines across the valley in the Dundee Hills, providing more structure and producing wines comparable to those of Puligny.

"Our next challenge and goal is to bring Oregon Chardonnay, and of course Roserock, to a lot of the tables inside the U.S., of course, but also outside of the U.S. That is really something we are going to work on because... I'm sure it will be something people will be very happy to discover or distribute," Boss-Drouhin said. But she also admits that convincing consumers that Chardonnay from Oregon is a desirable wine may require a "little bit of work." "In the past maybe it was not among the most exciting Chardonnay of the world, but they are now," she said.

When Boss-Drouhin's father made the move from Burgundy to Oregon in 1987, he made a bet on an unrecognized region with just a few, lone pioneers making incredible wine. "He believed in that region not knowing if it was right, but I think he thought the region would become famous and it has," Boss-Drouhin said.

That love and passion for the Willamette Valley was passed on to his daughter, who has been making wine at Domaine Drouhin Oregon for 32 years with an enthusiasm that never wavers. Within that time, she's watched the evolution of winemaking and knows that Chardonnay in the state has never been better.

"We understand better the region, we understand better how the fruit reacts to all kind of weather: warm, cold, wet, dry," she said. "It's a slowprocess, but I think we, little by little, are making progress every year."



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#### J. Wilkes Wines

2018 Viognier

#### A Wine That Wears its Sensuality on its Sleeve

In the 1980s and 1990s **Jefferson Wilkes** could be found promoting the grapes and wines of the Paso Robles Highlands and Santa Maria Valleys—the **Bien Nacido**, **Solomon Hills** and **French Camp Vineyards** in particular—to retailers, restauranteurs and anyone who had an interest in learning about what the Central Coast wine industry had to offer. He was a staunch supporter of the region, and his passion eventually spilled into winemaking as well.

Not content to just sell Santa Maria winegrapes, he wanted to take his interest to the next level and start his own brand. He reached out to his employer, **Steve Miller**, whose family has been entrenched in agriculture and viticulture on the Central Coast since the 1870s.

Wilkes' concept was simple: you have to start with great ingredients.

"When you're making wine from the greatest vineyards in the world, it's like being a three-star Michelin chef," said friend and winemaker and brand ambassador for **J. Willkes Wines**, **Wes Hagen**. "It's not about what you do to the food, it's what you don't do to the food."

As Hagen reports, Wilkes' philosophy was always that the wine was not about himself, not about imposing a style or a making a footprint. He was a "wine is made in the vineyard" type of guy. He wanted to showcase the best of what Santa Maria Valley and Paso Robles could produce.

Wilkes was fortunate enough to begin his winemaking career working with fruit from two acclaimed and historic vineyards. He launched his first vintage in 2001 and continued to make Pinot Noir, Pinot Blanc and Chardonnay until his passing in 2010. But the Miller family didn't want his legacy to fade with him, and so they re-launched the label in 2012, brought in Hagen as winemaker in 2015, and doubled down on the commitment to wines of character, style and, perhaps most importantly, AVA.

"As someone who's written more AVAs than any other living winemaker, that's a great platform for mel to talk about dirt and place. If the wines represent the AVA where they're from, that's what I want to give to my generation and younger generations of wine drinkers in the United States—great wine that's delicious no matter what. And if you want to go down the rabbit hole of 'place,' then let's give you a baseline to understand, say Santa Maria Valley," Hagen said.

That is the heart of Hagen's winemaking message. Though the wines he makes are made with grapes from Bien Nacido, Solomon Hills and French Camp Vineyards—which other wineries/brands often bottle as individual vineyard designates—Hagen wants to ensure that the wines are first and foremost something he would enjoy drinking.

Case in point: The 2018 Viognier, a crisp, bright, graceful version of a grape that can easily show as overly perfumed or over-the-top, with a strong potential to lose acidity in warm growing regions like Paso Robles. But because the grapes are sourced from a block in French Camp Vineyard that lies at a high elevation with a diurnal shift that averages 50 degrees during the growing season, the Viognier is able to maintain a naturally high level of acidity.

"We're looking at natural, unmodified juice making a wine at 15.2 percent alcohol, at 3.3 pH and six grams of acid—without adding acid. That is a miracle," Hagen said.

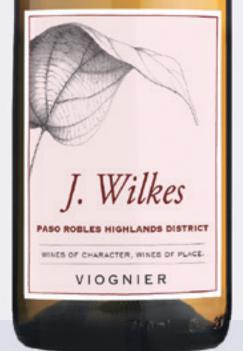
Hagen then takes care not to lose that "miraculous" effect produced by those warm days and cold nights, avoiding oak and letting the grapes and the land speak for themselves.

"I have to be very careful. This is a Viognier that was crafted and blended with the idea that we wanted it to be an accompaniment with food, but not overwhelming. We wanted it to be a little bit more on the elegant and restrained side," he said. "I know what I love in wine and I've always, for the last 25 years, tried to produce wines that I myself love to drink so I can bring them to market and promote them with honesty and passion."

When he's out promoting the Viognier against some of the more popular varieties, his enthusiasm is matched by buyers.

"Buyers get it and they also know that Viognier is one of those rare wines that is not only a geek wine, but when people get it in a glass, even if they've never had it, it's like a beautiful woman or a handsome man just saying hello and giving you a kiss on the cheek," he said. "It is immediately accessible because it is immediately sensual. Pinot Noir is tricky sensual. Viognier likes to wear its sensuality on its sleeve."

Going forward, Hagen will continue to promote the J. Wilkes brand, just as Jeff Wilkes had done before. He and the Millers have doubled production every year for the last four years, producing nearly 20,000 cases in 2019. But he's hoping the brand, and the story of Jeff Wilkes and the Central Coast AVAs, will continue to expand in production and reach consumers in every state.











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## Tarpon Cellars 2017 Sauvignon Blanc

#### Winemaker Collaborates with Spotify for New Pairing

Sauvignon Blanc's natural variability is one of the reasons Jeremy Carter started working with the grape. After making wine in New Zealand he realized that, yes, Sauvignon Blanc can be produced with that ever-popular and expected grassy character that's often exported to the American market. But he also learned that it's so versatile, it could be made to whatever style a winemaker wants.

"I tried stuff that was 100 percent new oak and 100 percent malolactic and all these different things," he said. "They would make wines like a Chardonnay that were real buttery but then they also had that kind of tropical aroma still." Then, Carter hit a point in his career when he got really into Bordeaux-style Sauvignon Blanc, while still loving the expressions coming out of California.

When he started his Tarpon Cellars brand, he knew he wanted to create a Sauvignon Blanc that was a combination of all three winemaking

region's typical styles. He found a vineyard planted to the Musqué Sauvignon Blanc clone—a clone that maintains a naturally high level of acidity and produces a wine with tropical, pineapple notes—and then treated the grapes like a Pinot Noir. His wine aged in the barrel for nine months on 20 percent new oak and underwent a 20 percent malolactic fermentation. The end result is an uncommon Sauvignon Blanc that holds

"It's just this really textured example of a Sauvignon Blanc, which I like because I love drinking a \$15 Sauv Blanc on the porch in the summer and having little oysters," he said. "But we wanted CH 2017 to make something that was really interesting. When some people say, 'You know, I don't like Sauvignon Blanc, I like Chardonnay,' I say, well, actually, try this because you might like it because texturally, it's closer to a Chardonnay than a Sauvignon Blanc. It's just got a different aroma and flavor profile."

But if he had to describe his Sauvignon Blanc in another way (maybe to non-Chardonnay lovers), Carter would compare his white wine to Sharon Van Etten's song "Every Time the Sun Comes Up."

"Part of it was because I was really into that song during the harvest, and so when I hear it, it reminds me of pulling up to that vineyard block to get out and check grapes. There's that component of it, but also, I mean,

just having the sunlight component; it's a bright, sunny wine," Carter said. "But if you listen to the lyrics of that song, there is actually some darker undertones and it's not exactly what you would expect from the song or the title, and so that's kind of where this wine is, too. It's got more than you would expect when you open it up. It has some layers and other things going on underneath the surface."

Music plays an important role in Carter's life and work and, appropriately, he has partnered with Spotify to produce and distribute playlists to accompany his wines. "The playlist thing with Spotify is just kind of an extension of who I am. For my girlfriend in high school, I burned

> CDs or mix tapes and I feel a way of connecting to people through music," he said. "To be able to incorporate that into my profession, just was a natural fit."

> > Carter reached out to Spotify years ago and was initially met with rejection: the streaming service was unsure of the legalities of working with a beverage alcohol company. In 2018, however, the company reached back out to Carter, ready to collaborate.

In August 2019, Tarpon Cellars announced its partnership with the music giant. Through the collaboration, every bottle features a link that directs to tarponcellars.com/music, where there is a complete playlist and brief description of the music and its associated wine.

To create that playlist, Carter sits down at the computer once the wine is bottled and reviews his notes from the growing season, the harvest, the crush and the vintage, spurring memories of trials, successes and irregularities. Themes will start to emerge, and Carter will find songs to accompany those themes, often incorporating songs he listened to during the growing season.

The music serves a dual purpose: to expose wine drinkers, both new and experienced, to the nuances of the less-appreciated Sauvignon Blanc and to introduce his wine drinking audience to lesser-known musical artists.

"If we can put a song into a playlist and somebody gets exposed to somebody new and buys their album and sees them live, that's a really cool thing to do," Carter said.



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# Thacher Winery and Vineyard 2017 Valdiguie Experimenting with Unique Varieties in Paso Robles

There's an oft repeated saying, particularly around harvest, that "It takes a good case of beer to make a good case of wine." A cold brew can be a winemaker's best friend—a refreshing end to a day spent shoveling pomace, tending fermentations, laboring over blending options or bottling.

Sherman Thacher knows that fermentation is fermentation, having learned the craft from a friend with a degree in fermentation science. It was the same friend who got him a job at a brewing company, where Thacher earned the renowned "brewmaster" title. But he was also dabbling in winemaking at the same time: A few years out of college he and his friend purchased some Old Vine Zinfandel and produced a couple of barrels of wine—just for fun.

"We were young and enthusiastic," Thacher said. "It went well, so we did it again and it just escalated from there. We had more wine than we could drink ourselves."

For him, there was an added pressure when producing wine: "Beer is super sterile. Beer, as a base, is susceptible to issues. With its higher alcohol and lower pH, wine is a bit easier that way, but you only get one try with wine each year. There was a big learning curve with that, doing experiments once a year. With beer you can do it whenever, hone in more quickly," Thacher said.

Thacher and his friend continued to experiment with wine from 1993 to 2001. Around that same time, he met his future wife, **Michelle**, who was earning her degree at the **University of California**, **Santa Barbara**. Though he was based in Santa Cruz, the distance didn't frighten them; they just

took every opportunity to meet at the half-way point in Paso Robles. After the two married in 1998, they started looking for a property to start their own winemaking operation, and Paso Robles was the natural fit. In 2004, when **Kentucky Ranch** came on the market, the two immediately put in an offer. Four years later, the winery and tasting room opened.

Over the last 10 years, Thacher has zeroed in on the direction he wants to take in the winery. He's influenced slightly by his brewing background and current tastes, but also by the fun he has discovering all the intricacies of new grapes, new vineyards and new winemaking methods. Thacher's wines are exciting and intriguing, but more importantly well-made. His preference for lighter, fresher wines is a welcome respite from some of the spicy, savory, heavy wines typically coming out of Paso's Adelaida region.

"Wines picked at the right time make themselves. A lot of wines in this area are more concentrated. I want a fun, fresh wine," he said, adding that

his wine preferences have parallels in the beer world. "A while ago I was looking at the beer fridge packed with triple IPAs, but a lot of the time I'm just looking for fresh."

That's not to say he doesn't produce some bigger wines as well—if the fruit is on the riper side, he doesn't try to manipulate the wine too much. In the end, he's looking to make something enjoyable, and is always willing to take a chance on something new.

It was while scoping out a 50-year-old, own-rooted Chenin Blanc that Thacher and his assistant winemaker **Daniel Callan** discovered that the same grower also had a block of Valdiguie. Though Thacher didn't have much experience with the grape, he and Callan were intrigued. That first year, they received 1.5 tons and, after asking some of the other winemakers how they treated the fruit, ran several winemaking trials, including experiments with whole-cluster inclusion.

"The amazing thing with Valdiguie is that right out of the press it tastes like a finished wine," Thacher said. "We don't do a lot of barrel tastings with people coming through the winery, but that varietal was our go-to barrel for every single tasting."

On the Central Coast, Valdiguie has been a bit lost, traditionally used as a blender in large-batch winery programs. Thacher finds Valdiguie a grape worthy of bottling varietally as well. Now in his third year working with the grape, he took a ton of the fruit, picked it earlier and made it in a nouveau style—just to see what it would taste like. Five weeks after harvest, he reported it as "zippy."

"Ultimately, I want to make something that is interesting," he said.

Some of the 19 other grapes he's working with include Négrette, Graciano, Traminer, Mencia, Mission and Orange Muscat—and all are described as "fun projects to keep us amused." He's taking advantage of the grape glut this year to try his hand at some of the lesser-known and lesser-planted varieties—an advantage afforded to him by a wine club willing and ready to give anything a try.

"I love sourcing within the Paso Robles AVA. There are so many soil types and farming techniques and it really adds to an amazing diversity when bringing in all these different things to the winery," he said. "I love incorporating it all."





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#### The Hilt Estate

2016 Vanguard Pinot Noir

#### Perfecting Sta. Rita Hills Pinot Noir

At **The Hilt Estate**, sister winery to **Jonata** in Santa Barbara and **Screaming Eagle** in Napa, understanding the vineyard is everything. In order to create wines of place, the team must know the place. The winery name even refers to the fact that the vineyard team "farms to the hilt"—a mentality that launched a series of wines that put the brand's winemaking style to the test.

"What really defines our brand is that we're an incredible collection of farmers on these properties. We take a long-term view of getting to know these things and not rushing anything. I'm ferociously proud of that," said winemaker **Matt Dees**.

Dees joined the Jonata team in 2004 at the suggestion of Andy Erickson and when sister winery The Hilt was launched in 2008, he was tasked with building the Pinot Noir and Chardonnay focused brand. In 2014, though they purchased the 3,600-acre Rancho Salsipuedes property, home to 200 acres of vineyard and two very distinct blocks, it was more important to Dees to understand the unique characteristics of the vineyard, including every block and every vine. Dees didn't want to move into single-vineyard bottlings early on without knowing if the vineyards would support such an endeavor.

In order to develop that surety, and build his depth of knowledge of the place, Dees started to make his "wines of style"—The Hilt's The Old Guard and The Vanguard series—from the fruit. The Old Guard prominently features the structure of Pinot Noir—the chewiness, the heaviness—while The Vanguard is focused on a luscious, smooth style.

"The Old Guard was really driven by structure. It was driven by stem inclusion, by earthiness, by grit, by that very dark side of Pinot Noir—a hint of corruption of Pinot Noir," he said. "The Vanguard was really driven by a very silky texture. It was really a question for us about structure versus texture. The Vanguard came out as a style that just has that wonderful push of silky fruit. It's all about that real pleasure in that velvety feel."

What he's shown through these blends is the versatility of Pinot Noir: it can be a wine that speaks of a plot of land or a winemaker's attitude; it can be rough and burly or soft and elegant. These "wines of style" are made possible by the complexity of the Sta. Rita Hills AVA, with its proximity to the ocean and its inland valleys, its howling winds and wide range of soils, aspects and altitudes.

But Dees admits that growing conditions aren't perfect at all times. "Because of its proximity to the ocean, because of its climate, it can be a bit of a challenge with mildew for sure. It can be a bit of a challenge to get fruit period, to be honest," he said. "The benefit, on the other side, is you get this incredible, wonderful, long, cool growing season, it's full of sunshine. As people have called it in the past, it's that 'refrigerated sunshine' quality."

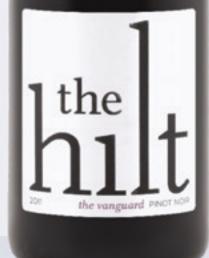
It's been nearly five years since the team purchased the property and, as Dees puts it, he is still in the "getting to know you" phase. He's experimenting in both the vineyard and the cellar, but as a vineyard-focused brand, most of The Hilt's trials are in the field. They're introducing new rootstock, new clonal material for the Pinot Noir, moving toward a lesser-irrigated model and even keeping some space open for Shiraz.

Though Dees is using that diversity of climate and soils to make the Guard series, he's become comfortable enough to do some single-vineyard bottling.

"Now I've finally started to do single-vineyard bottling because, finally, I can say with great surety, great certainty, that the vineyards that we own are all specific," he said.

"They're all different, they're all distinct, but more importantly, they're all really delicious. Just because a vineyard is different doesn't mean that it's delicious, and it doesn't mean that it deserves to be bottled."

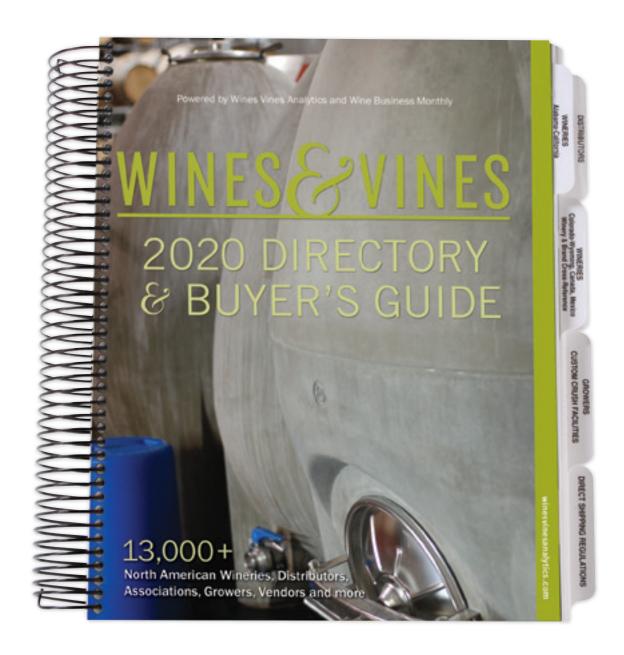
He hopes to keep both series around for a while. "I'm just a huge fan of keeping both options open, always exploring, always pushing, and never settling on a certain specific modeling forever," he said. "Things change, vineyards mature, winemakers mature, projects change. We're keeping everything open and really continuing to explore the AVA because there's so much to know about it. Even just our specific vineyards could be a lifetime of learning, for sure. But we know that there's specificity, and there's pleasure in all of our sites."



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#### William Chris Vineyards

Skeleton Key

#### Intention, Luck and Conviction Embody Texan Winery's Spirit

With an unrivaled passion and determination, Chris Brundrett and William 'Bill" Blackmon are dedicated to showing the rest of the world how wonderful Texas wine can be through William Chris Vineyards.

"Part of the wonderful gift of wine is tasting where the wine comes from. I think that intention is at the backbone, or should be at the backbone, of everything that we do. We want to share that through our wines, we want to have people feel that when they drink our wines, and we want to inspire others to feel intention and to be intentional in their lives," he said.

That intention shows itself in every tier of William Chris' wines, but it's in The Skeleton Key Red Blend that one can really feel that Texas spirit. A blend of grapes from the state's various AVAs, it's a lure to those who aren't as interested in wine or haven't experienced any Texas wine before

It also represents a pivotal moment for the winery. When Brundrett and Blackmon first started the business, they had very little capital—just \$40,000 and an American Express credit card. But they found a small piece of land on which to make their start, and on it sat a one-hundred-year-old farmhouse. With a

little remodeling using materials found onsite, as well as some reclaimed material from around the area, they turned it into their winery.

Amidst the demolition, Brundrett found a key—a skeleton key that opened all the doors to the building. "That little farmhouse ended up being, in a way, one of the keys to our success," he said. "It was like the cornerstone of our brand." In the end, they named their first line, Skeleton Key, after it.

One could even say that key saved the winery. When they first started to develop the Skeleton Key wine, Texas had one of the worst vintages in its history thanks to an incredibly strong, late frost that devastated most of the fruit. Brundrett and Blackmon, who had dedicated themselves to using 100 percent Texas fruit, lost 90 percent of their crop. But that didn't deter them. Brundrett says he just got in his pickup truck and drove to see every grower of every vineyard on the east side of Texas, looking for as much fruit as he could get his hands on.

"They were just little two-acre vineyards, four-acre vineyards, six-acre vineyards—little, small pieces of land. I started making agreements to buy all these little blocks of fruit, which is great. It saved our vintage. I literally put 10,000 miles on my truck in one month, just driving," he said.

The problem, however, was that they ended up with 20 lots of fruit, many consisting of just one or two barrels. While each lot made a great wine on its own, the two realized the insanity of making 20 different wines, particularly so early in the winery's start. Brundrett said they also

> took into consideration how unpredictable the weather could be-they could, potentially, experience another crop like this one again. The solution: a proprietary red blend.

> the Skeleton Key Red Blend were produced that year and it sold out in just two months—it was the fastest selling wine in William Chris history. When the next vintage rolled around, they made a little bit more, and the next year a bit more. And they always sold out. People fell in love with the brand—today it's in restaurants, H-E-B's and other grocery stores. Those external sales consistently drive

A couple hundred cases of

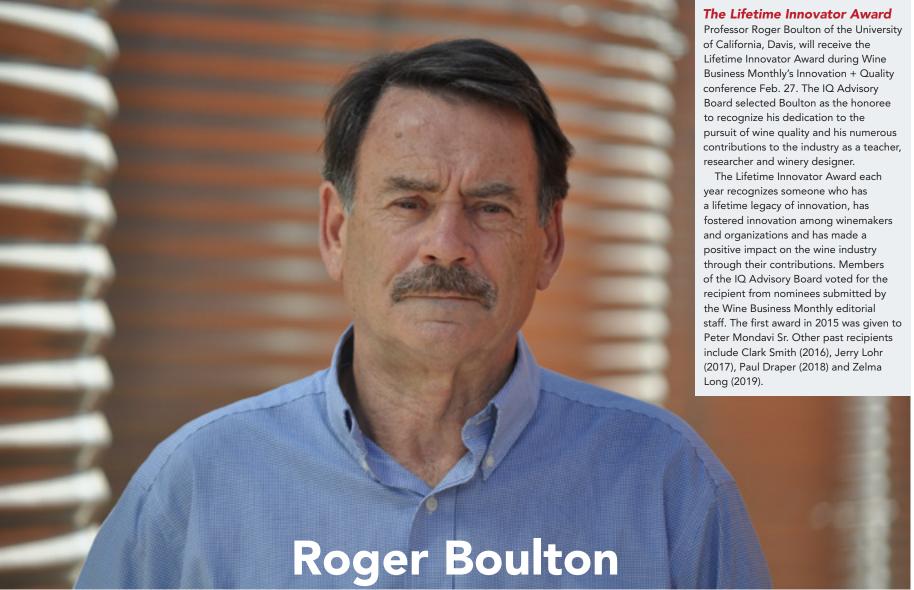
consumers to the winery. "People come into William Chris and half the time don't even taste it but end up buying a case, because they saw it on a restaurant shelf," Brundrett said.

Today, that entry level wine has seen great success and the Skeleton Key brand has expanded to include a Cabernet, a white blend and a Mourvédre. "Those are just taking off like wildfire. That (the Skeleton Key Red Blend) is kind of like the entry level, the access point. Once somebody tastes this and really likes it, then they look a little deeper and come out to the winery, and schedule their visit, and really dig into a lot of the single variety wines," Brundrett said.

While Skeleton Key has saved the winery from incredible vintage variations over the years, Brundrett hopes that some of their single vineyard and higher end wines will also showcase the power and quality of Texas winemakers and winegrapes. "We're building an amazing wine industry. We're supporting an economy and building a business that's going to be around for the next hundred years—that's responsible." WBM

Artesa Vinevards & Winery, Ascentia Wine Estates, B Cellars, B R ( Bedell Cellars and Corey Creek Vineyards, Bell Wine Cellars, Ben Benziger Family Winery, Bergevin Lane Vineyards, Bergstrom Win Winery and Tasting Room, Black Hills Estate Winery, Black Stallion Blackbird Vineyards, Bogle Vineyards, Bouchaine Vineyards, Buc The Wine Industry's Leading Online Job Site Cameron Hughes Wine Co., Castello di Amorosa, Caymus Vineyards, Estate Vineyards & Winery, Chance Creek Vineyards (Bock), Chappell Charles Krug Winery, Chateau Bianca, Chateau Diar , Chateau Mont state Wines, Darioush Winery, Dashe Cellars, Dario Proc vards, Del Dotto Vineyards, Delicato Vineyards Custon ine Estates, Diageo Chateau & Estate Wines. Dierberg/Star Lane aine Carneros, Ltd., Domaine Chandon, Domaine Serene Vineyar Don Sebastiani & Sons, Dono Dal Cielo Vineyard, Dry Creek Vineyard More wineries use winejobs.com Fantesca Estate & Winery, Far Nierte Winery, Ferrari Carai than any fother online job site. Wines, Francis Ford Coppola Presents, Frank Fam oma Caves, Fritz Winery, Frog's Leap Winery, Galante Family Wine Cellars, Goosecross Cellars, Grgich Hills Estate, Groth V Gundlach Bundschu Winery, Hagafen Cellars, Hahn Family Wine Created & Managed by ly Estate, Heitz Wine Cellars, Hess Co erv. Hudson Vinevards, Ironstone Vineyards, J F J Bronco Winery WINE BUSINESS MONTHLY Rock Neal & Son Vineyard Mgn nevard & Winery, Joseph Phelps Vinevards, Justin Vinevards Celler Estate, Kendall-Jackson, Kenneth Volk Vineyards, Kenzo Estate e Winery, Knights Bridge Winery, Korbel Champagne Cellars, Krupp es/Stagecoach Vineyards, Kunde Family Estate, La Crema, Laird Fam Lambert Bridge Winery, Lancaster Estate, LangeTwins Winery & Vin on Winery & Vineyards, Lewis Cellars, Littorai Wines, Long Meadow Lucas & Lewellen Vineyards, Lynmar Winery, Marimar Estate Vin nery, Martinelli Winery, Medlock Ames, Mendocino Wine Co./Parduc





KAREN BLOCK

# INNOVATION+QUALITY Lifetime Innovator Award Winner

The UC Davis professor taught two generations of winemakers and designed the winery of the future

Jim Gordon

IT IS DIFFICULT to imagine the U.S. wine industry without professor Roger Boulton. Since 1976, when winemaking was just beginning its renaissance, Boulton has been a driving force in the Viticulture & Enology Department at the University of California, Davis. Two generations of V&E students have taken his classes on wine stability, winery design and distilled spirits production. For more than 20 years, students and working winemakers have used a major textbook for which he was the lead author as a trusted reference. To top it off, all V&E students have learned hands-on winemaking and done research in the futuristic teaching winery that he designed.

Boulton has not disappeared, but at age 70 he is no longer a full-time professor. He has transitioned to emeritus status at UC Davis after 43 years, making this an opportune time for the wine industry to publicly recognize his many contributions with the Lifetime Innovator Award from the **Innovation+Quality** Advisory Board.

The Australia-born and educated Boulton holds bachelor's and doctoral degrees in chemical engineering from the **University of Melbourne** and has long held a second position in Davis's **Department of Chemical Engineering**. He is widely known for his emphasis on research and analysis as the keys to making top-quality wine on a consistent commercial basis. But rather than remembering him as a stickler, former students, including accomplished Napa Valley winemaker **Celia Welch**, recall the caliber of his thinking and the style of his teaching.

"I hope you have many pages for this story because Dr. Boulton's students will tell you volumes," Welch said. "Where we were blessed with strong specialists as professors, for example Dr. Singleton with phenolics, Dr. Kunkee with microbiology, and Dr. Ough with analysis, Dr. Boulton was more of a generalist. I took his winery design course where he described different types of equipment and how they functioned, and

really understood that he was teaching us how to look critically at a given situation and evaluate its suitability for the wines we were trying to make."

Boulton's key contributions came in research, teaching and winery design, according to current V&E department chair **David Block**. But Block also offers a more personal view of his long-time colleague's positive influence on the wine industry. "I consider him an important mentor to me as a faculty member in the department, and I know that other colleagues feel this way as well. Importantly, I know that there is a generation of winemakers out there that consider Roger to be an important mentor as well—this represents a significant impact on the California industry as well as the global wine industry."

Boulton developed an early mathematical model for wine fermentation that incorporated cutting-edge ideas in biochemical engineering at the time, as Block explained. He also did early work on developing methods for cold stabilizing and heat stabilizing wines that were more energy efficient and created less solid waste than traditional methods.

Boulton later focused on explaining how co-pigmentation was important to red wine color, deciphering the biochemistry behind an ages-old wine-making practice. The professor has been honored by the American Society for Enology & Viticulture with the Honorary Research Lecture and the Merit Award, and the Scott Endowed Chair in Enology in the V&E department.

#### Winery of the Future

Boulton has lectured widely about "the winery of the future" and got the rare opportunity to create such a facility when he led the design of Davis's **Teaching and Research Winery**, which opened in 2011. It has been heralded as the most advanced and most sustainable winery in the world.

"It was his idea to make our winery the most sustainable winery in the world and pursue the goal of a **LEED** Platinum certified facility," said Block. He also helped with the fundraising toward that goal. "He created the vision for the **Jackson Sustainable Winery Building** with the goal of taking the most sustainable winery in the world off the grid for water and energy and capturing all of our carbon dioxide."

"Through this vision, we now have rainwater capture on all of our buildings in the **Robert Mondavi Institute** complex, a reverse osmosis system to filter the rain water into potable water—a project with **WineSecrets** and **GE**—and the latest solar panels that charge a bank of second-life electric car batteries that power the winery at night and on cloudy days." This effort also encouraged the campus as a whole to seek LEED Platinum Certification for its subsequent buildings.

#### Serendipity

When first told about his selection as the Lifetime Innovation Award winner, Boulton was momentarily stunned, nearly speechless. When he did begin talking, he first gave credit to the many mentors, academic colleagues and industry people who worked with him or helped in other ways. He recalls a dinner at the home of Davis enology professor Maynard Amerine in Napa Valley within a few weeks of his arrival at the Davis campus. Amerine invited Boulton so he could meet a number of influential winery owners, including Ernest Gallo, Peter Mondavi of Charles Krug Winery, Jack and Jamie Davies of Schramsberg and Louis P. Martini.

"I didn't know those people," Boulton says. "I didn't know the significance of those people. But if he hadn't done that, I wouldn't have got that start. That Amerine gesture, as I look back at it, was profound." A few weeks later professor **Dinsmore Webb** also invited him to a dinner, this time to meet **Pascal Ribereau-Gayon**, the noted professor and enology consultant from Bordeaux, which led to a lifelong friendship.

"I feel like I was lifted many times by many different people. I often look back and go, 'I'm not sure that happens to everybody.' I'll be blunt to say it probably doesn't happen to most people. So there's a sense of gratitude and respect that is hard to translate."

#### **Detective Work**

Boulton eventually talked at length about the detective work of a researcher. Filling in the blanks of knowledge drove him, he said. The unknowns about pH, why fermentations stall, why no one was using crossflow filtration for wine and other mysteries set him and other members of the department to work.

"When I first came, nobody knew why the pH of wine was what it was. They didn't know why you had a high pH or why you had low pH. They just knew it was different. It turns out that if you do the calculations on the acids, the pH should be 2.2 and the titratable acidity should be 10. Well, it's not. It's 7 and 3.5. Hang on, something's wrong here."

He eventually traced the difference to the potassium content of the berries and enzyme activity, and showed his predecessor, Professor Berg, what he had learned. "He looked at it, he goes, 'I think you're right.' For a young kid to have someone with that amount of knowledge say that just blew me away. Yet that's not a research topic that I would ever get funded for. That's an intellectual pursuit to understand a problem that required several little pieces of detective work."

Boulton's similarly innovative work on red wine color made the biggest impression on Sonoma County-based winemaker and winery owner **Carol Shelton**. She was a student of Boulton's when he first arrived at Davis. "He made immense contributions to our industry, here in California and worldwide. I think the research he did on co-pigmentation was one that affected me the most, but there were so many things he shed light on that it is hard to pick just one accomplishment. He will be missed when he completely retires!" **WBM** 



Jim Gordon, editor at large for Wine Business Monthly, writes and edits articles on grape growing, winemaking and wine marketing. He has been covering wine and the wine business for more than 35 years, notably as the editor of Wines & Vines from 2006 through 2018. A role as contributing editor for Wine Enthusiast magazine began in 2014, in which he reviews California wines and reports on various California wine regions. He was executive director of the annual Symposium for Professional Wine Writers at Meadowood Napa Valley from 2008 to 2015. Dorling Kindersley (DK Books) of London published his first book as editor-in-chief, Opus Vino, in 2010, which was chosen as a finalist in the James Beard Awards. In 2002 he was co-creator and managing editor of the long-running Wine Country Living TV series for NBC station KNTV in San Jose/San Francisco.



**IQ** 2020

# INNOVATION+QUALITY Product Awards

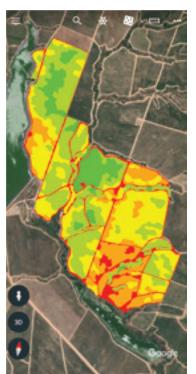
Sixth Annual Innovation + Quality Award Winners Announced

Curtis Phillips

**WINE BUSINESS MONTHLY'S** editorial mission is to help wineries and growers evaluate and successfully utilize innovative new products. Throughout the year, we write about new product categories that are advancing quality in the wine industry. From these, submissions from winemakers around the world, and with help from the 2020 **Innovation + Quality** Advisory Board, the winners of the sixth annual Innovation + Quality Awards were chosen based on innovation relevant to ultra-premium wineries.

Curtis Phillips, an editor for Wine Business Monthly since 2000, is a graduate of UC Davis, and has been a winemaker since 1984 and an agricultural consultant since 1979.





## Precision View - Pollen Systems

PrecisionView™ integrates a vineyard or winery's own existing information with regular or weekly RGB (Red Green Blue, i.e., true color), Normalized Difference Red Edge (NDRE) and Normalized Difference Vegetation Index (NDVI) imaging from drones, fixed wing aircraft, satellites and ground vehicles. The images are interpreted to yield data on soil conditions, crop health, pest and disease pressures, and other factors that can help a vineyard or winery team improve harvest yield and productivity. All of Pollen Systems' scans are stored in their Pollen Cloud and analyzed by their technicians and analytics software.

#### Trellís Al Crop Prediction - Trellís

The **Trellís** software-as-a-service (Saas) platform uses a proprietary Al engine specifically designed for agri-food production. The service is web-based and operates in the cloud, i.e., that the customer accesses via the internet.

There is an assumption that the vineyard or winery already collects data, but there is no need for additional hardware or software. The key to the Trellís platform is the iterative nature of machine learning. The AI model is fed a large quantity of real crop data that is used to adjust its



predictive algorithms. As the process repeats and the AI is given more data, it will predict more accurately.

This tool can be applied to any quantifiable facet of the wine business—in the vineyard or winery—down to the individual block. The crop yield and quality predictive modeling deserve particular recognition because the AI appears to predict results early enough, and well enough, that vineyard and/or winery owners can take corrective action.



## Diemme Neutral 2 System - Diemme Enologia

The Diemme Neutral 2 is the most recent iteration of inert-atmosphere presses from **Diemme Enologia**. The Diemme Neutral 2 maintains an inert nitrogen or carbon dioxide atmosphere inside the press so that grapes are protected from oxygen exposure the moment they enter the press. The press is filled with fresh inert gas each time the membrane is deflated. This keeps the grapes in an oxygen-free environment throughout the entire press cycle. The pressed juice is also kept under the same  $N_2$  or  $CO_2$  environment from the moment it leaves the Neutral 2 until it enters the fermenter.



#### Pera Automatic-Control Systems -Pellenc America

Since its acquisition of **Pera** in 2014, **Pera-Pellenc** has been integrating the Pera crushpad equipment with its own so all tools can be integrated and controlled together. On one level, this allows Pellenc to be the one-stop shop for winery crushpad equipment since they can now provide everything from the receiving hopper to the must pump. More importantly, the Pera Automatic-Control Systems run all the Pellenc equipment on the crushpad from a single control stand. Even when multiple control stands are used, the simple and intuitive user interface layout means that staff can manage the crush and cellar processes with a similar set of UI layouts for each piece of equipment, thus improving efficiency and safety at work.



#### Braud 9090X - New Holland Agricultural

The Braud 9090X is an impressive over-the-row grape harvester that can be fitted for several vineyard tasks other than harvesting. The entire picking head is designed so that one person can remove it in about 10 minutes, without using any special tools. The non-harvesting attachments for the front tool carrier include a trimmer, pre-pruner and leaf-remover, with fully integrated control via the IntelliView™ touchscreen. The implement carrier telescopically adjusts, both horizontally and vertically, to suit the various implements; the front tool carrier can rotate away from the cab during a turn. The 9090X may be fitted with a **Berthoud** sprayer in place of the picking heads and can be controlled via the IntelliView™.

The harvester is available with either two grape hoppers or a side conveyor. The units with two hoppers can be fitted with a SOCMA destemmer at the top of each hopper. When the destemmer is not needed, its rotation direction can be reversed from the cab, directing all harvested material directly into the collection hoppers.

Together with the option to fit SOCMA destemmers, the IntelliView™ control and display are the reason we chose the Braud 9090X. The IntelliView™ III in-cab display has a touchscreen interface to make setting machine functions faster and simpler. The operator can customize UI pages to suit specific operations. The system offers full ISO BUS control so the operator can use the IntelliView™ screen to operate a range of compatible equipment, including sprayers and multi-function implements. This eliminates the need for separate controls and reduces the time to switch between tasks. WBM



## Winemaker Trials

#### The Year in Review

Stacy Briscoe and Michael S. Lasky

**UNDERSTANDING THAT TRIALS** are the embodiment of winemakers' and grape growers' pursuit of quality, the editors of **Wine Business Monthly** select more than 20 trials to feature during our annual **Innovation + Quality** (IQ) conference—a forum created for ultra-premium wineries that are interested in cutting-edge innovations that advance wine quality.

This year, IQ will be held on Feb. 27, 2020 at **The Culinary Institute of America** (CIA) at **Greystone** in St. Helena, Calif. During the conference, wine-makers who have submitted trials have the opportunity to pour their wines for the more than 1,000 wine industry guests in attendance. It's a time to show off their work, share what they've learned and receive honest feedback from colleagues in a professional environment.

Additionally, WBM will continue to feature trials presented at IQ within the pages of the magazine, diving deep into the details of the experimentation and interviewing the winemakers about their scientific process and analysis.

Here, we present a round-up of trials covered throughout 2019 from those who presented their work at the 2018 and 2019 IQ conferences. This list is representative of just some of the innovative work being done in our industry. The WBM editorial team would like to encourage more winemakers to submit their trials for upcoming events and/or for publication in the magazine. For more information on how to contribute your work, please visit www.surveymonkey.com/r/IQ2020ProductSubmission.

#### **JANUARY 2019**

## Sonoma Winemaker Learns the Pros and Cons of Using Perle Barrels for Pinot Noir

Winery: Virginia Dare Winery (part of The Family Coppola)

Winemaker: Humberto Berlanga

This trial was "Phase II" of a trial **Humberto Berlanga** first presented at IQ 2017 that compared barrel-fermented Russian River Valley Pinot Noir against a stainless steel-fermented control. From that experiment, he concluded that there was a noticeable difference in extraction and final aroma and flavor profiles between the two trialed lots and, in general, barrel-fermented wines show higher levels of extraction. This was corroborated by the reports from **ETS Laboratories**.

The objective of this second phase was to determine if the same quality improvement can be achieved with the use of oak alternative products, specifically oak chips.

#### **Excerpt from Winemaker's Postmortem:**

WBM: From the results of this second phase, what have you learned and how will you use this knowledge in the future?

Berlanga: I learned that I can credit the darker, more concentrated color to the barrel ferment. Oak chips provided vanilla oak tones. It continued with fresh fruit richness, but the color was more comparable to the stainless steel control. The Perle barrels were a lot darker. The ones that we used with oak chips had color that was more comparable to the control [lighter], and that was basically confirmed by the ETS lab numbers. We've learned from this that when we use oak chips, we get a little bit of extra fruitiness, but the color is not going to go as dark as it could be with the barrel ferment.

#### **FEBRUARY 2019**

## Velocity Winemaking via STARS-XF Technology Realizes Major Cost Savings

Winery: The Hess Collection Winery Winemaker: Alison Rodriguez

When evaluating the use of **STARS-XF** technology versus cold-stabilization followed by cross-flow microfiltration, data showed that overall processing time was reduced from six weeks to just 12.5 hours in the case of Chardonnay and from 14 days to 12.5 hours in the case of a Pinot Noir. The main time savings were attributed to the long cold stabilization time.

When observing the resulting wine, the STARS-XF lots showed some color improvement in the Pinot Noir sample but no changes in the Chardonnay. It was noted that STARS allowed for greater adjustment of final pH level(s). STARS, combined with reverse osmosis, lowered water consumption by approximately 70 percent from 12 percent to 3 percent of total wine volume processed.

#### **Excerpt from Winemaker's Postmortem:**

WBM: Does the price of the STARS XF machine compensate for the reduced processing time and other possible long-term savings? (The price quoted is in the mid- to high-six figures.)

Rodriguez: I think that depends on what your cost of labor is and what your individual days to stabilization are. I've worked at other wineries in my past where it took two weeks, and sometimes more, to stabilize a tank using traditional cold stabilization. Here at The Hess Collection, we can usually stabilize inside of a week. But commonly, I would say the industry standard is more like two to three weeks. For those wineries, it makes a whole lot of sense. Trying to cold-stabilize in the middle of summer for three weeks, for instance, if you're running cooling towers, you end up running a lot of water through your winery just to chill that wine down. There is that expense and the general environmental factors that one must weigh before making a final purchasing decision.

#### **MARCH 2019**

## Finding the Right Temperatures on Barrel-fermented Chardonnay

Winery: Chamisal Vineyards
Winemaker: Michael Callahan

"For our Chardonnay program, we see ourselves leaning toward less primary fruit and more complexity," said former **Chamisal Vineyards** winemaker, **Michael Callahan**, who noticed a winemaking trend toward more "noble reduction," which produces a less fruit-driven and slightly more complex Chardonnay. "Without tweaking it too much, we wanted to check how slight changes in our fermentation temperature would add a bit more complexity."

#### **Excerpt from Winemaker's Postmortem:**

WBM: One of the comments you noted in your conclusion was that you noticed there was better oak extraction in the newer barrels and, going forward, could use less overall oak. Was there a reason that you used both new and old barrels?

Callahan: It was a trial split—we had eight barrels, eight barrels and 10 barrels for the three lots. That's how it ended up. It wasn't a perfect split, but that gave us the ability to do a 25 to 30 percent new oak program with each lot, so [the winemaking team] tasted the wines not only from neutral barrels but more as they would if it was an entire program.

From there, we were able to ask how it worked with the old barrels, how it worked with the new barrels and how it worked with the one-year-old barrels. We were able to get that to composite, and that pretty much tells a story of what the 18° C ferment tastes like, versus a 15° C, versus a 21° C. I guess it wasn't the thing that we were testing for. We're not trying to get more out of the oak program, but a lot of times when you start off with these experimental trials, you find something that maybe you weren't looking for pop up. That's part of the fun with doing trials, discovering something other than what you were looking for. Maybe in the future we spend less money on oak.





**APRIL 2019** 

#### What are the Sensory and Phenolic Effects of Using Oxygen and Nitrogen as Flotation Gases?

Winery: Erath Winery

Assistant Winemaker: Karl Weichold

The goal of this experiment was to compare the sensory effects and analyze the phenolic composition of juice that was float-clarified with air and nitrogen. To do so, a homogenous press fraction of Pinot Gris juice was processed with a standard pre-flotation protocol (pectinase, bentonite, etc.) then split into two separate tanks. One tank was float-clarified with air and the other with nitrogen. Two stainless steel drums were collected from each tank, inoculated and fermented until dryness. Sodium metabisulfite was added once fermentations were complete, and the paired stainless steel drums were each racked out to individual neutral barrels.

**Excerpt from Winemaker's Postmortem:** 

WBM: What was the overall opinion of attendees who attended the trial's IQ presentation?

Weichold: At IQ and other symposia, the startling thing about this experiment was that there didn't seem to be a subjective consensus between the two treatments. This addresses my original point that this experiment isn't necessarily meant to show the right or wrong way to select gases for fermentation. It's simply a set of tools you might use to create a house style. To us, the nitrogen float was a little more closed but might have had flintier, crisper characteristics. The air float had a rounder, more tropical, more expressive pear and apple note to it. Our style is very fruit-forward, so we felt that the expression of the fruit that the air gave us was more appropriate for the wines we create. In our opinion, the experiment is certainly worth performing on your own wine just to confirm that you are making the correct choice for flotation gas to best achieve your stylistic target.

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**JUNE 2019** 

## What are the Sensory Impacts to Sauvignon Blanc Following a Stimulated Thiol Release?

**Winery**: Scheid Family Wines **Winemaker**: Casey DiCesare

Casey DiCesare and the Scheid Family Wines winemaking team wanted to evaluate the effect of a nutritional product on the release of thiol aroma molecules in Sauvignon Blanc wine to determine overall sensory impacts. A pectinase was added to pressed juice, along with a dose of bentonite and SO<sub>2</sub> at 50 ppm. It was then inoculated with Saccharomyces cerevisiae strain VL3. The juice was allocated into similar vessels for fermentation as the control juice, which received no nutritional supplement. The treated tank fermented significantly faster than the control and was dry in 15 days while the control took 34 days. The fermenting juice was racked to kegs at 7° and 9° Brix, respectively, to finish fermentation.

#### **Excerpt from Winemaker's Postmortem:**

## WBM: During the trial, were there any problems that had to be addressed and how did you attend to them?

**DiCesare**: The initial inoculation went well. Fermentation took a couple of weeks, and fermentation curves were very similar within both. We really didn't run into any real issues. Partway through the fermentation, however, due to the limitations of available tank space, we racked off into kegs to finish fermentation. That was just tank logistics at the time. But even with that, both fermentations went well.

**JULY 2019** 

## Using Leaf Pull to Increase Thiols in Sauvignon Blanc

Winery: Chemeketa Cellars Winemaker: Scott Dwyer

Sauvignon Blanc is an uncommon variety in Oregon's Willamette Valley, so wine studies program chair of **Chemeketa Community College**, **Scott Dwyer**, decided to lead his students in a study to discover how, if at all, leaf pull at fruit set can increase the fruit's aromatic compounds.

His conclusion showed that the thiols were higher in his control group, those grapes that did not undergo leaf pull. However, those thiols seemed to lean toward "reductive thiols" rather than the boxwood/gooseberry component that was his goal. Thus, while the control may have more thiols in the true chemical sense, it had less of the "right" ones.

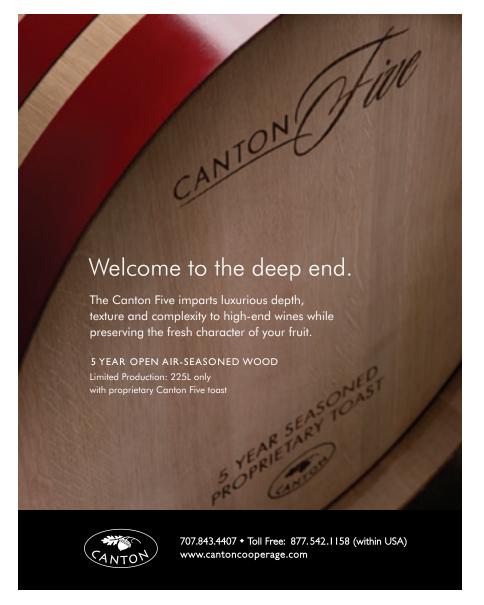
#### **Excerpt from Winemaker's Postmortem:**

#### WBM: Did the outcome reflect your expectations?

**Dwyer**: The trial and control were very different throughout fermentation; but as time progressed, they became more and more similar, sensorially. From the standpoint of making an aromatic and thiol-rich Sauvignon Blanc, we were successful with both lots. From the standpoint of demonstrating leaf pull as a tool to increase thiols, we fell short. Our results didn't exactly align with our expectations or previously published research on the subject. In fact, they were the opposite.









#### **AUGUST 2019**

## Chardonnay Three Ways: Measuring Effects of Concrete Tank, Puncheon Barrel and Stainless Steel Drum

**Winery**: Artesa Vineyards & Winery **Winemaker**: Ana Diogo-Draper

Artesa Vineyards & Winery's winemaker, Ana Diogo-Draper, wanted to compare Chardonnay fermentation results between her new 236-gallon square concrete tanks, a stainless steel drum and a once-used puncheon barrel. The goal: to find the unique characteristics each fermentation vessel imparts.

Fermentation times for the puncheon and stainless steel drum were similar (around 28 days for the stainless steel drum and 32 days for the puncheon barrel), but the concrete tank took 67 days to become RS dry. This is due to the exceptional temperature retention of concrete, which was clearly displayed in this trial, since all vessels were present in the same space during the fermentation period. Post-fermentation chemistry panels of the three lots were very similar, with the concrete tank presenting a slightly higher pH than the oak and stainless steel barrels. However, it was in the sensory assessment that Diogo-Draper and her team found the greatest differences between the wines.

#### **Excerpt from Winemaker's Postmortem:**

## WBM: Based on your results, will you adjust your Chardonnay program?

**Diogo-Draper**: This trial showed us the incredible power of fermenting in different vessels, which is something we already do in our winemaking program, both for white and red wines. If anything, it reaffirmed our stylistic goal of having distinct blending components and our ambition to add more concrete tanks to the program.

The results of this trial surpassed my expectations. Moving forward, we will be using all three vessels to ferment the Hyde Vineyard Chardonnay grapes [which we bottle as a single-vineyard wine]. I truly believe the best wine on the table is the blend of the three components.

We will continue to test the use of all three vessels on Chardonnay; this vintage focused specifically on fruit from our estate vineyard. We conducted similar trials on Pinot Noir and Cabernet Sauvignon last vintage and will continue to do so, expanding to other reds, such as Tempranillo.

OCTOBER 2019

## Impact of Varying Intervals of Extended Maceration on Texas Mourvèdre

Winery: William Chris Vineyards

Winemakers: Tony Offill and Chris Brundrett

Wanting to create more complex layers in their single-vineyard Mourvèdre, William Chris Vineyards' winemakers Tony Offill and Chris Brundrett decided to experiment with various maceration times. The five-, 60- and 120-day macerations each offered unique aromas, flavors and textures, creating a more well-rounded, and interesting, final blend.

#### **Excerpt from Winemaker's Postmortem:**

WBM: What did you learn from this trial? Did anything occur during the course of the trial or in the results that were unexpected?

**Offill & Brundrett**: We learned that we could use this across more of our varietal programs in order to add depth and mouthfeel with a bit more reductive strength. In addition, we would reduce volumes across the lots of extended maceration in order to make it a smaller percentage of the final blend.

The greenness on the 120-day lot was, and is, a bit challenging to blend. However, the positive attributes in mouthfeel far outweigh the aromatic components. The most surprising aspect was that there was virtually no change in pH the longer we macerated. We anticipated more changes in chemistry, which in the end proved not to be the case. However, the mouthfeel depth improved more than we anticipated, which is a positive.

#### **DECEMBER 2019**

#### Finding the Right Oak for Each Pinot Noir Clone

Winery: Terragena Vineyard Winemaker: Chris Buchanan

Curious about the effects of new versus neutral oak aging on specific Pinot Noir clones, **Terragena Vineyard** proprietor **Chris Buchanan** decided to run a trial testing just that: Holding all other fermentation variables constant, this trial determines the sensory effects of new Hungarian oak versus neutral French oak on Pommard clone Pinot Noir.

Buchanan is also bottling these wines as individual selections in order to explore how each clone and oak treatment ages in comparison with a blend of clones from the same vineyard. This long-term project will help inform Buchanan and his winemaking team which clones or treatments may be better suited to longer aging and/or how a blend of clones could contribute to a wine that ages gracefully for many years.

#### **Excerpt from Winemaker's Postmortem:**

WBM: Did you encounter any problems during the course of the trial? If so, how did you overcome these issues?

**Buchanan**: It took forever to hand-write all of the details on each individual bottle. Originally, we were going to write out the clone name and oak type on each bottle. After about one case we decided to switch to codes. "N" for neutral oak, "H" for Hungarian and "Pom" for Pommard. Clone 115, well, that one didn't need an abbreviation. **WBM** 



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## A Changing Landscape: Producing Premium Wine in a New Environment Miguel Torres and Marimar Torres



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## Oak or Barrel?

Some thought about wine aging in light of recent research

Curtis Phillips

Curtis Phillips, an editor for Wine Business Monthly since 2000, is a graduate of UC Davis, and has been a winemaker since 1984 and an agricultural consultant since 1979.



**I RARELY GET ASKED** about the relative merits of aging red wine in barrels versus in tanks by anyone in the wine industry itself. The assumption is that barrels are the perfect aging vessel, and the best result an alternate container can achieve is to approach this acme close enough that the consumer doesn't notice that the wine was *not* aged in barrels.

But even if barrels are, indeed, the best container for aging red wines, how much of this is a chicken-and-egg phenomenon? Our entire concept of what a red wine should be derives from wines that are crushed, fermented, pressed and then aged in barrels. This was not always the case. I daresay that the Greeks and Romans would find our wines completely undrinkable and vice versa. Their wine production and storage methods resulted in a product that would likely taste horribly oxidized to our palates. Keep this in mind the next time someone touts amphorae as the perfect wine storage vessel.

A "civilized" person in the ancient world didn't drink their wine straight either. Wines were diluted with two to four times as much water as wine and augmented with herbs, resin and perhaps seawater, citrus juice, chalk, various lead salts or even natron (a naturally occurring mix of sodium carbonate, sodium bicarbonate, sodium chloride and sodium sulfate used in Egyptian mummification). Such a beverage seems more like a poorly conceived sports drink or patent medicine than something that we'd call wine.

The Gauls and Germans, on the other hand, were ridiculed by the "civilized" Greeks and Romans for drinking wine uncut and unadulterated. The supposed drunkenness of the Gauls and Germans is something of a literary trope in Latin literature, so I don't know if there was any truth to the idea that the Gauls and Germans imported wine without adopting the ceremonies of adulteration that went along with it. There are enough surviving records of wine being shipped north of the Alps that some historians have put the total quantity of wine shipped from Italy into Gaul at what seem like astronomically high volumes.

## Barrels are Pretty Much Perfect in Every Way, Right?

The differences between the gastronomic fashions for contemporary and ancient wines notwithstanding, the barrel ended up being the preferred wine storage vessel rather than the amphora. My feeling is that the switch from amphorae to barrels had more to do with practical issues unrelated to wine quality or fashion than a perceived organoleptic superiority of wines aged in barrels. Perhaps it was the relative abundance of the oak needed for barrels versus the red clay used for terra cotta amphorae. I think it's just as likely that the switch was motivated by the fact that barrels are sturdier and more resistant to impacts that would otherwise shatter a clay vessel; this would make barrels better transport containers than amphorae. From the late classical era until around the First World War, barrels were more or less ubiquitous transport containers for just about everything except bulk items, like coal, that were simply shoveled into a ship's hold.

Note that I haven't subjected the hypothesis that barrels are more durable transport containers than amphorae to any sort of rigorous experimentation; but given the more or less universal adoption of the barrel since the late classical era, I'm pretty sure that my hypothesis is correct.

Nearly all goods, from apples, crackers, salted meat and all liquids, including spirits, wine, whale oil and molasses, were shipped in barrels. The heyday of the barrel as a shipping container didn't last forever. Today, hardly anything is moved in barrels. I suspect this is mainly because, while barrels are more durable than amphorae, they are less durable than the containers we can make today. It is notable that beverages, like wine and some distilled spirits, continue to be aged in barrels, even if they aren't typically transported in them.

I think the role the oak barrel plays as a source for oak flavors considered essential to most red wine styles is the least relevant. If vanilla and toasted coconut characters were the sole reasons for using oak, then we would use a lot more new barrels every year than we currently do. The number of oak



extractives imparted by a barrel into a wine declines sharply each time the barrel is emptied and refilled with a new wine. Oak aromas and the romance of having a cellar full of barrels might be enough justification for a few brands, but I really doubt that these alone are adequate reasons for the continued use of barrels to the extent that they are. After all, the wine industry does have the option to simply put oak into their wines rather than fill barrels. There must be some other reason that tips the balance in favor of aging red wines in barrels, at least for wines that sell at high enough price points that they can absorb the additional labor costs.

## Working with Tanks and Barrel Alternatives

Plenty of red wine is made without anything like a traditional *élevage* in barrels. The trend I see in our barrel and oak survey is that the shelf price below which barrels are deemed too expensive has been steadily rising for as long as we have been surveying winemakers. It used to be that if the shelf price was below \$6.99 it was safe to assume that the red wine was never put into a barrel. Nowadays, it's just as likely that any U.S. red wine with a shelf price below \$25 per bottle hasn't been aged in barrels.

But does that mean that these wines are simply kept in whatever tanks they went when they were pressed? Obviously not, since such wines would still have

to be racked off their lees and filtered prior to bottling. Even taking racking and filtration as assumed, is that all there is to it? Maybe, but probably not. It takes more than a little effort to produce a wine where one cannot tell if the wine was aged in barrel or not. As I have noted, barrels are a source for oak extractives; but if it was just a matter of using oak alternatives, the entire wine industry would have cut barrels out of the production process long ago. I am convinced that it is the barrel's role as a passive micro-oxygenation system that keeps them relevant and makes them difficult, but not impossible, to replace.

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#### **Barrel Surrogates**

Barrel surrogates are plastic or steel wine tanks designed to serve the same oxidative function as barrels. There have been several attempts to make steel "barrels" or small tanks with wooden ends to serve this function, but few seem to stay on the market for very long. The idea is that ends are replaceable and provide oak extractives and some oxygen transmission. Much more successful are plastic tanks designed to take the place of barrels, like the Flextank Cell and Flextank Stacker.

Note that thanks to geometry, the smaller the tank, the more oxidative it is to the wine even if the material of the tank doesn't allow any oxygen permeation. This is, of course, as true of oak barrels as it is of stainless steel tanks.

#### MOX

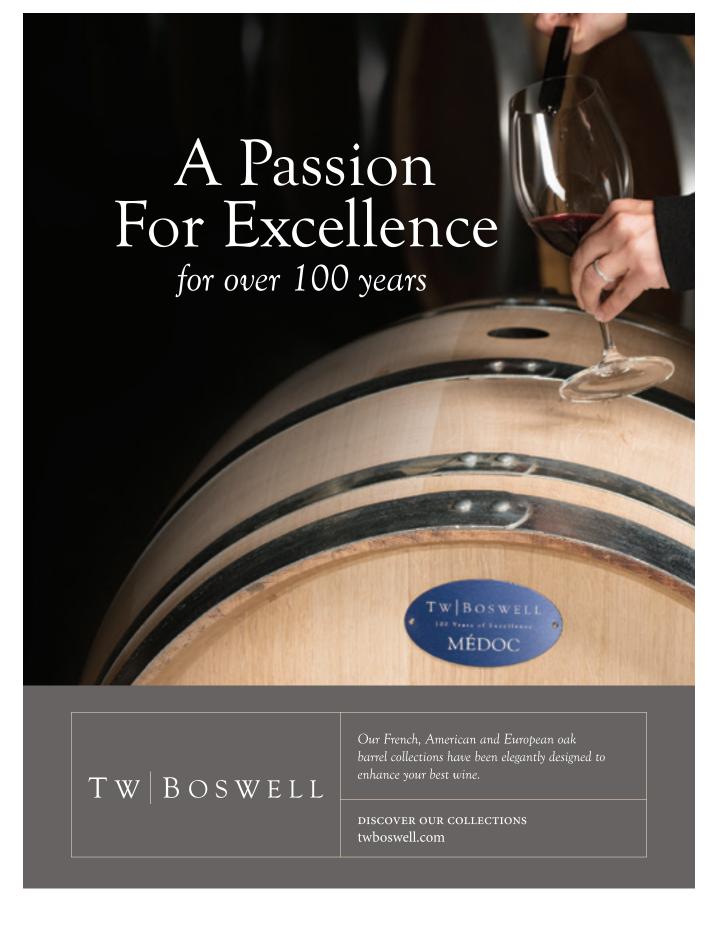
Micro-oxygenation (MOX) is a catch-all name for active systems that dispense oxygen into a tank full of wine at very small, but measured, levels. MOX systems are available from several suppliers, including G3 Enterprise, Juclas USA (a branch of The VASONGROUP), Enartis USA, Westec, StaVin, Vivelys USA, Parsec and Wine Grenade. When handled correctly, these units can produce a final wine that is exceedingly difficult to distinguish from wines that were aged traditionally. But that is the rub: MOX requires more attention from the winemaking staff and tends to be less forgiving than a traditional *élevage*. I think this is why larger wineries tend to be the most successful with these systems.

Research has demonstrated that only using the metric of how close-set the annual rings in the barrel staves are—that is, the grain tightness—is an inadequate tool to predict the aging performance of the barrel by itself.

## It's All About the Oxygen

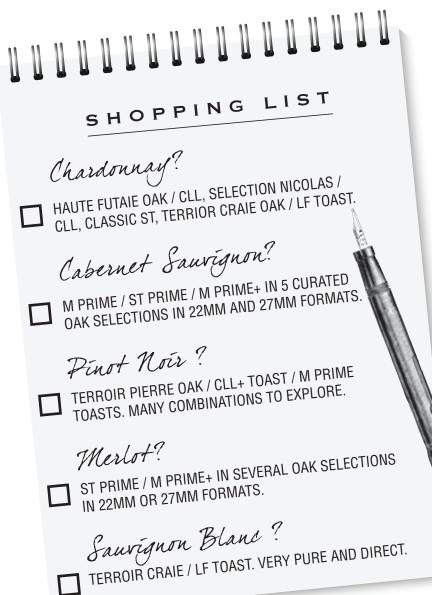
A barrel is much, much more than a source of oak aromas and a rustic item to show off during winery tours. I would argue that the barrel's primary role in winemaking is as a passive micro-oxygenation system.

Winemakers often have an instinctual assumption that wines aged in "fine-grained" or "tight-grained" oak age more slowly, making such barrels more appropriate for the wines that they think benefit from the longest time in barrel. Similarly, wines aged in "open-grained" barrels are presumed to age more quickly. Unfortunately, research has demonstrated that only using the metric of how close-set the annual rings in the barrel staves are—that is, the grain tightness—is an inadequate tool to predict the aging performance of the barrel by itself.



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## **Determining Barrel Stave Oxygen Transmission Rate**

The November 2019 issue of the journal *Materials and Design* contains the published version of a paper that was presented at the **ASEV Annual Conference** held in June 2019. This paper, "Application of image analysis and artificial neural networks to the prediction in-line of OTR in oak wood planks for cooperage," delineates three highlights:

- "(1) A novel nondestructive methodology is proposed to estimate the oak wood oxygen permeation for cooperage,
- (2) An artificial neural network estimates the oxygen transmission rate (OTR) from eight wood parameters measured by image analysis, and
- (3) This method allows to make barrels with different levels of oxygen transmission rate and low variance among barrels."

The goal of the paper is more about making barrels with different OTR than the practicalities of managing a winery that includes a traditional *élevage* in oak barrels as part of its winemaking program, but I have a couple reasons for mentioning it. First and foremost, I think that this paper will prove to be a watershed moment for the way we think about, and buy, barrels in coming years. Secondly, this research points the way toward making tools that allow coopers to select the staves used in individual barrels to have up to a three-fold difference in OTR that, in turn, should provide winemakers the ability to select barrels that age their wines at the rates they want.

Cooperages have been selecting oak based on visual criteria for decades; but as noted above, this isn't sufficient by itself to predict a stave's, or the resulting barrel's, OTR during *élevage*. Several cooperages have developed, or are developing, various methods of evaluating staves during their production processes to produce barrels with predictable characteristics, but I haven't yet heard of any that include the ability to predict the stave OTR described in this research. Consequently, I expect the effects of this research, and the resulting commercial application of it, to be far reaching. I imagine that the commercial application of multilayer perceptron artificial neural networks, like the one used by Martínez-Martínez and collaborators, will be incorporated into the oak selection processes used by a great many cooperages.

#### **Conclusions**

So, should winemakers use tank or barrels? As with aspects of winemaking, there isn't one clear cut answer that fits all wineries or even all the wines produced by a single winery. The answer is more about choosing what is correct for the wine in question. Not every winery is going to want to manage a barrel program that consists of 50,000, 100,000 or 500,000 barrels. Not every winery has the technical know-how and diligence to manage a MOX program. Not every winery is going to have the technical knowledge and consistent fruit-sourcing to take advantage of high- or low-OTR barrels. WBM

1. Martínez-Martíneza, V., del Alamo-Sanza, M. and Nevares, I. 2019. Application of image analysis and artificial neural networks to the prediction in-line of OTR in oak wood planks for cooperage. *Materials and Design*. 181

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#### **Leslie Sisneros**



"As a winemaker who has a special interest in R&D and is always open to experimentation, I'm very excited to be a part of this research movement. I like the idea of running similar trials at multiple wineries without the influence of a vendor or salesperson. ROC is a good platform for winemakers to openly connect and discuss their experiences and learn about new innovations."

**Leslie Sisneros LS Wine Consulting** 

#### **Johannes Scheid**



"ROC is exactly what the wine industry needs: winemaking professionals working on different trials and sharing their experience and knowledge, without a vendor behind it. The philosophy of transparency among the group helps us all grow in our profession and lead to improving the overall quality of our wines."

Cheers,

**Johannes** 

Winemaker

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# UC Davis Researchers Say Blending is Better in Cylindrical, Jacketed Tanks Than Concrete Eggs

Kerana Todorov

**Kerana Todorov** is staff writer/news editor at *Wine Business Monthly*. She can be reached at *ktodorov@winebusiness.com*.

**A UC DAVIS RESEARCHER** recently concluded that jacketed cylindrical tanks provide better mixing and temperature control than concrete egg fermenters. **Konrad Miller**, who received his Ph.D. in chemical engineering in the summer of 2019 from UC Davis and now serves as a researcher and lecturer at the university, led the study, conducting a series of research projects that used computational fluid dynamics to predict temperature changes in space and time inside different wine fermenters.



Konrad Miller released recent research on temperature control and liquid mixing in concrete egg tanks.

Miller used mathematical modeling to simulate the fermentation of Sauvignon Blanc in a concrete egg and compared the results with data obtained from a study conducted on a cylindrical tank fermenter. The experiment monitored the liquid, external concrete surface temperature and sugar concentration during the fermentation process and compared the data with information obtained from the mathematical model. "By comparing the real fermentation data with the model predictions and getting the same results, we saw we could use the model," Miller said.

In the study, the stainless steel cylindrical tank's jacket maintained temperature control via liquid coolant—no cooling coil was used.

**Dr. David Block**, professor for the **Department of Chemical Engineering** and **Viticulture & Enology Department** at UC Davis, suggested Miller analyze temperature control and liquid mixing in concrete egg tanks from an engineering standpoint. The hypothesis was that the egg-shaped tank would have superior mixing capability due to its oval shape—a popular claim that had not yet been scientifically proven. The experiment did not delve into whether or not fermenting in concrete affects the taste of the wine. Block stressed he has no qualms against using egg tanks.

Miller worked with **CADE Estate Winery** on the project, experimenting with its Sauvignon Blanc. According to Block, the results from Miller's experiment concluded that concrete acts more like an insulator than a heat sink, making temperature more difficult to control.

The research indicated that the heat released during fermentation is trapped by the concrete. Block noted that the liquid in the egg fermenter will heat up unless there are cooling coils in the concrete.

"Unlike stainless steel wine tanks, concrete egg fermenters typically have walls several centimeters thick, which provide significant mass for heat absorption and serve as an insulator to slow heat transfer with the ambient air," Miller wrote in his research paper.

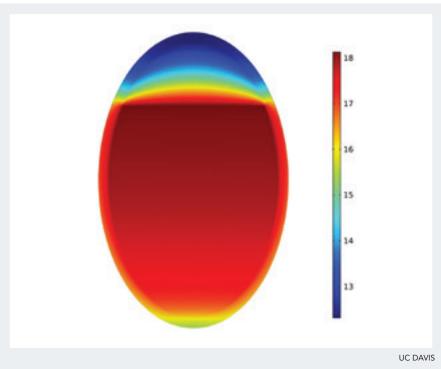
Experiments described in Miller's paper indicate the lack of heat exchange in a concrete egg fermenter results in less mixing, which results in large temperature gradients in the liquid over time. The study, "Predicting fermentation dynamics of concrete egg fermenters," published in 2019 in the *Australian Society of Viticulture and Oenology*, showcased that the differences become even starker after 120 hours.

"With the difficulty of directly measuring heat transfer and mixing in commercial scale fermenters, simulation is a powerful tool for quantitative analysis of fermentation dynamics," Miller wrote. "Modern computational techniques allow for simultaneous dynamic simulation of fermentation kinetics, mass transfer, fluid flow and heat transfer throughout the fermenting juice."

The study is among a series of research projects Miller has conducted using mathematical modeling in winemaking. A series of experiments tested phenolic extraction modeling, describing mathematically what researchers record in laboratories. The results, compared with the observations, are very close, according to Block.

#### **Temperature, Mixing and Phenolics**

Block and Dr. Anita Oberholster, associate cooperative extension specialist at UC Davis, have conducted research experiments in their laboratory regarding phenolic extraction in red wines. Phenolic extraction has three components—the release of phenolics into fermenting wine from skins and seeds, phenolics' adsorption back onto grape skins and seeds and other solids, and phenolic reactions—all of which are a function of temperature and ethanol concentration.



Concrete egg fermenters provide less homogeneous mixing of the liquid and less temperature control than jacketed cylindrical tanks, according to UC Davis research.

The first experiment used mathematical modeling on a number of projects, including prediction of temperature changes in space and time within a red wine fermenter. Miller then applied this model to his own study to help understand how the size and shape of a fermenter can affect cap temperature during fermentation.

According to both Block and Miller, the ultimate goal is to give winemakers a tool that will help them create red wine in their desired styles.

To that end, the researchers use **COMSOL Multiphysics®** software. "I use really beefy computers, and I put together all of these equations that describe everything I can think of in the fermenter," Miller said. That includes phenolic extraction, fermentation, fluid flow, heat transfer and diffusion data.

"I cram all of these equations into this tool called 'computation fluid dynamics.' And the tool then spouts out pretty much every parameter you can think of for the fermenter," Miller said. "So it tells you at every point in time, at every point in space in this three-dimensional fermenter, what the temperature is, what the fermentation rate is, what the sugar concentration is, what the phenolic concentration is, how fast the fluid is moving...everything."

Miller then compared his modeling results with data from physical experiments in the research winery to validate the model. The model has been applied to tanks as large as 500,000 liters, Miller said in Dec. 2019.

Previously, there was no real model for combined fermentation and phenolic extraction at the industrial scale. "There really hasn't been a good model to account for both of those things with the presence of a cap," Miller said. According to Miller's model, when it comes to temperature maintenance, cylindrical, stainless steel tanks outfitted with cooling jackets provide greater overall control and homogeneity of the fermenting liquid. **WBM** 





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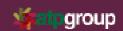






















































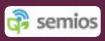
































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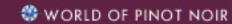












## Michigan Wine Industry Moves into 2020

An update on the Michigan Craft Beverage Council, the Michigan Wine Collaborative and the new Welch Center for Wine and Viticulture at Lake Michigan College

Linda Jones McKee

Linda Jones McKee, Eastern editor for Wine Business Monthly, has been writing about growing grapes and making wine East of the Rockies since 1981 when she and her business partner Hudson Cattell founded Wine East. That magazine was integrated into Wines & Vines in 2008, and she served as Wine East editor until W&V was incorporated into Wine Business Monthly in January 2019.



LINDA JONES MCKEE

The vineyard view at Willow Vineyards overlooks Grand Traverse Bay in the distance.

IT HAS BEEN NEARLY two years since Richard Dale Snyder, then governor of Michigan, signed the House and Senate bills that changed the name of the Michigan Grape and Wine Industry Council (MGWIC) to the Michigan Craft Beverage Council (MCBC). And it has been nearly four years since two winemakers in the state anticipated that reorientation of the Council and established the Michigan Wine Collaborative as a non-profit organization "to give a unified voice to the needs of wineries and associated grape growers at the state and local level."

The MGWIC had been a source of research funding, education and promotion of the wine industry since the Michigan legislature created the Council in 1985. As part of the Michigan Department of Agriculture and Rural Development (MDARD), the Council ran the annual Michigan Wine Competition, organized the annual Michigan Wine Conference, published an industry newsletter and the annual Michigan Wine Country magazine, and held promotional events.

All projects managed by the MGWIC were funded through non-retail, non-wholesale liquor license fees. Those fees included winery, brewery and distillery licenses although most of the revenue came from licenses to out-of-state wholesalers, such as **Anheuser Busch** and **E. & J. Gallo Winery**, to permit them to sell their products within Michigan. With the growth of the craft beverage industries in recent years, the wine industry was not surprised that the craft beer and spirits producers would want the MGWIC to represent their industries as well, since the council was funded, in part, by their license fees.

#### The Michigan Craft Beverage Council

The MCBC officially became part of the MDARD on Oct. 1, 2018. Chaired by the director of that department, **Gary McDowell** (a non-voting member), the Council is composed of nine members: two winemakers, a winemaker who primarily produces cider, a small distiller, a distiller who manufactures



more than 60,000 gallons of spirits per year, a large brewer, a microbrewer or brew-pub license-holder, a restaurant representative who carries Michigan craft beverages, and a retail representative who sells Michigan craft beverages. The stated purpose of the Council is to provide research, support and promotion for the craft beverage industry and the agricultural inputs—fruits, hops and barley—that are used in the production of Michigan wine, cider, beer and spirits.

It is not surprising that the past year has been a time of transition for the Council as it expands beyond its former focus on grapes and wine. **Karel Bush**, who had been the executive director of the MGWIC, remained in the same role for the MCBC until May 2019. Two months later, in July, **Jenelle Jagmin**, who had experience as the promotion specialist for the MGWIC from 2016 until May 2018, was appointed executive director.



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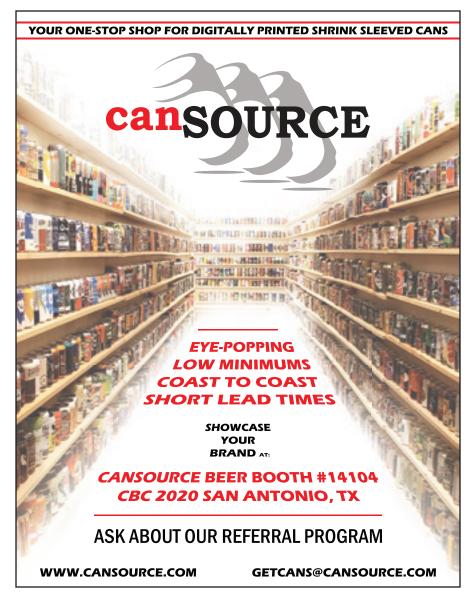




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# MEGAN SPRAGUE

Jenelle Jagmin

According to Jagmin, the Council in 2019 placed its emphasis on research and brand building for the MCBC. She reported that during fiscal year 2019, the Council received 29 research grant proposals and approved 10—in all, \$353,189 was awarded. A total of 21 proposals that requested more than \$800,000 for fiscal year 2020 were summitted to the MCBC by the deadline in October. The Council's research committee had identified five topics that would cover all craft beverage industries and will evaluate grant proposals to see how well each fits within the following priorities:

- Climate change impacts;
- Crop quality, including pest and disease management, and soil health;
- Water management and wastewater practices;
- · Market research; and
- New varieties of hops, barley, fruit, rye and other agricultural inputs.

On October 10, the Council announced the launch of a new website, www.MichiganCraftBeverage.com, which includes a research database for the projects funded by the Council. Since the craft beverage research projects are not yet complete, the data currently included are for projects funded through the MGWIC.

"It's a very exciting time for Michigan craft beverages," Jagmin said, "but the Council will need to be strategic and careful with their budget."

#### The Michigan Wine Collaborative

When the MGWIC first formed in 1985, there were only 14 wineries in Michigan. The Council was very helpful in growing the wine industry, but grape growers and winery owners didn't realize the importance of establishing an organization that would work solely for their interests. While the industry grew over the years, funding for the MGWIC remained at less than \$600,000 per year. With the inclusion of brewers and distillers in the MCBC, the amount of funds available to support the wine industry would be significantly less than before.

In 2016, **Dave Miller**, owner and winemaker at **White Pine Winery and Vineyards** in St. Joseph, Mich., and assistant professor in the department of food science and human nutrition at **Michigan State University**, and **Lee Lutes**, head winemaker at **Black Star Farms** in Suttons Bay, Mich., were both serving on the research committee of the MGWIC. They decided that in order for the wine industry to be prepared for an inevitable change in the structure of the Council, they would establish the Michigan Wine Collaborative (MWC) to speak and work for the grape and wine industry.

The new MWC set up a board of directors with 14 members from all regions of the state. Not surprisingly, a major focus for the organization was to establish funding for the various programs they would like to support. One of the first steps they took was to apply for, and receive, a specialty crops grant from the **United States Department of Agriculture** to help the organization grow its membership. They have now applied for a second grant, this time to promote the industry.

In addition, the board recognized that Michigan cherry growers, blueberry growers, apple growers and other commodity groups have utilized self-assessment contributions from growers and producers within their industries to access matching government grant funds at Michigan State University

"Michigan is a region that has a lot of potential. You can taste that in the wine. We're a relatively young growing region, but we are all passionate about the potential for making great wines and being known as a world-class winemaking region."

Michael Moyer, director, Wine & Viticulture Technology program, Lake Michigan College

and other places. The MWC is now working on the steps necessary to get a self-assessment on winegrape growers to provide "sustainable funding so we can leverage those dollars with state and university dollars in order to have greater direction in research, education and extension programs. Then, when combined with state and federal dollars, do the same for marketing programs to support our growing wine industry."

Miller told *Wine Business Monthly* that the director of the Department of Agriculture met with growers to discuss a self-assessment "check-off program" for wine growers for about \$5 per ton. It would be a five-year program that would raise money for research and promotion. Those funds would then be available to match with government grants to increase the total amount available to use for research, extension and education programs, as well as to promote the wine industry.

In the past year, the MWC took on several projects that had been run in support of the industry by the MGWIC, including the following:

- Coordination with the MSU School of Hospitality Business and the MDARD to hold the 42nd annual Michigan Wine Competition; 63 wineries entered 439 wines;
- Participation in the **National Restaurant Association Show** in Chicago, which exposed Michigan wines to more than 15,000 restaurant and wine buyers;
- Participation in the **FLXcursion International Riesling** event for journalists, restauranteurs, wholesalers and retailers.
- Development and introduction of a free webinar series on various trade-focused topics, featuring consultants, suppliers, academics and winery representatives;
- Organizing winegrape sessions at the Northwest Orchard and Vineyard conference;
- A take-over of **Vintage Michigan**, a state-wide wine club, to continue to attract consumers to Michigan wineries and promote Michigan wines:
- Maintenance of a strong social media presence on Facebook,
   Instagram and Twitter to grow consumer and industry followers.

In reflecting on the accomplishments of the MWC in the past year, Miller said, "It takes a while to get this established, but we've made progress."

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The new Welch Center for Wine & Viticulture at Lake Michigan College in Benton Harbor, Mich.

#### Welch Center for Wine & Viticulture Opens at Lake Michigan College

When Michael Moyer became the director of the Wine & Viticulture Technology program at Lake Michigan College (LMC) in 2015, the program was located in a temporary two-room laboratory. He took the job, knowing that LMC had promised to relocate the program to a dedicated facility within a few years. The college broke ground in May 2018, and right before classes started in fall 2019, the Welch Center for Wine & Viticulture officially opened. The new \$7 million, 14,000-square-foot teaching winery was named in honor of **Mike** and **Lisa Welch**, who are long-time supporters of LMC.

The associate degree program is designed to provide a comprehensive, hands-on education in enology, viticulture and the business side of the wine industry, including sales, marketing and distribution. The college provided the business program a home in July 2017 when the Lake Michigan Vintners wine tasting room opened in an urban storefront building in downtown Baroda, just south of the college campus. At that time, Moyer noted that the tasting room helped educate students about customer service and tasting room operations while simultaneously promoting both the college's wine program and the entire southwest Michigan wine region.

The Welch Center facility includes two classrooms, three offices, a workroom and an open commons area for wine tasting, community education classes and special events. There is a fully covered crush pad, a new wine press, tank and bottling rooms, a laboratory, and temperature- and humidity-controlled barrel and case good storage areas. The tank area has catwalks for easy access.

"We wanted to show students what is possible in a winery space," Moyer said. "Winemaking is time- and labor-intensive, and you don't want space and design limitations to bog you down even more. We've designed the winery to be ergonomic and enhance the flow of production, from fruit reception through crush operations, fermentation and bottling."

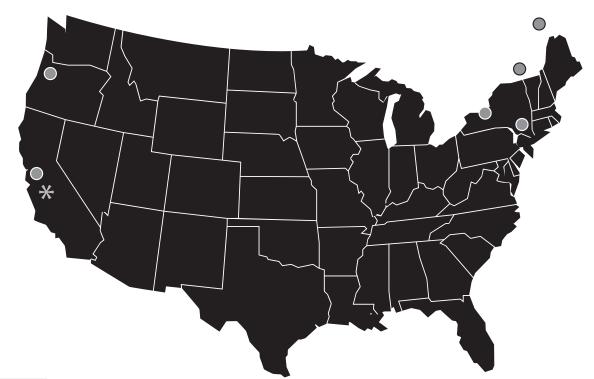
When the wine and viticulture program first started, students made wine from grapes purchased from local vineyards and wineries. LMC is located about five minutes from Michigan State University's Southwest Michigan Research and Extension Center (SMREC), and the LMC viticulture program has access to several research blocks so students can manage the vines and harvest the grapes. "Students get good real-world experience with what happens after serious winter injury, how grapes respond to different trellis systems," Moyer said.

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"Michigan is a region that has a lot of potential. You can taste that in the wine," he continued. "We're a relatively young growing region, but we are all passionate about the potential for making great wines and being known as a world-class winemaking region. Those who have supported this project know it is a big deal for the area. Not only does it offer a world-class educational facility, but it helps to put Southwest Michigan on the map."

## New Viticulture Extension Specialist Named at Michigan State University

When Dr. **Tom Zabadal** retired as professor of viticulture at MSU (and former viticulture extension specialist and director at MSU's Southwest Research and Extension Center) on Dec. 31, 2017, the university did not immediately appoint a replacement to fill his position. It took until June 2019 for the university to announce that Dr. **Katherine East** would be joining MSU as viticulture extension specialist in August.

East, a native of Alberta, Canada, received her undergraduate degree from the University of British Columbia in Vancouver and her Ph.D. from Washington State University where she studied under Dr. Michelle Moyer.

"I'm learning the region," East told Wine Business Monthly. "I've gone from the desert [in Washington] to a very different climate in Michigan." She will work with Dr. Paolo Sabbatini, associate professor in the horticulture department; Dr. Tim Miles, assistant professor and small fruit



Dr. Katherine East, viticulturist extension specialist at Michigan State University

extension specialist; and Dr. **Rufus Isaacs**, professor and extension specialist in the department of entomology.

#### **Summary**

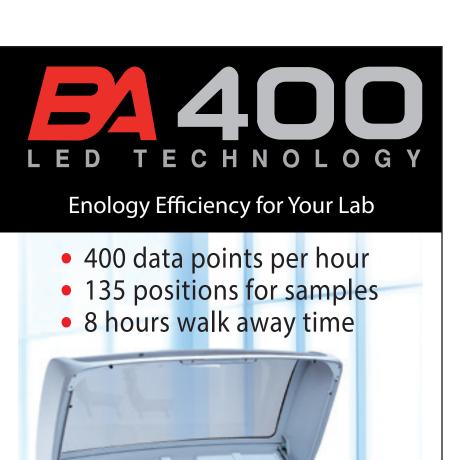
A year and a half after the Michigan Grape and Wine Industry Council was reorganized to focus on all craft beverages, the Michigan wine industry is moving forward to help grape growers and winemakers grow better grapes, produce quality wines and expand their markets. While the Michigan Craft Beverage Council continues to provide some research, support and promotion for the industry, the Michigan Wine Collaborative has taken over management of the annual Michigan Wine Competition, brought speakers from four states for the wine grape session at the January 2020 NW Orchard and Vineyard Show near Traverse City, and participated in events to promote the statewide grape and wine industry.

The opening of the new Welch Center for the wine and viticulture program at Lake Michigan College will be a major step towards providing appropriately trained individuals to work in the state's vineyards and wineries (or to establish new business ventures), while the hiring of Dr. East as viticulture extension specialist will help the industry statewide.

The Michigan grape and wine industry enters the new 2020 decade in better condition to move the industry forward. **WBM** 

#### Michigan: AS OF NOVEMBER 21, 2019

- 429 licensed wineries, including hard cider producers
- 211 wineries are listed in Wines Vines Analytics
- 320 licensed breweries
- 134 licensed distillers







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## A Forum for Winemaking Discovery

Winemakers find value in talking about trials

Stacy Briscoe

**Stacy Briscoe** is the assistant editor of *Wine Business Monthly*. She has been writing about wine professionally since 2015, freelancing for multiple publications including The *San Francisco Chronicle*, *Edible Communities* and *Napa Sonoma Magazine*, among others. She also maintains her own website, *BriscoeBites.com*, dedicated to wine reviews and tasting notes. Outside of wine writing, she also contributes as a freelance editor for the independent publisher She Writes Press. Stacy has a Bachelor of Arts degree in English-language literature from the University of California, Santa Cruz.



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The Research Oenovation Collective (ROC) is a non-profit organization that supports the research and experimentation of grape growers and winemakers and provides a venue for sharing that applied research. "From implementation of new tools and practices to simply creating contextual understanding ... of the winemaking process, the ROC is a much-needed link between discovery research and application development," ROC CEO Peter Salamone said.

In January 2019, the non-profit announced its official partnership with the former **Sonoma County Wine Technical Group** (SCWTG), launching ROC-Sonoma. ROC hosted its first North Coast regional meeting in June 2019, and the local chapter now holds regular quarterly meetings at the **Santa Rosa Junior College**. Other regional chapters, thus far, include ROC-SLO (San Luis Obispo), ROC-OR (Willamette) and ROC-WA (Walla Walla).

Expansion into other wine regions is in the works for 2020.

"We're going to separate out the North Coast," Salamone said. This will include the more region-specific chapters of Napa County, the Sierra Foothills and Monterey. Outside of California, the organization looks forward to welcoming ROC-WA (Columbia Basin), ROC-Texas, ROC-NY and ROC-HI-Volcano.

The point of the regional meetings is to offer an open forum for discussion about what grape growers and winemakers are working on, whether in the field or in the cellar.

Today, ROC has secured more than 70 trial commitments from 35 different wineries, according to Salamone. Topics include studies in viticulture, yeast strains, enzymes and cellar processing.

#### **2019 Vintage Trials**

**Aimée Sunseri**, winemaker at **New Clairvaux Vineyards** in Vina, Calif., is conducting a trial with ROC that explores the use of sur lie aging in white winemaking. Specifically, she's curious how different techniques during the aging process, such as regular bâtonnage and the addition of dry ice, create different mouthfeels in the resulting wines.

When asked about her trial experience, Sunseri said, "I highly encourage other winemakers to experiment and collaborate. The platform that ROC has put together has been mind-opening. I love hearing about other people's trials and am learning so much, just from participating."

Terroir is a debatable term in the industry—can one truly study the essence of the vineyard? **Casey DiCesare**, assistant winemaker and enologist at **Scheid Family Wines**, wanted to learn just that. So, he and his team are conducting an experiment to observe the effects of in-vineyard native fermentation:

A portion of Pinot Noir, harvested from the Scheid Family Wines' Riverview Vineyard, was left in the vineyard to undergo native fermentation in a refrigerated trailer. A separate lot went to the main winery to be processed with house yeast. Each lot experienced the same punch-down regimen and additives throughout the process. DiCesare and his team closely monitored the wine's transformation, compiling both sensory and analytical data.

"Doing trials like this can be a large investment for a winery in time and capital," DiCesare said. "We find great value in doing trials on a production scale in order to learn more about our vineyards and winemaking. Not every trial is a success, but we always learn something."

Ashes & Diamonds Winery's portfolio is led by the classic Bordeaux varieties. As such, production winemaker Andrew Brooks, along with his winemaking colleagues, finds studying cap management techniques imperative to improving wine style and quality. Brooks' ROC experiment takes a look at two different extraction methods and how those methods affect the fermentation process and the resulting wine.

"I was pretty excited to work with the ROC folks," Brooks said. "Especially since we work with a limited number of vineyard sources and wines, our ability to experiment is somewhat less. Getting to do this within a community of like-minded folks that are also interested in bettering their winemaking technique helps us all learn faster and more conclusively than if we were doing this only by ourselves."

In a quest to bottle more organic wines, the winemaking team at **Castoro Cellars** is studying new techniques in reducing total SO<sub>2</sub>, including introducing a non-Saccharomyces yeast strain immediately after harvest, when the grapes enter the receiving hopper.

"We are very excited to see what the non-Saccharomyces yeasts can do to help with bioprotection of organic grapes," said **Castoro Cellars** associate winemaker **David Sailer**. "Trials are a great way to add knowledge to the winemaking vault, as well as a fun way to keep harvest even more interesting. It's like having a science fair project and hoping you get the results you wish for!" **WBM** 

"I highly encourage other winemakers to experiment and collaborate. The platform that ROC has put together has been mind-opening. I love hearing about other people's trials and am learning so much, just from participating."

Aimée Sunseri, New Clairvaux Vineyards

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# Leafroll: Still a Problem and Truly an Epidemic Thanks to Vine Mealybug

We shouldn't dismiss leafroll as Red Blotch's less evil cousin

Mark Greenspan

**IN AN ARTICLE I** wrote in August on managing Red Blotch Virus-infected vineyards, I was perhaps too dismissive regarding the effects of leafroll. From a vine physiology perspective, Red Blotch does, indeed, appear to create a more dramatic suppression of fruit ripening than leafroll does. Where leafroll-affected vines may have a difficult time ripening fruit, Red Blotch-affected vines seem to have an *impossible* time ripening fruit. However, on regional, as well as worldwide scales, leafroll may have the greater impact on viticulture.

I recently attended the **2019 Sustainable Ag Expo** in November in San Luis Obispo. It was a rich set of presentations on topics such as climate change, pest and disease and regional water management. During one of the breaks, I was asked by a reader (who I'll leave anonymous because I haven't asked permission to name this person) why I thought leafroll was less of an issue than Red Blotch, and I mentioned my argument above. They told me that leafroll was a serious threat to the Delta and Lodi growing regions, mainly due to the ubiquitous nature of mealybug vectors, mostly the vine mealybug. Our breaktime discussion was enlightening to me and a perfect prelude to the formal discussions that followed on vine mealybug and leafroll virus.

#### **Controlling the Virus**

Gerhard Pietersen, professor at Stellenbosch University in South Africa, spoke specifically about leafroll. He stated that leafroll disease is the most important disease of grapevines worldwide. I wonder why Red Blotch isn't such an issue outside of the U.S., or at least not apparently as big an issue as leafroll. I don't know the answer, but it may be that the Red Blotch vectors are less prevalent (or not present) outside of regions where it is a problem. Regardless, Pietersen stated that in South Africa, the number of vines affected by leafroll doubles every year, which is astounding and is certainly reason to consider it an epidemic. Vineyards are now replaced every 20 to 25 years in South Africa because of the disease—a figure that has become the norm for coastal California vineyards, also a result of virus diseases.

The virus is phloem-limited, so it reduces the transport of sugar and nutrients within the vine. That is likely why the leaves turn their characteristic reddish-purple color late in the season and also why fruit sugar accumulation is disturbed.

Control of the disease requires control of the insect vectors, mealybugs and soft scales, as discussed below. There are no known alternate hosts of the virus, so it is simply a matter of spread from infected vines to clean vines. No matter how effective we are at obtaining clean planting material from the nursery at planting time, the vineyard can and will get the virus if a non-clean vineyard or set of vines is within the vector's travel distance. Quite frequently this is a vineyard owned by someone else who may not have the same level of dedication to controlling the virus and the vector.

Dr. Mark Greenspan has more than a quarter-century of scientific viticulture research and viticultural field experience. He specializes in irrigation and nutrition management, yield and canopy management, vineyard climate and microclimate, vineyard design and vineyard technology. He is the founder of Advanced Viticulture, Inc. based in Windsor, California (www.advancedvit.com), providing consulting, technology, vineyard management and vineyard development for wineries, winemakers and wine growers devoted to producing premium wines. Please direct queries to mark@advancedvit.com or 707-838-3805.



Pietersen stressed that rogueing of infected plants be done early and often when symptoms appear. Milking the life out of a vineyard may make economic sense, but doing so retains the pool of virus for an extended period of time, with the likelihood that that vineyard will infect neighboring vineyards with the virus. Unfortunately, tearing out a vineyard is a tough business choice, and even I, in my August article, promoted ways to stretch out a vineyard's lifespan through various management practices. However, doing that will also prolong the source of inoculum, so perhaps those words of advice must be taken with that caveat in mind.

Within one's vineyard, vines that exhibit virus symptoms must be flagged and removed. It is not good enough to cut the top of a vine if the root system will send out suckers to regenerate virus-infected vines yet again. Therefore, vine rogueing should be done with simultaneous root removal as much as possible. If a vineyard is removed, fallowing it is best to allow for remnants to regenerate vines for further extraction.

#### Vine Mealybug

Leafroll virus can be vectored by soft scale insects, as well as mealybugs. Mealybugs are more common than the soft scale insects, but both are present in many vineyards. There are numerous species of mealybug, including vine, grape, obscure, long-tailed and Gill's mealybugs. While all mealybugs can vector leafroll, vine mealybug (VMB) is really the biggest threat to us because it is so difficult to detect. **UC Davis** entolomogist **Kent Daane** spoke on VMB and leafroll virus and started his talk by stating that once a vineyard has VMB, it will never be completely eradicated. And if you don't think you have VMB and are in the coastal regions of California, it could be because you haven't really found it yet (my words, not his). VMB is difficult to find because it spends much of its life cycle under the bark of the vine, eluding not only detection but also avoiding contact insecticides that may have been applied.

Crawlers acquire the virus within less than one hour of feeding on a virus-infected grapevine, and the virus titer in the insect peaks after about

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24 hours of feeding. The virus is semi-persistent and remains for about three to four days after acquisition or cessation of feeding on the infected vine sap. Additionally, molting of the insect removes the virus from the insect. Vines fed upon by virus-wielding mealybugs will not exhibit virus symptoms for about one year after inoculation, so it is not easy to determine the breadth of the virus spread because of that delay. What does that all mean? From a practical point of view, it means that the insect is a very effective vector for leafroll viruses, and the implications of its effective spread are perhaps more economically damaging than even Red Blotch.

Control requires several approaches, but control without insecticides is essentially ineffective. Control of the Argentine ant, which protects mealybugs in exchange for their sweet honeydew excretion, is one small step. In

fact, the presence of ants along trunks and other woody parts of the vine is usually indicative of a mealybug colony. Control of the ants will increase the ability of predators to control the mealybug as ants will otherwise deter them from doing their deed.

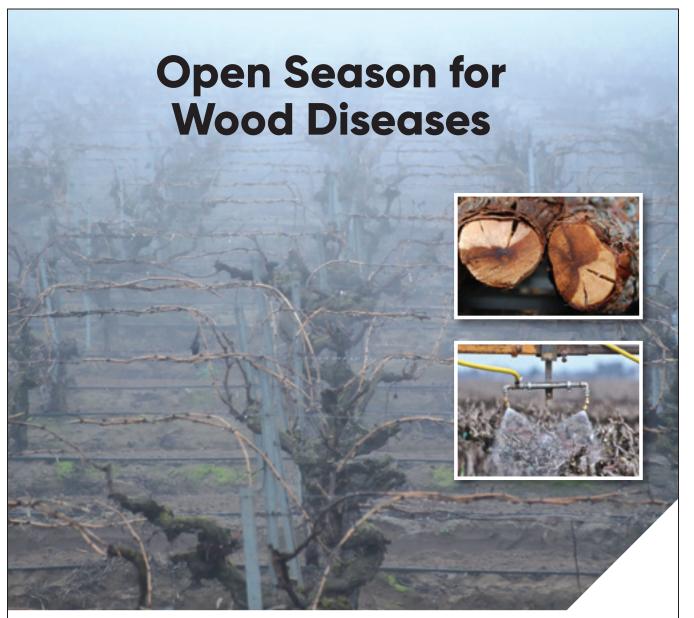
Stripping bark will help reduce the places VMB can hide, but bark stripping is incredibly slow and, therefore, expensive. Most growers will strip bark only in the most severely infested parts of a vineyard, but I've seen organic vineyards strip bark everywhere because their tools are very limited. Speaking of which, the choice of insecticides is crucial. Broad-spectrum insecticides, like pyrethrum (organic) and pyrethroids (synthetic pyrethrum), will kill beneficial insects as well as target insects, which means they should be avoided. Unfortunately, organic vineyards have only broad-spectrum insecticides in their arsenal. Conventional growers should likewise avoid broad-spectrum

insecticides even if they are allowed to use them.

Currently, Movento<sup>2</sup> (spirotetramat) is the primary insecticide of choice against VMB. It is applied to the foliage of the vine, where it is metabolized to an enol form of the spirotetramat product. It is the enol form that is insecticidal and not the spray itself. Hence, it is more effective to use it directly on the foliage rather than via drip irrigation or chemigation. Application timing is important, and the usual timing is around fruit set. The enol form will remain in the vine for quite a long time (up to 320 days), but its concentration is highest shortly after its application. Daane mentioned that, so far, no resistance to Movento has been seen, but frankly, it is only a matter of time when we may see that. So, it's important to use other tools.

Belay (clothianidin) is another insecticide that is registered for mealybug. However, it is a broad-spectrum insecticide and will therefore kill beneficial insects, such as bees, including honeybees, so one should not use it without good reason. Neonicotinoids, such as Admire (imidacloprid) and Platinum (thiamethoxam), may be applied through the drip and can offer some control over VMB. Personally, I think it's good to use it in a rotation with Movento to prevent resistance even though there hasn't been any documented resistance yet.

Carlo Duso, a professor from the University of Padova in Italy, stated that imidacloprid is no longer available in the E.U., so that removes one



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tool from the bag there. He discussed biocontrol of vine mealybugs with the insect *Anagyrus pseudococci*, now known to be *Anagyrus vladimiri*. This is a tool that can be used but is not always successful. Nevertheless, insects can be a part of a multi-pronged control program against vine mealybug. The "mealybug destroyer" beetle *Cryptolaemus montrouzieri* feeds on a variety of mealybugs, and Dusso reports it has been quite successful in mealybug control efforts. He said that timing predator releases near harvest is a good practice as the mealybugs are moving onto exposed surfaces at that time.

Another tool for VMB control is mating disruption, which uses synthetic insect pheromones to confuse male insects and mis-direct their mating process. Most commonly, pheromone dispensers, such as **CheckMate VMB**, are placed in the vineyard and left all season long. Mating disruption is effective only when populations are low. It is unlikely to achieve significant

control without other measures being taken. That said, it could help to reduce movement from hot spots into areas with lesser infestation. Dusso noted that mating disruption benefits are usually seen more in the second year of use since mated females overwinter.

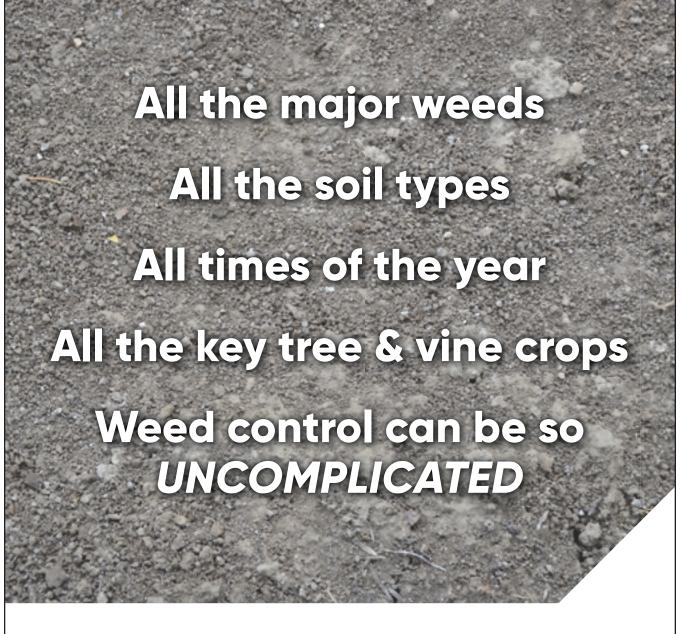
United States Department of Agriculture-Agricultural Research Service research horticulturist Rachel Naegele spoke about breeding resistance to mealybugs into plants. They have found two sources of rootstock with potential mealybug resistance, neither of which have any commercial potential themselves. However, they may be able to use them to breed mealybug resistance into more commercially attractive rootstocks. Yet she cautioned that resistance from rootstocks would not convey complete resistance to the plant, so it would only be a tool among many in the control of VMB. I would also caution that there are so many other resistances of importance to growers that the addition of VMB resistance, through conventional breeding only, would be a very long way off.

Furthermore, control of VMB in one vineyard is nearly useless if not done areawide. If only select growers control their VMB but others do little to control them, the source of infestation will remain, and true economic control will never be achieved. This is perhaps the reason why regions, such as Lodi and the Delta, are having such severe problems getting the pest and its vectored virus under control. Just like successful efforts to eradicate pests, such as the European

Grapevine Moth, and efforts to control the spread of Glassy Winged Sharpshooter have required areawide control measures that involve *everyone*, so will efforts to control mealybug vectors. This takes coordinated effort as well as full grower participation. If you think you are not part of the problem, you are wrong. We can't let these diseases destroy our livelihood. WBM

#### References

- <sup>1.</sup> Greenspan, M. Managing Vineyards with Red Blotch Virus. *Wine Business Monthly*. August 2019.
- <sup>2</sup> Mention of products does not constitute an endorsement of the products nor are they to be considered a recommendation. Consult a PCA for your specific application.





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### Grapevine Virus Management in Lodi:

# A Collaborative Research and Integrated Outreach Effort to Help Solve a Statewide Challenge

Stephanie L. Bolton

**MEALYBUGS AND VIRUSES MAKE** growing grapes to their full potential very difficult to do today. To help translate international efforts around grapevine virus research into practical tips for the California grower, the **Lodi Winegrape Commission**'s (LWC) **Grapevine Virus Research Focus Group** is using recently awarded funding to jump-start a grapevine virus outreach project.

There are about 110,000 vineyard acres in Lodi, which yielded about 850,000 tons of grapes in 2018. Vineyards range from highly mechanized, high-production vineyards to sought-after historic vineyards. There are roughly 750 growers in the region, many of whom are already concerned with high grape supply and low prices. The worry over pests and viruses presents an expensive, additional threat to the market. The region currently invests more than \$2 million per year to promote Lodi's reputation for premium wine; selling grapes that exhibit virus symptoms, such as poor sugar, poor color and poor flavor, would only hurt this cause.

Unfortunately, like other regions in California, vineyards in Lodi have seen exponential growth in the vine mealybug population. The LWC believes that every single vineyard in California either has, or is at risk for, vine mealybugs and is working hard to educate growers and pest control advisors on how to identify and manage mealybugs by using integrated pest management (IPM), specifically via biocontrol methods.

Management can be difficult, as these copious mealybugs are spread by equipment, wind, birds, trucks and planting material, and can infect grape-vines with leafroll virus and vitiviruses at a much faster rate than available insecticides can kill them. Contrary to the opinion of some of our grant reviewers, the average grower in California does not know how to manage grapevine viruses, nor do they understand the important differences between Red Blotch and leafroll...yet.

#### Making Research Accessible

The Lodi Grapevine Virus Research Focus Group (Virus Focus Group) is a team of growers, pest control advisors, scientists, nurseries, viticulturists and extension personnel working with professor **Gerhard Pietersen** of **Stellenbosch University** in South Africa and professor **Marc Fuchs** of **Cornell University** in New York, who are both experts in the field of plant pathology.

The group's objective is to learn how to best manage and prevent grapevine virus disease in the 110,000 acres in Lodi, and share outreach tools and strategies with other regions across California. The Virus Focus Group **Stephanie Bolton** is the research and education director for the Lodi Winegrape Commission.



KYLE BROW

If you look closely, you will see mealybugs on an emerging bud (photo taken in early April 2019).

investigates the current status of grapevine knowledge, both at the academic and regional grower levels, and studies any and all published virus research—whether locally or internationally. South Africa and New Zealand, for example, are years ahead of California in terms of virus management, and the group is learning from these countries' applied knowledge and creating practical, interactive outreach materials for California growers.

Ultimately, the group is focused on building long-term management plans for economically feasible and impactful virus control strategies in Lodi and throughout California, while simultaneously establishing priorities for further grapevine virus research projects.

#### It Takes a Village

The first step in the outreach project is to help growers understand why they need to care enough to learn about viruses and virus management. The Virus Focus Group believes that when the grape growing industry learns together, it can find solutions faster. This strategy has worked for the growers in Lodi where the Virus Focus Group created an email Listserv, which today includes 180 members from all over the world. The Virus Focus Group discusses practical pest management solutions, commercial virus testing, the **Grapevine Registration and Certification Program** and other topics.

One of the first things the group discovered is that there is no single organization in charge of the California grapevine virus crisis. In much the same way the Pierce's Disease/Glassy Winged Sharpshooter (PD/GWSS) program works, it would be beneficial to all growers to have a statewide coordinated research and outreach effort around mealybugs and viruses.

We quickly realized that it is going to take a lot of teamwork and help from the growers, nurseries, Foundation Plant Services (FPS), California Department of Food & Agriculture (CDFA), academia, virus testing labs, wineries, extension, IPM companies, pest control advisors, viticulturists, county ag commissioners and regional associations. We need to stop pointing fingers and realize that we all contribute to the problem and to the solution, and then decide what action each of us can take so that we can move forward together.

The Virus Focus Group uncovered a need for a checks and balances system within the grapevine virus testing industry—no specific laboratory accreditation nor standard protocols are in place for grapevine virus testing. (Note:

A more universal ISO certification is available, as are generic International Standards for Phytosanitary Measures or ISPMs).

The Virus Focus Group hosted a meeting in April 2018 for virus testing labs to speak to the group as well as each other. The participating testing labs included Agri-Analysis, AL&L Crop Solutions, California Seed and Plant Labs, Eurofins USA, Foundation Plant Services, Sunburst Plant Disease Clinic and Wonderful Laboratories.

At their suggestion, a third-party, blind ring test was organized for these labs, as well as the CDFA lab, in conjunction with **Bob Martin** of the USDA Agricultural Research Service in Oregon. Samples from FPS were secretly coded and shipped to all participating labs. The results of this ring test have been shared with each laboratory to help them improve their detection techniques if needed.

#### Cost of a Virus-infected Vineyard

Economics, the third pillar of sustainability, is important to consider for every issue. It's common knowledge that viruses can cost growers money in the form of decreased yields and quality, the inability to ripen grapes to a satisfactory level for a contract, extra mealybug management, virus testing, rogueing a vineyard and the added work that comes with managing replants, or even pulling out a vineyard sooner than expected. However, it was not until the Virus Focus Group sat down and crunched the numbers that it came to light just how much money growers are losing under virus-infected vineyards.



In 2017, when the group first began intensely studying viruses, it interviewed Lodi's **Vino Farms**, which was personally testing their CDFA-certified nursery orders for viruses long before others. During the process, they calculated losses from one vineyard where they unknowingly planted 70 acres of leafroll-infected Malbec. The total came to a shocking \$2.5 million. The vineyard was six years old and just coming into full production. The estimated cost included removal, planting new vines, vine-training and loss of revenue for three years.

The United States Department of Agriculture's Tree Assistance Program (TAP) provides financial assistance for farmers experiencing a natural disaster. Red Blotch Virus was approved by TAP as a covered disease in 2015. Lodi's Virus Focus Group worked with a dedicated grower and the USDA Farm Service Agency (FSA) toward getting leafroll virus approved for one year and can now report that, as of December 2019, leafroll virus is an approved natural disaster eligible for financial assistance through TAP in California.

Those thinking about removing a vineyard due to Red Blotch or leafroll virus are encouraged to learn more about this program. Growers who have used the TAP resource have reported that it is undoubtedly worth the time and effort to go through the process. The hope is that this financial assistance will help with the collective goal of decreasing levels of virus inoculum throughout California.

## **Voluntary CDFA Grapevine Registration and Certification Program**

The Virus Focus Group's research discovered alarming confusion about the voluntary CDFA Grapevine Registration and Certification Program. A lot of extension material about certified vines falsely uses the phrase "certified virus-free." CDFA-certified does not mean "virus-free," nor does it mean that every individual vine that comes off the truck has been tested for viruses. It is not supposed to mean "virus-free."

A CDFA-certified grapevine is produced using propagating materials that can be traced back to vines maintained by the FPS at **UC Davis**. CDFA-registered nurseries source plant material from FPS and plant it in Increase blocks. If the Increase blocks are to be certified by the CDFA, then they are visually inspected annually by the state of California for disease. However, this does not do much good for detecting symptoms in white varieties or rootstocks, nor does it help if the inspection is not conducted during the fall season when red leaf symptoms become apparent.

Once every five years, the CDFA collects random samples from these increase blocks to test against a set of economically important viruses, including leafroll-3, Red Blotch and fanleaf. Because testing is random and conducted just once within a large interval of time, this certification is not stringent enough on its own to keep viruses out of planting material. Many nurseries are voluntarily going above and beyond these testing requirements.

To clear up CDFA confusion, the Virus Focus Group created a booklet entitled "Nursery Ordering 101: Viruses," which puts the CDFA certification program, among other topics, in simpler terms. The intention of the booklet





is to teach growers how to order CDFA-certified material (which, in actuality, can be quite confusing) and how to take responsibility to obtain cleaner material, including simply asking for it, engaging in extra testing from the start and maintaining detailed records. Additionally, due to the many hurdles a grower must overcome to begin testing their vineyard for viruses, the Virus Focus Group also publishes the Virus Testing booklet.

The goal is to eventually compile these booklets into a complete grapevine virus workbook for growers. As of right now, these smaller publications are available for growers to utilize until the final version is ready. This also gives growers and others in the agricultural industry the opportunity to contribute and improve upon the content before the final publication. Winegrowing regions in California are encouraged to customize the booklets to specifically address their growers' needs and local laws. Washington state, North Carolina, Texas, Portugal and Chile are among a few of the other regions outside of California taking advantage of the Nursery Ordering booklet.

# Complicated Management of Vine Mealybugs

Vine mealybug management is complicated and takes a regional effort to be successful. Because the bug thrives and reproduces under vine bark, many growers are unaware their vineyards are infected. Unfortunately, it can take a few years for mealybugs to become visually noticeable, but thanks to the research and outreach efforts of industry experts and groups such as the Lodi Winegrape Commission, more growers are becoming educated on how to identify the pest.

The Virus Focus Group created a poster to demonstrate how quickly one mating pair of mealybugs can multiply into more than 22.7 trillion mealybugs in one warm growing season. The poster is included in the group's Vine Mealybug Management booklet, which includes a scouting card for vine mealybugs and for beneficial parasites and predators, as well as a beneficial insect risk chart based on decades of local experience and UC IPM guidelines. Custom flagging tape was made available to growers to mark mealybug hotspots so extra attention to that area can be paid the following year.

#### **MEALYBUG BIOCONTROL**

The Lodi Winegrape Commission has put a lot of energy into learning about mealybug biocontrol. Due to the nature of the vine mealybug and its ability to hide underneath grapevine bark and on the roots, insecticide control options are not 100 percent effective in a vineyard, and eradication is difficult if not impossible. Several mealybug insecticides, including Lannate, Lorsban and Applaud, are no longer an option for many winegrape growers due to their potentially negative effects on the environment and/or people. Currently, Imidacloprid insecticides—a backbone of the South African and New Zealand leafroll management strategies—are being questioned by regulators and may also be removed as an optional mealybug control measure.

Because of these factors, the Virus Focus Group encourages the use of biocontrol—especially through pheromone mating disruption techniques and the use of beneficial insects, which can help reduce mealybug populations and delay resistance to plant-protectant materials.

With our sister team, the Lodi Mealybug Biocontrol Research Focus Group, we have hosted family field days where *Cryptolaemus* mealybug destroyer beetles, donated by Associates Insectary, were deployed in a vineyard with the help of Parabug's drone.

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#### **Grapevine Virus Management in Lodi**

## **Invasive Argentine Ant**

During the course of its research, the Virus Focus Group discovered that dealing with one invasive pest, the vine mealybug, also means dealing with invasive Argentine ants. Argentine ants can, and will, carry a mouthful of mealybug eggs along a drip irrigation line, deposit the eggs elsewhere, giving birth to a new colony of mealybugs.

Growers are now accepting the need to also control ants, but the Virus Focus Group realized that there is no efficient ant control method for Argentine ants in larger vineyards. Accordingly, during the summer of 2019, the LWC worked with Kris Tollerup, professor for the UC Agricultural Research and Extension Center, on ant bait trials. Research results will be ready to share in early 2020.



MARIO SALINAS

This little ant is carrying a mouthful of mealybug eggs along a drip irrigation line—off to start a new colony of mealybugs on a grapevine.

## **Mystery Vine Collapse**

Since 2010, throughout California, a phenomenon known as "mystery/sudden vine collapse" has been occurring. Vines that appear healthy except for stunted shoots push out fruit then, within a matter of weeks, the entire vine is dead.

**Charlie Starr**, an independent pest control advisor, and **Paul Verdegaal**, retired **UCCE** Farm Advisor, along with several other scientists, have been studying the collapsed vines for the past 10 years. They tested many theories, including *Phylloxera*, esca, *Phytophthora* and even lightning strikes, but were unable to solve the mystery.

In July 2019, UCCE plant pathologist, **Akif Eskalen**, and UC Davis FPS lab director, **Maher Al Rwahnih**, joined Starr and the others in studying both the collapsing and healthy vines from four affected vineyards. They thoroughly tested rootstock and scion samples for fungal and viral pathogens. Every collapsing vine tested positive for a leafroll virus and a vitivirus. Trunk disease pathogens were isolated from each sample, but they were not the same pathogens.

The research continues, and, at this point, it looks like the answer is a combination of issues, including leafroll virus-sensitive rootstock, leafroll virus, vitivirus and another, unknown stress, possibly trunk pathogens, crop or water stress, etc., which leads to the collapse. Collapse symptoms and positive test results for both a leafroll virus and a vitivirus have been confirmed on Freedom, O39-16 and 101-14 rootstocks, but there are likely more affected rootstocks.



# Rootstock Sensitivity to Natural Leafroll Inoculum

To study different rootstocks and their sensitivity to natural leafroll inoculum, **Chris Storm** of Vino Farms designed a rootstock trial in one of the Virus Focus Group's demonstration vineyards. He planted all obtainable rootstocks in a new vineyard in statistically significant replicates. The trial vineyard previously had leafroll-infected vines and the surrounding area has natural mealybug and leafroll inoculum.

Trial vines tested negative for a panel of viruses at planting in January 2019. By November 2019, positive test results were obtained for leafroll-3 virus and grapevine virus-A (a vitivirus) in all 11 rootstock types planted, including the own-rooted vines. This demonstration vineyard is providing a local, real-world example of how quickly a new vineyard can become infected when diseased vines and mealybugs are nearby.

# Planning an Adaptive Management Strategy

The presentations from the Mealybug and Virus Outreach Meeting in April 2019 were videotaped and provide an opportunity for teams to learn together and create individual adaptive management strategies. **Kent Daane** from **UC Agriculture and Natural Resources** spoke about mealybugs and how the vine mealybug was introduced to California. Marc Fuchs provided a great primer on viruses. Professor Gerhard Pietersen offered one of the world's only carefully monitored commercial vineyard examples of successful leafroll virus management. **James Stamp** discussed clean planting material based upon many years of experience in the field. There is also a new video about the spread of leafroll virus by **Aaron Lange**. You can use these videos to educate yourself and as a conversation starter with your vineyard teams and neighbors.

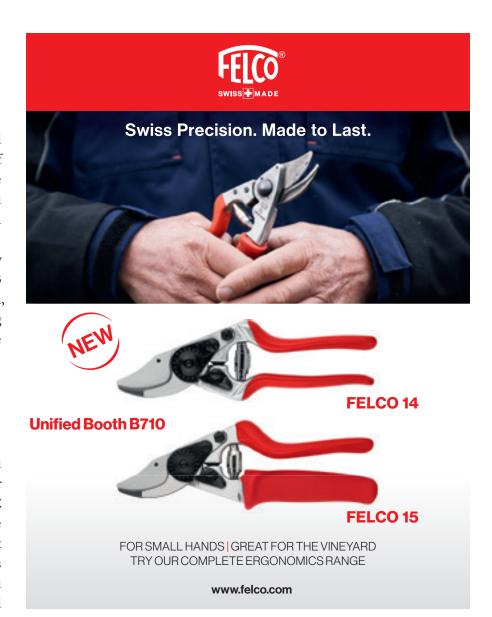
#### **INVITE TO APRIL 9, 2020 MEETING**

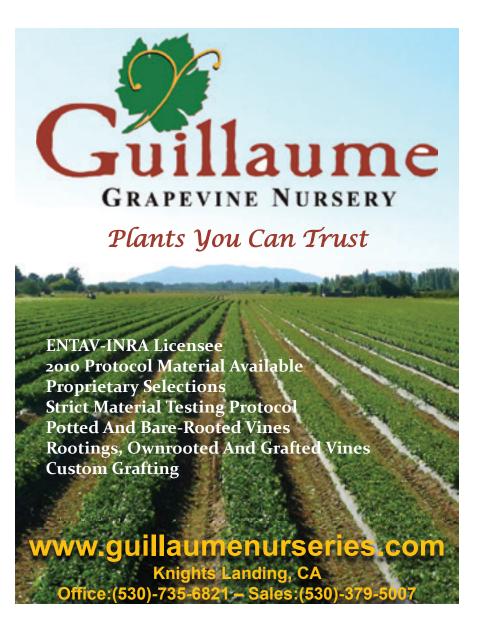
You are invited to join the Lodi Winegrape Commission's Virus Focus Group on April 9, 2020 at the **Stockton Ag Center**, where we will host our third and final big Mealybug and Virus Outreach meeting. There will be presentations in the morning, followed by time to meet and greet with relevant industry members. Lunch will be provided. In the afternoon, there will be breakout leadership meetings for the nurseries, virus testing labs and regional associations.

In 2020, we will provide an update on mealybug and virus management, showing leafroll virus mapping over time in commercial California vine-yards and the results from the mystery/sudden vine collapse case study collection. There will be a surprise, expert speaker who will address the topic of neighbors working together in a collective effort to reduce leafroll virus within a region. Grapevine Virus Grower Workbooks will be available for the first time. WBM

Author's Note: Thank you to the Lodi Winegrape Commission, the CDFA's PD/GWSS Board and the American Vineyard Foundation for funding, and to members of the Lodi Mealybug and Virus Research Focus Groups for their commitment to helping fellow California growers.

Videos of the Lodi Winegrape Commission's Virus Focus Group April 2019 meeting are available online at www.lodigrowers.com under the Education tab.





# Recent Developments in the California Grapevine Nursery Industry

Widespread Red Blotch contamination in the UC Davis FPS Russell Ranch Vineyard is a critical blow to the production of clean vines in California and the United States.

Alan Wei, Ph.D. and James A. Stamp, Ph.D.

practices to detect disease contamination (SIDEBAR 1).

**RUSSELL RANCH VINEYARD (RRV)** is the **California Department of Food and Agriculture** (CDFA) Grapevine Nursery Certification Program's
Foundation Block first planted in 2011 with vines derived through meristem
tissue culture by **UC Davis Foundation Plant Services** (FPS) to provide
clean propagation materials to participating grapevine nurseries. RRV was
designed to fulfill the standards of the Protocol 2010 (P2010) **National Clean Plant Network** (NCPN) quality control guidelines, which include extensive
virus elimination and confirmatory testing along with in-field monitoring

On Oct. 21, 2019, FPS announced that 339 of 4,761 vines, or 7.1 percent, planted in RRV P2010 Foundation Block (FB) had tested positive for Grapevine Red Blotch Virus (GRBV) (TABLE 1). This represents a 14-fold increase from the 0.5 percent contamination level (24 of 4,406 vines) announced in Dec. 2018 and a 68-fold increase from the 0.1 percent contamination (5 of 4,132 vines) reported in 2017. With the likely continued expansion of infection in RRV, FPS announced, on that same date, the suspension of shipment of Foundation P2010 materials to nurseries until further notice. This signals the retirement of the only California source of Foundation P2010 materials.

The news release also noted that one of 4,075 vines planted in the Classic Foundation Block located on the campus at UC Davis tested positive for GRBV in 2019. Grapevine material from this block will continue to be available for distribution to nurseries and growers. Some of the vines in the Classic Block were planted in the 1970s.

#### SIDEBAR 1. Protocol 2010 Material Definition<sup>1</sup>

Compliance with the new NCPN standard will ultimately be required as a prerequisite to NCPN certification for a foundation vineyard on the 100-acre Russell Ranch parcel on the UC Davis campus. To qualify as P2010 plant material, two primary qualifications must be met. First, the FPS source vines are generated using microshoot tip tissue culture techniques, i.e., cut from a piece of the meristematic dome that is 0.5 mm or smaller in size. Second, these source vines must test negative for the extensive list of pathogens detailed on the P2010 list using testing techniques which include PCR, ELISA, herbaceous and woody indexing. This testing scheme is designated "PROTOCOL 2010."

Dr. Alan Wei is the owner and president of Agri-Analysis LLC located in Davis. Dr. Wei received his Ph.D. degree in Bioengineering from University of Utah and has been working on grapevine viruses and diseases at Agri-Analysis for 14 years since 2005. Prior to joining Agri-Analysis, Dr. Wei worked on microbial testing products at 3M company for 15 years. With 20 issued United States' Patents and over 15 peer reviewed publications, Dr. Wei is a nationally recognized expert in microbial detection. Among his several community activities, he serves on the research grant review committees of American Vineyard Foundation (AVF), United States Department of Agriculture (USDA) and National Institute of Health (NIH). Contact Dr. Wei at apwei@agri-analysis.com.

Dr. James A. Stamp is a Sebastopol, California scientist who specializes in grapevine nursery plant material quality and propagation and the critical evaluation of vineyard performance issues. He has more than 35 years of experience in California viticulture and established Stamp Associates Viticulture, Inc. after founding Novavine grapevine nursery, working in the agbiotech industry and completing a post-doctorate at UC Davis. Stamp Associates advises growers and winemakers in the U.S. and overseas in the establishment and management of high-quality, pathogen-tested vineyards. Stamp Associates work with their clients and industry partners to ensure on-time, on-target delivery of high quality, virus test-negative grapevine planting stock. Dr. Stamp serves on the American Vineyard Foundation grapevine breeding review committee. Contact him at james@jamesstamp.net or 707-217-2539.

TABLE 1.

Contamination of Foundation Block vines at RRV

	Russ	ell Ranc	h Found	ation	C	lassic Fo	oundatio	n
Year	Vines Tested	Total Vines	Positive Vines	Infection Rate	Vines Tested	Total Vines	Positive Vines	Infection Rate
2013	1,106	1,142	0	0%	3,438	4,284	9	0.21%
2014	2	1,807	0	0%	1,010	4,081	6	0.15%
2015	1,002	2,616	0	0%	636	4,169	0	0%
2016	584	3,290	0	0%	2,276	4,163	0	0%
2017	6,761*	4,132	5	0.1%	3,604	4,088	1	0.02%
2018	6,013*	4,406	24	0.5%	4,127*	4,075	0	0%
2019	5,442*	4,761	339	7.1%	4,167*	4,075	1	0.02%

\*Some vines tested multiple times

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Excepting that this significant increase in Red Blotch disease at RRV might have been predicted back in December 2018, this development raises many questions about what we think we know about GRBV and its transmission. While we don't know what caused this increase in Red Blotch disease at RRV, there are several factors and hypotheses that should considered.

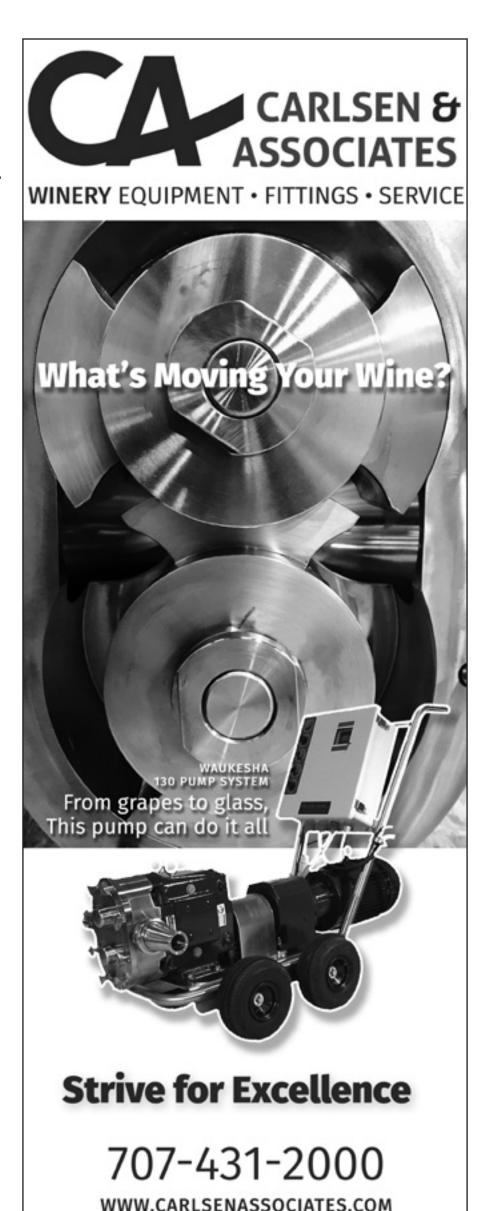
Red Blotch disease was first discovered in October 2012<sup>2</sup> and methods for detection of GRBV were available soon after. **TABLE 2** presents a snapshot of the widespread GRBV-contamination of CDFA classic certified and non-certified materials (subjected to independent testing by **Stamp Associates Viticulture, Inc.**) between 2012 and 2014 (Stamp and Wei, 2013, 2014). **TABLE 3** presents data showing the effect of Red Blotch disease on wine quality from a Rutherford vineyard grafted to Cabernet Sauvignon FPS 04 that tested both positive and negative for GRBV (negative for all other viruses). **SIDEBAR 2** summarizes our current understanding of Red Blotch disease and GRBV.

**TABLE 1. Testing of RS and Scion Increase Blocks** Nov. 2012-May 2014

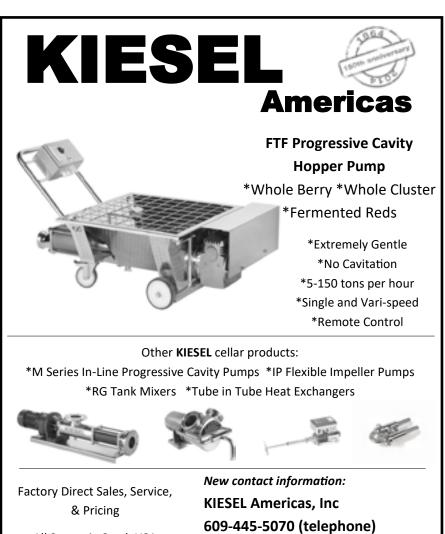
Material	Source	GRBaV	LR2	LR3	LR9
101-14MG	CDFA CERT	POS			
420A -1*	CDFA CERT	POS			
420A -2*	CDFA CERT	POS			
5C	CDFA CERT	POS			
VR 039-16	CDFA CERT	POS			
CH FPS 4	CDFA CERT	POS			
CS ENTAV 15 -1	CDFA CERT	POS			
CS ENTAV 15 -2	CDFA CERT	POS			
CS ENTAV 169 -1	CDFA CERT			POS	
CS ENTAV 169 -2	CDFA CERT	POS			
CS ENTAV 338	CDFA CERT	POS			
CS ENTAV 412	CDFA CERT	POS			
CS FPS 4	CDFA CERT	POS			
CS FPS 6	CDFA CERT			POS	
CS FPS 7 -1	CDFA CERT			POS	
CS FPS 7 -2	CDFA CERT	POS			
CS FPS 7	Field selection	POS			
CS FPS 31	CDFA CERT			POS	
CS FPS 33 (191)	CDFA CERT	POS			
CS FPS 47 (337) -1	CDFA CERT			POS	
CS FPS 47 (337) -2	CDFA CERT			POS	
MB FPS 9 -1	CDFA CERT	POS			
MB FPS 9 -2	CDFA CERT	POS			
ME ENTAV 181	CDFA CERT	POS			
PN ENTAV 943	CDFA CERT			POS	
PN FPS 90 Calera	CDFA CERT			POS	
PN Calera	Field selection 1		POS	POS	
PN Calera	Field selection 2	POS		POS	
PV FPS 2	CDFA CERT	POS			
SB FPS 1	WA STATE CERT			POS	
SB FPS 1 -1	CDFA CERT			POS	
SB FPS 1 -2	CDFA CERT				POS
SB FPS 1	Field selection	POS			

<sup>\*-1, \*-2:</sup> different increase block sources

POS: positive for virus







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# Recent Developments in the California Grapevine Nursery Industry

#### SIDEBAR 2. Biology and Impact of Red Blotch Disease

- Grapevine Red Blotch Virus is causal agent.
- GRBV is a geminivirus with a circular single stranded DNA genome. By comparison most grapevine viruses are RNA-based.
- GRBV is graft-transmissible.
- Symptom severity is directly correlated with virus titer level in the vine.
- GRBV is not mechanically transmitted.
- It is vectored by the three cornered alfalfa hopper (TCAH)—though only demonstrated under greenhouse conditions.
- TCAH is considered to be an inefficient vector—its native host is alfalfa (not grapevines).
- Independent reports suggest that the disease spreads rapidly, but our understanding of TCAH does not support rapid spread by this vector. Is this evidence for other vectors?
- It is managed by the removal of infected vines, or rogueing.
- Plant only virus-tested, clean vines to mitigate spread.

#### **Red Blotch Disease Effects:**

- Reduced vine growth
- Reduced fruit yield
- Reduced sugar in fruit juice
- Higher pH in fruit juice
- Higher titratable acidity in fruit juice
- Lower anthocyanins and tannins in berry skin
- Inferior wine quality
- Diminishing economic return
- GRBaV disrupts normal berry development and stress responses by altering transcription factors and hormone networks, which result in the inhibition of ripening pathways involved in the generation of color, flavor and aroma compounds.

# TABLE 3. The Bottom Line: The Effect of Red Blotch on Wine Value at a Rutherford, CA Winery

Red Blotch	Wine category	Harvest sugar	Seed components	Tons/ acre	Cases/ ton	Gal/ ton	\$/ gal	\$/ case	FOB Gross wine revenue/ acre
NEG	Reserve	28 Brix	Complete ripening	3	50			\$600	\$90,000
POS	Bulk	25 Brix	Impaired ripening*	2		150	\$25		\$7,500

<sup>\*</sup>immature pigment and phenolic components

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Factors that may be involved in the spread of Grapevine Red Blotch Virus at RRV include:

- Selections planted at RRV before 2013 were not tested for GRBV (because the virus had not been identified).
- The testing procedures historically used by FPS for detection of GRBV in RRV have focused on testing petioles/leaves in spring and summer. The authors' experience, however, is that woody cane tissues tested in the fall (October onwards), when coupled with our own proprietary sample processing methods and testing protocols, are superior for reliable routine detection of GRBV in vines.
- All selections at RRV were derived through meristem tissue culture (TC)—a protocol designed to eliminate grapevine virus diseases in potentially contaminated stock.
- GRBV is a gemini virus (DNA virus) and has a much smaller genome than RNA-based grapevine viruses, which comprise the majority of economically important grapevine viral pathogens. It is feasible that TC procedures are less effective in eliminating these small genome DNA-based viruses.
- TCAH is the only vector of GRBV identified to-date—and the vector mechanism has only been demonstrated under greenhouse conditions—not in the vineyard. The rapid spread of GRBV suggests that other vectors are involved. Could whitefly, which is a ubiquitous geminivirus vector in many plant species and a constant companion of tomato plants and grapevine plants (especially in Yolo County where RRV is located), be a vector?
- There is anecdotal evidence that GRBV may express differently in different rootstock and scion varietal materials.
- Many growers have reported rapid spread of Red Blotch disease (as confirmed by GRBV testing) adjacent to neighboring disease epicenters, suggesting vector transmission from diseased to clean stock, and therefore supporting the presence of efficient vectors.

Is it possible that the TC process renders vines more susceptible to GRBV and other pathogens? Many industry experts believe this. Why does the Classic Foundation Block (located seven miles from RRV at the UC Davis campus) have so few GRBV infections? Does this reflect on the location of the block, the method of propagation, the absence of TCAH or a combination of these factors? Many selections in the Classic Foundation Block at UC Davis were also derived using meristem tissue culture procedures for virus elimination.

This raises other questions: Should FPS be open to independent sampling and testing? Were standard sanitation procedures at RRV sufficient to suppress the activity of potential GRBV vectors? Absent from the list of RRV-contaminated vines provided by FPS on Oct. 21, 2019, are ENTAV clones. Do these clones make up the majority of Proprietary clones listed on the FPS website?

The entire list of contaminated vines found during summer and fall 2019 at RRV is available<sup>3</sup>. **TABLE 4** is a screenshot of the first set of contaminated vines as listed on the FPS website.

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# Recent Developments in the California Grapevine Nursery Industry

**TABLE 4.2019 GRBV+ Vines Testing and Distribution History** List of plants tested positive for GRBV in 2019.

Cultivar (Selection) *=Proprietary	Date Planted	2015	2016	2017	2018	2019
Proprietary [*]	11-Jun-15			NEG	NEG	POS
Aglianico [04.1]	28-May-12	NEG		NEG	NEG	POS
Apple Grape [01.1]	13-Jul-11	NEG		NEG	NEG	POS
Arinto [01.1]	13-Jul-11	NEG		NEG	NEG	POS
Proprietary [*]	11-Jun-15			NEG	NEG	POS
Arvine [01.1]	28-May-12	NEG		NEG	NEG	POS
Assyrtiko [01.1]	13-Jul-11	NEG		NEG	NEG	POS
Proprietary [*]	6-Jul-16		NEG	NEG	NEG	POS
Bourboulenc [01.2]	30-Jul-12			NEG	NEG	POS
Brianna [01.1]	11-Jun-15			NEG	NEG	POS
Brianna [01.2]	11-Jun-15			NEG	NEG	POS
Cabernet Franc [01.1]	14-Aug-13			NEG	NEG	POS
Cabernet Franc [11.1]	11-Aug-14			NEG	NEG	POS
Cabernet Franc [13.1]	13-Jul-11	NEG		NEG	NEG	POS
Cabernet Franc [13.1]	13-Jul-11	NEG		NEG	NEG	POS
Cabernet Franc [13.1]	13-Jul-11	NEG		NEG	NEG	POS
Cabernet Franc [16.1]	28-May-12	NEG		NEG	NEG	POS
Cabernet Sauvignon [08.3]	28-May-12			NEG	NEG	POS
Cabernet Sauvignon [*]	31-Jul-13		NEG	NEG	NEG	POS
Cabernet Sauvignon [30.2]	11-Aug-14			NEG	NEG	POS
Cabernet Sauvignon [33.1]	11-Aug-14			NEG	NEG	POS
Cabernet Sauvignon [37.2]	11-Aug-14		NEG	NEG	NEG	POS
Cabernet Sauvignon [*]	31-Jul-13	NEG		NEG	NEG	POS
Cabernet Sauvignon [49.1]	13-Jul-11			NEG	NEG	POS
Cabernet Sauvignon [52.1]	11-Aug-14	NEG		NEG	NEG	POS
Cabernet Sauvignon [*]	28-May-12	NEG		NEG	NEG	POS
Cabernet Sauvignon [*]	28-May-12			NEG	NEG	POS
Cabernet Sauvignon [*]	28-May-12			NEG	NEG	POS
Proprietary [*]	11-Jun-15			NEG	NEG	POS
Proprietary [*]	11-Jun-15			NEG	NEG	POS
Proprietary [*]	11-Jun-15			NEG	NEG	POS
Proprietary [*]	11-Aug-14			NEG	NEG	POS
Proprietary [*]	11-Aug-14			NEG	NEG	POS
Proprietary [*]	6-Jul-16			NEG	NEG	POS
Proprietary [*]	6-Jul-16			NEG	NEG	POS
Proprietary [*]	6-Jul-16			NEG	NEG	POS
Carignane [11.2]	6-Jul-16			NEG	NEG	POS
Carignane [11.2]	6-Jul-16			NEG	NEG	POS
Carignane [13.2]	13-Jun-17				NEG	POS
Casetta [01.1]	11-Jun-15			NEG	NEG	POS
Casetta [01.2]	11-Jun-15			NEG	NEG	POS
Catarratto [01.2]	28-May-12			NEG	NEG	POS
Chardonnay [04.1]	31-Jul-13		NEG	NEG	NEG	POS
Chardonnay [*]	11-Jun-15			NEG	NEG	POS
Chardonnay [*]	11-Jun-15			NEG	NEG	POS
Chardonnay [*]	11-Aug-14			NEG	NEG	POS
Chardonnay [108.1]	11-Aug-14			NEG	NEG	POS
Chardonnay [*]	28-May-12	NEG		NEG	NEG	POS

#### SIDEBAR 3. Grapevine Sampling and Testing

- Sampling strategy heavily depends on testing objectives
- Test every mother vine for economically significant viruses when sourcing budwood or rootstock materials
- Use statistically significant sampling methods to survey existing vineyards
- When applying for USDA/TAP assistance a minimum of 10 GRBaV infected vines should be tested
- Use composite sampling to reduce testing cost

## **Notes and Comments from the Ninth International Geminivirus Symposium**

The Ninth International Geminivirus Symposium was held at UC Davis Nov. 9-13, 2019. Professor Robert Gilbertson, a recognized world authority in geminiviruses, organized the meeting. Our understanding of Red Blotch virus, despite much progress made since 2012, is still limited. Scientists have been unable to directly observe viral particles by scanning electron microscopy. Furthermore, no laboratory has been able to obtain antibodies that bind to the Red Blotch virus. Antibodies can be routinely raised against viral coat proteins of important grapevine viruses such as GLRaV-3, which can then be used in laboratory detection protocols. These facts suggest that GRBaV is an atypical virus. Together, they point to the possibility of a virus that may not be encapsidated or only transiently encapsidated. Recent work by Gilbertson's group suggests that all GRBV gene proteins are targeted to the nucleus of the plant cell where they work synergistically by "hijacking" the host's biosynthetic machinery to replicate the virus and to suppress the host defense mechanism.

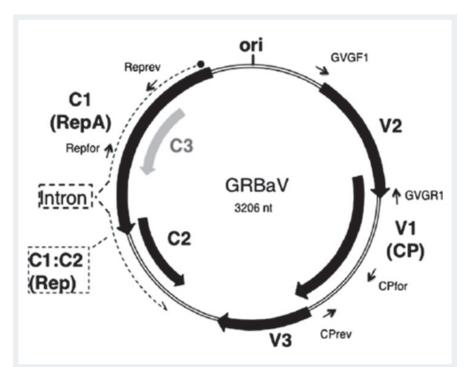


FIGURE 1. The Red Blotch genome consists of a circular singlestranded DNA of 3,205 nucleotides with three forward and three reserve open-reading frames that can be transcribed into six gene proteins (V1, V2, V3, C1, C2, C3). There are two genetic clades of GRBaV with up to 8 percent sequence heterogeneity with no recognized biological differences among known isolates.

#### SIDEBAR 4. Latest Research Findings Regarding **GRBV** at the Molecular Level

- All GRBV proteins were seen to be targeted to the nucleus of the plant cell
- Proteins C1, V1 and V2 exhibit DNA binding properties
- V1 is likely the capsid protein
- V2, V3 may mediate nuclear export of viral DNA and be involved in the host cell cycle and gene expression
- C1 and C2 are likely involved in the replication of viral DNA
- C3 is a movement protein and suppresses host gene silencing



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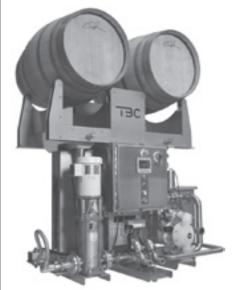
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# Recent Developments in the California Grapevine Nursery Industry

Red Blotch disease consists of three dynamically intercative components, or a disease triangle: the Red Blotch virus, the vector and the grapevine host. The GRBV outbreak at FPS is puzzling because we simply do not understand the Red Blotch virology and dynamic interplay of the three compoents in this triangle.

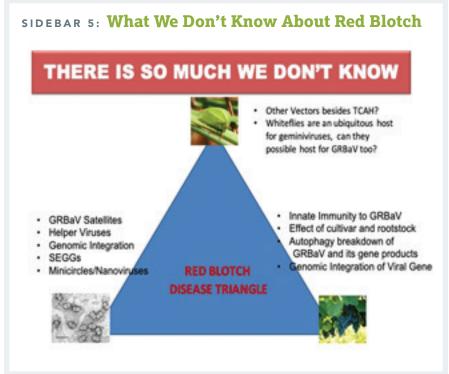
Our current understanding seems to be limited to a static model where the virus is simply a particle that can be acquired by a vector and transmitted to healthy vines. Our countermeasures against GRBV are largely based on this static model and they have generally appeared to be effective under present conditions. However, geminivurises are considered the top viral pest in agriculture, causing billions of dollars of production losses worldwide. They are a class of viruses that appear to be more highly evolved and more lethal than other virus types.

Geminiviral DNA has been found to be integrated into the tobacco genome. Integrated viral genome DNA can remain latent and be passively replicated, along with the host genome, and then passed to the cell's offspring. Environmental changes can reactivate the virus within the host, which can lead to viral transcription and the production of new infectious viruses. Although there has been no direct scientific evidence that Red Blotch Virus undergoes genomic integration in grapevines, observations of unexpected Red Blotch disease development could support a hypothesis that Red Blotch infection can be latent.

Many geminiviruses found in other plant species employ satellites, helper virus, SEGS, minicircles or nanoviruses to enhance their infectivity by increasing viral copy accumulation in the host cell, thereby boosting host symptom severity. If, and to what extent, GRBV employs these mechanisms is unknown. However, we do know Red Blotch Virus copy numbers in infected grapevine tissues can vary by several orders of magnitude. Viral copy is directly correlated with the severity of grapevine leaf symptoms<sup>4</sup>.

Other host-plant species use autophagy to combat geminiviral proteins by moving them from the nucleus to the cytoplasm, where they can be broken down by cellular factors. If, and to what extent, grapevines use such mechanisms to defend against Red Blotch Virus is unknown. Autophagy in grapevines could be expressed by differential cultivar and rootstock responses to GRBV gene product.

The above are just some research foci the scientific community needs to address to help understand the alarming development at RRV—and to find solutions to safeguard clean plant production for the grapevine industry. We call on all members of the industry to advocate for increased support for Red Blotch research through grower associations, trade associations, local and federal governments, etc.



# Safeguarding Unique, Priceless Grapevine Genetics

The grapevine plant is arguably the most important component in new vineyard development, and the availability of healthy, physically sound vines for new vineyard establishment is something that should not be in doubt. That FPS has been unable to maintain clean Foundation stock from which nurseries can propagate clean vines is a severe setback to Californian and North American viticulture. Commercial propagation of grapevine stock is a process that has remained largely unchanged for centuries. Cuttings from *Vitis* species root easily and, with little effort, will readily graft between species/hybrids to enable delivery of familiar scion/rootstock combinations.

Arguably, the pathogens of greatest concern in the nursery business today are GRBV and Leafroll 3 virus, vectored by TCAH and mealybug, respectively. The diseases caused by these viruses affect fruit yield and wine quality. The CDFA Protocol 2010 program was designed to keep these and other important viruses out of the grapevine nursery propagation system. However, the unsophisticated nature of grapevine propagation is ideally suited to the production of vines contaminated with viruses, fungi and bacterial pathogens (SIDEBAR 6).

# The Need for Improved Propagation in Grapevines

Although the winegrape, table grape, raisin and juice industries are of multibillion-dollar values, very little has been invested in propagation improvement. The **American Vineyard Foundation** research committees review many

## **SIDEBAR 6. The Limitations of Traditional Grapevine Propagation**

- 1. All Foundation and Increase blocks in California are currently exposed to the environment: vines growing within these blocks are exposed to soil-, wind-, mechanical- and insect-borne pathogens.
- 2. Vines are rooted in native soil and, therefore, are exposed to pathogens living in the soil and those that alight on the soil surface.
- 3. In many cases Foundation and Increase blocks—and nursery storage and processing facilities—are located close to commercial agriculture, including vineyards and citrus orchards.
- 4. Foundation and Increase block access is usually not sufficiently restricted; there is often no fenced perimeter nor sanitized entrance where foot and/or vehicular traffic are inspected/cleaned before entry.

proposals for improvement of wine grapes for resistance/tolerance to factors such as Pierce's disease, powdery mildew, nematodes and viruses. However, as evidenced by industry wide difficulty in propagating the nematode/fanleaf virus resistant rootstock GRN-1, very little attention is directed to improved propagation of potentially interesting grapevine genetics.











# Recent Developments in the California Grapevine Nursery Industry

Research needs to be undertaken to address the following propagation issues:

- 1. Increase the efficiency of propagation of difficult-to-graft rootstock varieties.
- 2. Consider establishment of clean CDFA Foundation Blocks under greenhouse and/or screenhouse conditions to prevent contamination of vines by soil and air borne vectors.
- 3. Develop clean methods of grapevine propagation including "green grafting."
- 4. Consider growing all Foundation Block (FB) and Increase Block (IB) vines using artificial media-based (and hydroponic) greenhouse intensive production methods to prevent contamination of vines by soil, air and insect borne pathogens.

Viruses and other pathogens found in Protocol 2010 Increase Blocks by Stamp Associates:

- GLRaV-3
- GRBV
- GPGV
- Agrobacterium vitis (tumorigenic strain)
- Various fungal pathogens

Just as the authors have found important viruses in classic and Protocol 2010 certified stock<sup>5</sup> (TABLE 2), it must be assumed that others, including participating nurseries, have also found virus in various CDFA nursery certified materials. There is currently no mechanism for this information to be released to the public—i.e., no format for the industry to be informed of the number of IB's testing positive and how often they are tested. Asked about the availability of this information, **Joshua Kress**, CDFA branch chief, responded, "I am currently working with our staff to provide an annual summary of testing activities and results, and we will be providing that summary to the public in the future via the IAB."

### The Value of Grapevine Plants: Why it is Worth Investing in Improved Grapevine Propagation

A little math explains why grapevine plants are so important. All the investments in steel, plastic, drainage, irrigation, etc. are all well and good, but only the grapevine plant provides a real return on investment (FIGURE 2). Today the average price of a grafted grapevine plant is somewhere in the \$4 range. Grapevine plants should be perceived as a bargain, considering the substantial value derived from them, and growers should understand they are purchasing something for which the unit price has remained virtually unchanged over the last 30 years or so.

Consider the value derived from an established Napa Valley grapevine plant:

Net per vine **fruit value** over 20 years Napa CS @ 10.56 lb/v: \$572 \* Net per vine **wine value** over 20 years Napa CS @ \$51/bottle: \$3,233\*

\*Based on 2017 Grape Crush report data for Napa Valley Cabernet Sauvignon fruit at 907.5 vines per acre, fruit value of \$7,500 per ton, 4.79 tons fruit per acre (Y/Pwt: 5, 4 shoots per foot: 10.56 pounds per vine), and \$10,000 per acre farming costs. At 600 bottles per ton and 3.17 bottles per vine, with a retail value of \$80 per bottle, less cost of grapes and winery cost per bottle (\$51 per bottle x 3.17 bottles per vine x 20 years = \$3,233 per vine). These are ballpark figures, and some would argue a yield to pruning weight of 5 is too high, but in my opinion it seems to work. Data provided by Doug Fletcher.



**FIGURE 2.** \$4.00 investment options

## Weed Removal is Essential for Improved New Vine Establishment

Weed control around newly planted vines is essential. Weed root systems are usually located above the roots of the vine, commonly situated between 8 and 12 inches below the soil surface. In typical drip-irrigated plantings, therefore, the weed root system has primary access to the water supply, leaving the vine root system situated six or more inches lower in the rhizosphere, with reduced water and nutrient supply.



FIGURE 3. Extreme weed competition





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# Recent Developments in the California Grapevine Nursery Industry

A grower recently noted, "We had managed cultivation between the vines in the rows very well. The under vine cultivator does leave some weeds around the base of the vines. When we went through and took those weeds out by hand, the vines seem to respond almost immediately. Most unexpected, but welcome."

### Importance of Fallow Period for Vine Mealybug Eradication and Observations on Potential Spread of Grapevine Leafroll 3 Virus

According to Monica L. Cooper<sup>6</sup>: "The risk to newly planted vineyards from neighboring infected blocks is much greater than from remnant mealybugs surviving on infected roots. Although researchers from New Zealand and South Africa suggest that there is a risk from subterranean mealybugs surviving between plantings under their growing conditions, Cooper has not seen good evidence for this in California (where there are different growing conditions and different MB species).

"In heavy soils under normal rainfall years on California's North Coast, it's doubtful mealybug would survive in the soil on root pieces. Most belowground observations are in sandy soils from the Central Valley. We've never observed grape mealybug below ground, only vine mealybug. Additionally, grape mealybug (GMB) is typically in the egg stage (overwintering) when vines are removed. This makes it impossible for them to move from the vines to roots, as they would need to do to survive. We don't typically have GMB eggs hatching until closer to bud break. We've had a long-term GMB trapping program in Oakville, and we repeatedly see significant decreases in trapped males after a vineyard block is removed, and it takes several subsequent years for GMB to re-populate these blocks. This suggests that the removal of the block drops GMB populations.

Neither GMB nor vine mealybug have been found to survive long-term on hosts other than grapes in California, so I'm not sure what the effect of natural vegetation might be."

## **Avoiding Syrah Decline**

ENTAV Syrah clone 877 is considered a bad choice if one is concerned about Syrah Decline. Both in France and California this is the clone that is most susceptible to Syrah Decline. It is not clear why Syrah vines fail to Syrah Decline (the decline is not associated with any known virus), but affected vines usually show decline within about five years of planting—and again, ENTAV 877 is associated with the worst symptoms. The best alternative is Syrah ENTAV 470. This has good yield, good quality, and is comparable to ENTAV 877—and is not known to be associated with Syrah Decline in California or France. A good rootstock choice would be 110R or 1103P: their drought tolerance is helpful with Syrah, which does not like overly dry conditions. It has been observed that Syrah Decline can be initiated as a result of water stress.

Grapevine Syrah virus-1 and rupestris stem pitting virus Syrah strains have been found in association with declining Syrah vines, but no cause or effect has been determined. It is recommended that Syrah materials purchased from grapevine nurseries should be tested for these viruses.

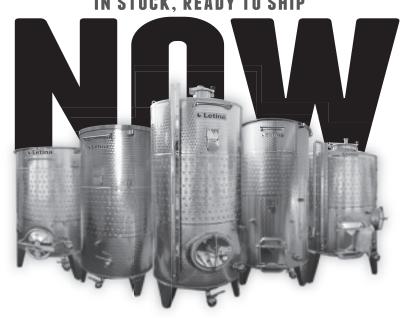
# **Avoiding Cold Damage to Recently Planted Green Potted Grafted Vines**

Early spring 2019 revealed significant fatalities in new vine plantings, resulting from severe cold weather during the winter of 2018/2019. On examination of dead plants that had grown remarkably well during late summer and fall of 2018, it was clear that vines were not defective: root systems were full and well-developed, graft unions were healed perfectly, and shoot growth, in some cases trained to a single shoot that reached over 6 feet in length over a 3-month growing period, supported the conclusion that vines were healthy when planted. Lake County can have particularly cold winters, and in one instance a high proportion of July- and August-planted green-potted SB01/ SO4 vines planted near Kelseyville died—seemingly from cold damage as, on examination, the dead vines were of perfect physical condition.

## TABLE 5. Daily High and Low Temperatures Kelseyville Fall 2018 (Western Weather)

Date	Daily Max Temp (°F)	Daily Min Temp (°F)
11/28/2018	61.3	41.5
11/27/2018	54	38.5
11/26/2018	63.6	34.6
11/25/2018	66	36.2
11/24/2018	63.2	40.9
11/23/2018	59.3	45.7
11/22/2018	55	43.7
11/21/2018	58.4	42
11/20/2018	68.9	26.6
11/19/2018	74.4	26.7
11/18/2018	76.3	22.8
11/17/2018	69	23.5
11/16/2018	66.8	25.1
11/15/2018	71	24.5
11/14/2018	69	22.7
11/13/2018	64.2	26.9
11/12/2018	68.5	23.1
11/11/2018	66.9	20.7
11/10/2018	60	24
11/9/2018	62.5	22.3
11/8/2018	68.1	24.7
11/7/2018	77.1	30.2
11/6/2018	76.1	27.7
11/5/2018	76.1	33.9
11/4/2018	78.8	34.9
11/3/2018	80	36
11/2/2018	80.8	36.9
11/1/2018	79.8	39.9
10/31/2018	72.5	34.7
10/30/2018	70.1	30.6
10/29/2018	68.7	38.1
10/28/2018	69.6	43.9
10/27/2018	80.6	42.9
10/26/2018	83.3	39.6
10/25/2018	83	38.9
10/24/2018	77.8	39.4
10/23/2018	72.7	31.9
10/22/2018	80.9	32.2
10/21/2018	83.3	34.4
10/20/2018	85.9	35.5

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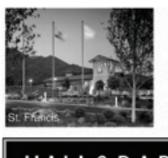
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# Recent Developments in the California Grapevine Nursery Industry

Hal Huffsmith, formerly of Trinchero Family Estates, commented on his experience with sudden vine death in Middletown (and occasionally Lakeport) vineyards). Without seeing the SB01/SO4 vines in question he noted, "I have seen enough damaged first year Lake County vines to offer some plausible direction concerning the cause of this phenomena. It's my guess that the vines were damaged from a fall cold temperature event. Here's why: It's difficult to get first year vines forced into dormancy or hardened off prior to a Lake County cold-temperature night. Without a crop, young vines continue to grow through the fall (without ripening a crop, their physiological timing is off, plus SO4 tends to have a long season growing cycle) and Lake County has regular warm day/cold night temperatures in October or November (TABLE 5). Actively growing green tissue is particularly susceptible to cold damage and, if the terrain has low spots that are displaying greater vine death, that may also be an indication of cold temperatures. I think it was Jim Wolpert (based on his research at Michigan State) who encouraged us to make sure the young vines had abundant K levels and to cut off water early in the fall, around the middle of September. The potassium ensured vascular cell strength and the lack of water forced the young vines into dormancy prior to a cold temperature event."

Mounding especially susceptible plants is a strategy that works to prevent cold temperature death of recently planted green vines. This is especially useful for VR 039-16 grafted vines whose tissues are especially low-temperature sensitive, due to the genetics of this hybrid rootstock. Other strategies used to reduce cold-temperature damage in recently planted green potted vines include temporarily removing cartons to allow for hardening of shoot and graft union tissues (and then replacement before frost), filling of cartons with soil, rice hulls and/or grass or straw, and timely shut-off of irrigation to promote vine lignification.

Sauvignon Blanc is considered to be among varieties with the lowest cold hardiness.<sup>7</sup> WBM

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FIGURE 4. Mounded CS07/VR 039-16 vines planted July 2019 (Oakville 11.22.19)

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# Luxury Wine Packaging: Less Is More

Premiumization suggests that consumers are willing to spend more per bottle, but success is determined not only by the quality of what's in the bottle, but what's on the bottle as well.

Michael S. Lasky

**IT WAS BACK IN** 2006 when **Rob McMillan**, executive vice president and founder of **Silicon Valley Bank**'s Wine Division, coined the term "premiumization" to describe the trend toward increased sales of wines priced at \$20 per bottle or more. The collective consumer desire to enter the luxury wine world, while simultaneously fulfilling the function and necessity of the mass wine market, was something the wine industry watched carefully. Although the trend toward opting for wine at higher price points has continued to grow, defining the dollar value of the luxury category has remained amorphous.

## **Defining the Price of Luxury**

While some data analysts refer to high price point wines as luxury, others term it premium or ultra-premium. What's more, the actual price range for these wines also varies, depending on the source: be it wineries, brand marketing consultants, distributors, data analysts and even consumers. That's because the wide range of prices for high-end wines extends from \$20 to more than \$100, and even then, the term "luxury" is still arguable.

Let's face it: When there is a Grand Canyon-sized price range that defines the "luxury" category, what really distinguishes a \$20 bottle from a \$150 one is the look. Despite this wide variance in pinpointing wine price tiers, for the purposes of this article, *Wine Business Monthly* will refer to the term "luxury" as we investigate the specific packaging design elements that are common to this category.

# How Package Design Helps Define a Luxury Wine Package

Reverse engineering helps pinpoint the elements of luxury wine packaging. WBM spoke with package designers, winemakers and other industry mavens to help break down the various elements shared by luxury bottles, from the capsule and cork to the type of glass, the label and even the punt.

Some of these elements are obvious in communicating the wine's price point, like heavy glass bottles. "It's really about the perception of being high-end and the look of being high-end," explained **Liz Thach**, who is a distinguished professor of wine and professor of management at **Sonoma State University**, as well as the co-author, along with **Peter Yeung**, of *Luxury Wine Marketing: The art and science of luxury wine branding* (2019,



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**Infinite Ideas**). "A lot of consumers perceive really heavy bottles to be more prestigious and more expensive—implying luxury contents," Thach said.

"Heavy, darker glass is also employed to protect against light and temperature variations for wines intended for longer storage," added Yeung. Although these logical reasons for heavier glass for luxury wines ring true, he noted in his book that "at least half of the top 50 more expensive wines do not employ heavy glass."

The wine industry's increased awareness of sustainability has sharply reduced the reliance on heavy bottles, among other practices, but the costs associated with heavier glass are probably better motivation. As **David Schuemann**, owner and creative principal at design firm **CF Napa**, explained: "There's been a huge shift in the industry when looking at some of these heavier bottles of wine because shipping costs are so expensive, the practicality of shipping your wine club members bottles that weigh over a 1,000 grams a piece is prohibitive to the bottom line.

"There's been a huge shift in glass manufacturing to taking some of the heft out of bottles without losing the beautiful, larger-looking shapes. So that means larger punts and other ways to make the bottles still look substantial without being ultra-heavy," Schuemann continued. "In addition, there's definitely been a move to recycled stocks and papers, and just greener initiatives—again, without losing the look of luxury refinement."

Of course, high-end wine does not solely rely on heavy glass to create a luxury image or define a winery's reputation for quality wine. That's where other elements of the package contribute. Say hello to the creative use of capsules and closures.

# **Getting Closure: What's on Top Helps Define Luxury**

Package designers are emphatic that every embellishment on a bottle can speak volumes about the story, heritage and philosophy of a wine brand. With luxury wines in particular, every aspect or element of the bottle's design must be in harmony. Though the capsule offers limited real estate, it still remains another opportunity for branding. "A lot of artwork for our clients is designed to help them stand out and raise their hand and say 'pick me,'" Affinity Creative's managing director Edwin Rice explained. "Even just that diminutive top button on the capsule can make or break a consumer connection when they gaze over the thousands of options at a retail display."

It's equally important to communicate the value of the wine for direct-to-consumer (DTC) sales. "Think about it: when you open a bottle of wine, be it to pull out the cork or to twist the screwcap, you look down on the capsule and its top button," Rice added.

The new trend in the high-end set is to select short capsules, which first appeared for wines positioned as "hipster." The purpose of the shorter capsule is to show embellishments on the cork, offer a more distinguished look and show off more of the wine and the neck-fill in the bottle. Combined with other design elements, such as metal medallions and branded leather appliques, luxury is implied.

"We've seen a lot of our high-end clients' packaging move away from capsules and go naked, which has been something that's become more and more popular with higher-end wines, for whatever reason," added CF Napa's Schuemann. "That's allowed for our designing the end of the corks for a distinctive, sophisticated appearance and a bow to the overall simplicity favored by high-end producers."

Though the trend is becoming more popular, as it's thought to differentiate a brand, traditional design choices remain pervasive in the luxury market—brands want to focus on the prestige and pedigree of the winery,

its reputation and its intended aging potential. This is manifested by thicker tin capsules, simpler label designs, the more expensive corks (such as the **Diam** 30, which is sold with a 30 year-guarantee and is considered essential to inherent aging potential for luxury-tier wines)—and now, even the use of screw caps. You read that right: Screw caps on luxury wines.

There are two good examples of the aging capability of screw caps to demonstrate their gradual adoption by winemakers of luxury wines. The first as related by **Mick Schroeter**, wine director of **Sonoma-Cutrer Vineyards**. "The first screw cap we used back in 1999 was on our Founder's Reserve Chardonnay. From a company perspective, we actually started with our very top, most expensive wine in our portfolio, not like other wineries which use screw caps only for the lower tiers," he said.

"Twenty years later we conducted a tasting of two Founder's Reserve under cork and one in screw cap. The first bottle we opened revealed the cork completely deteriorated and the wine oxidized. The second wine under cork showed a great deal of evolution and complexity. But the highlight was the screwcap wine: The color was brighter. It was a fresher, more vibrant wine and was still aging gracefully. In other words, what one would expect from a luxury wine," Schroeter added. Today, Sonoma-Cutrer's entire portfolio is under screw caps.

The second screw cap report comes from PlumpJack Winery, which daringly back in 2000, sold a two-pack of its highly rated Cabernet Sauvignon—one bottled in cork, the other in screw cap. "What was considered risky then actually proved a startling success. Consumer feedback was overwhelmingly positive. So, we've actually expanded other wines in our portfolio to screw cap bottling," said Plumpjack winemaker Aaron Miller.

"In our feedback I'm seeing that what they like about these older, screw-capped wines is that they are fresher on the nose. They have a similar palate—the palate is evolving really nicely—but the nose is evolving a little more slowly, and it still has fresher fruit and so a little more vibrant quality to it, a little more life."

# Luxury Labels: As the Price of the Wine Goes Up, Label Designs Get Simpler

Luxury Wine Marketing author Peter Yeung recalled a quote from Harlan Estate proprietor Bill Harlan, describing the epitome of a high-end, luxury wine label. "The label," Harlan said, "has a wonderful handmade quality. It was a label designed for a bottle that would sit on a table in candlelight, not on a store shelf." Indeed, Harlan Estates' wines are at the stratosphere of luxury wines, available on an allotted DTC basis only and never sold at retail.



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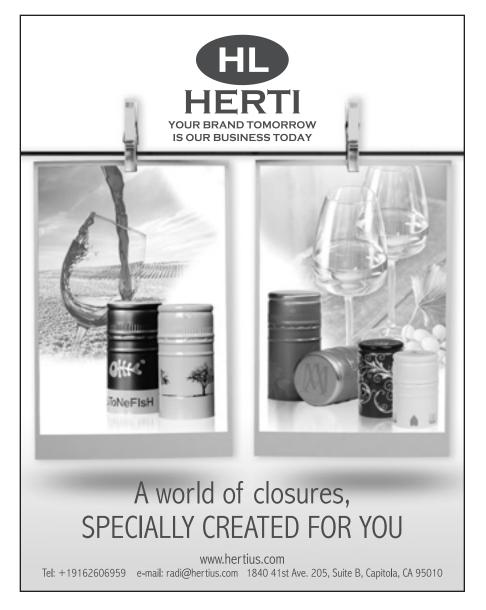
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#### **Luxury Wine Packaging: Less Is More**



But this does not exclude all the other luxury wineries that do not package their bottles with "candlelight" simplicity. As the price of their wines goes up, the ornamentation of their containers generally goes down.

"The marketing logic for this is experiential. I think your branding and your design and your approach to conveying the personality and attributes to the wine give you a lot more latitude as you don't need to worry as much about competing in a sea of 8,000 other brands," Rice said. "The goal there is to achieve the appropriate degree of shelf impact while still looking appropriate at your price point and appealing to your target, either in a store or in a DTC relationship."

As Yeung and Thach point out in their book, "Several research studies in different countries have shown that the majority of consumers prefer a traditional wine label design. Furthermore, when they are asked to select which label design they consider to be from the most expensive wine, an even higher percentage select the traditional label. A review of luxury wine labels also supports this premise as the majority feature a traditional label."

Just what is considered a "traditional" label design? It's basically an understated label with simple font. If accompanied with an image, that image is usually of the winery, a vineyard, a symbol or crest (which typically applies to the brand, the winery's family or heritage) or the winemaker's signature. Some wineries may use the back label for further biographical information or reference sustainability practices. Minimal information on luxury wine labels is commonplace as customers generally are either previously familiar with the wines through tasting room visits, wine club memberships or other in-person interactions.



# Collector's Crates: Secondary Packaging is Luxury Wine's Domain

When you think about the investment market for some of the highest-priced, limited-production, luxury-level wines—be it for collectors, commemorative gifts or presentations—secondary packaging supplies the biggest initial impact. From original wooden boxes for one or more bottles to wrapping, anything that helps with provenance and storability tends to generate a premium (or more) connotation, Yeung noted.

Rice agreed. "The secondary packaging can be essential, and it can be creating the allure of everything from the unboxing experience or opening the shipper, to finding a box within the box or even an unexpected greeting card or booklet," he said. "Are you using tissue or using a really nice cushioning material to enhance that unboxing experience?"

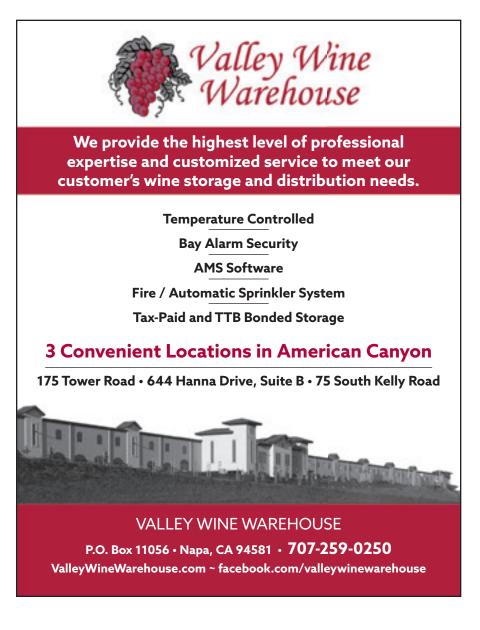
An elaborate presentation case is not unexpected in this category. Affinity Creative produced a commemorative polished wood case for **King Estate Winery** to mark its 25th anniversary. Inside were the special reserve editions of their Pinot Gris and Pinot Noir. At a \$225 price point, the wine was supplemented with a luxurious keepsake.

"We've developed wooden trophy cases for wines so that when they're shipped to the consumer, they can be used to present the bottles in their wine cellars. We've even created leather-wrapped wood cases," said Schuemann. "The sky's the limit. A lot of that's been influenced by some examples you've seen in the high-end, single-bottle gift boxes for luxury scotches and spirits."

He added that a good portion of his luxury wine packaging products now include a well-designed gift box made exclusively for club members or even for specialty retailers.

Thach summed it up nicely. "Everything about marketing luxury products, in general, is done with a whisper, not shouted or bragged about," she said. "It's done with finesse. The true refinement and elegance of the luxury wine ultimately win the day—and the sale." **WBM** 





## **Retail Sales Analysis**

# Wine Sales Steady as Sauvignon Blanc Grows

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## Sales Value Steady in November

Off-premise table wine sales were stable in the four weeks ended Nov. 30, staying even with a year ago at \$1.3 billion, according to scan data tracked by **Nielsen**. Sales rose 1 percent in the 52 weeks ended Nov. 30, however, totaling \$14.4 billion.

#### Sales Volume Drops 3 Percent

Off-premise table wine volume fell 3 percent versus a year ago in the four weeks ended Nov. 30, totaling 13.7 million 9 L cases. The decline in the latest 52 weeks was more modest at 1.6 percent, with volume totaling 159.3 million 9 L cases.

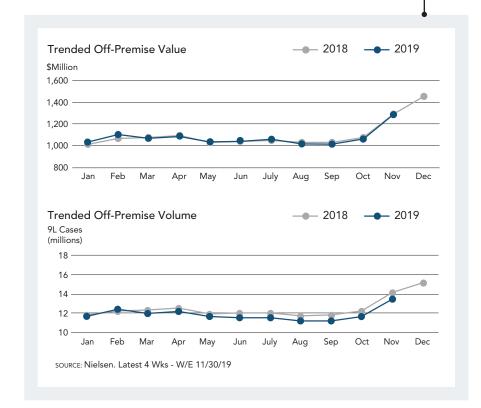
# Affordable Luxury Dominates Table Wine Growth

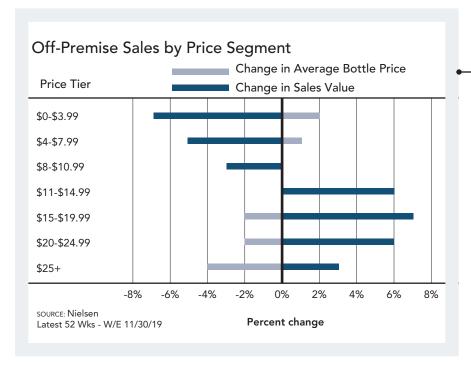
The past several months have seen a trend towards the value of off-premise wine sales outperforming volumes, which have been generally declining. This has led to an increase in average bottle price over the past year. In the 52 weeks ended Nov. 30, the average bottle of table wine increased 23 cents to \$8.67, while sparkling wine increased 33 cents to \$12.73 a bottle.

Most of the gains have occurred at the lower end of the market, among wines selling for less than \$15. These are the same price tiers that have seen sales shrink. Conversely, sales gains at the more expensive price tiers have coincided with declines in average bottle price in each tier. Off-premise consumers may be trading up, but they're also being careful about what they're spending. The luxury they're seeking is—according to the data—becoming more affordable.

The most-expensive wines, those priced \$25 and up, saw the slowest increase in sales (3 percent), and the most significant drop in average bottle price (4 percent, to \$37.75). However, wines priced between \$15 and \$19.99 saw average bottle price fall 2 percent, to \$16.76, but lead the category in terms of sales growth at 7 percent.

Similarly, wines priced at less than \$4 saw the most significant premiumization, with per bottle pricing rising 2 percent to \$3.36 even as sales dropped 7 percent. **WBM** 





#### Methodology

Sourced from Nielsen, these figures represent off-premise retailer wine sales to the consumer aggregated across a variety of channels nationwide, including grocery, drug, mass merchandisers, convenience, dollar, military, as well as a selection of warehouse clubs, and liquor channel geographies and liquor channel retail chains. Nielsen figures are updated and released every four weeks.

Nielsen Table Wine Category Segments MARKET: Total US xAOC+Conv+Military+Liquor Plus PERIOD: Week Ending November 30, 2019

	1	ieleen	Dollar V	alue	Dollar Value	% Chg YA	9L Equivalent	Volume	9L Equivaler % Chg		Avg Equival Per 75	
		IICISCII	Latest 52 Wks - W/E 11/30/19	Latest 4 Wks - W/E 11/30/19	Latest 52 Wks - W/E 11/30/19	Latest 4 Wks - W/E 11/30/19	Latest 52 Wks - W/E 11/30/19	Latest 4 Wks - W/E 11/30/19	Latest 52 Wks - W/E 11/30/19	Latest 4 Wks - W/E 11/30/19	Latest 52 Wks - W/E 11/30/19	Latest 4 Wks - W/E 11/30/19
$\rightarrow$		TOTAL TABLE WINE	14,396,525,240	1,290,037,456	0.8	0.0	159,311,312	13,698,934	-1.6	-2.8	7.53	7.85
		BOX	1,423,214,314	118,131,575	5.4	4.7	34,006,122	2,768,991	1.8	0.2	3.49	3.56
	S	\$0-\$3.99	576,824,000	46,507,452	-1.2	-1.7	19,908,734	1,581,614	-2.7	-4.5	2.42	2.45
	Ä	\$4+	845,026,335	70,788,336	10.3	8.1	14,071,770	1,171,880	8.7	5.9	5.01	5.03
_	CONTAINERS	Total Table Wine Glass	12,695,232,883	1,150,365,928	0.0	-0.7	121,984,350	10,679,413	-2.7	-3.6	8.67	8.98
		Value Glass \$0-\$3.99	639,179,534	52,251,403	-6.6	-6.0	15,842,679	1,296,212	-8.4	-7.1	3.36	3.36
	ВУ	Popular Glass \$4-\$7.99	3,103,070,224	259,581,484	-5.3	-6.4	46,945,466	3,925,150	-6.0	-7.6	5.51	5.51
الد	TIERS	Premium Glass \$8-\$10.99	3,284,047,775	291,323,708	-2.8	-4.2	28,995,735	2,571,385	-3.1	-5.1	9.44	9.44
	프	Super Premium Glass \$11-\$14.99	2,851,463,418	268,276,507	5.7	5.0	18,969,851	1,795,220	6.1	5.1	12.52	12.45
	PRICE	Ultra Premium Glass \$15-\$19.99	1,431,063,873	141,137,888	7.0	6.2	7,112,603	696,524	8.7	6.8	16.76	16.88
		Luxury Glass \$20-\$24.99	590,633,447	56,732,305	6.3	6.7	2,317,920	218,697	8.4	6.7	21.23	21.61
1		Super Luxury Glass \$25+	781,945,128	78,484,795	2.5	-0.1	1,725,469	162,121	7.3	-0.2	37.75	40.33
		IMPORTED ITALY	3,800,824,610 1,207,970,653	336,869,513 115,031,376	0.4 1.9	-0.1 1.9	39,792,984 10,491,447	3,427,811 963,739	-1.2 -0.1	-2.1 -0.8	7.96 9.59	8.19 9.95
		AUSTRALIA	717,122,736	61,228,584	-2.1	-2.6	11,758,479	982,464	-2.5	-0.6	5.08	5.19
		FRANCE	468,023,328	38,199,448	2.5	1.1	2,941,762	239,107	-0.5	-1.9	13.25	13.31
	Ω	CHILE	255,067,830	21,789,460	-1.5	-2.0	3,870,855	327,204	0.4	-0.7	5.49	5.55
	MPORTED	SPAIN	158,339,263	14,395,248	-5.8	-4.2	2,018,110	172,307	-3.9	-4.8	6.54	6.96
	MPC	GERMANY	76,157,226	7,379,666	-7.7	-9.2	725,427	70,082	-8.2	-10.1	8.75	8.77
	=	NEW ZEALAND	502,413,307	42,280,280	8.5	8.0	3,628,743	301,453	8.7	6.9	11.53	11.68
		ARGENTINA	325,567,267	28,997,373	-6.2	-7.3	3,558,131	306,595	-7.3	-8.0	7.62	7.88
		SOUTH AFRICA	22,893,401	1,952,065	-7.6	-5.0	200,472	16,364	-6.5	-5.5	9.51	9.94
		PORTUGAL	39,094,324	3,219,615	-4.3	-11.8	408,998	31,903	-9.5	-19.0	7.96	8.41
		DOMESTIC	10,595,700,630	953,167,944	0.9	0.027	119,518,327	10,271,124	-1.7	-3.0	7.39	7.73
		CALIFORNIA	9,539,197,293	854,880,842	0.9	0.2	110,874,522	9,479,483	-1.8	-2.9	7.17	7.51
		WASHINGTON	608,835,750	55,779,430	-1.8	-4.5	5,065,973	465,472	-2.5	-5.2	10.01	9.98
	STIC	OREGON	215,733,146	21,733,950	12.9	9.1	1,115,145	109,788	14.0	10.0	16.12	16.49
	DOMESTIC	TEXAS	32,460,726	2,591,288	0.3	-7.5	384,869	29,351	-3.0	-13.0	7.03	7.36
	ОО	NEW YORK	37,062,005	2,891,892	1.0	-0.3	476,892	38,787	-6.2	-7.9	6.48	6.21
		NORTH CAROLINA	40,570,765	3,882,242	1.5	-2.5	421,882	39,105	0.5	-3.0	8.01	8.27
		INDIANA	23,476,899	2,125,635	-0.2	-3.5	257,945	23,186	-1.6	-5.3	7.58	7.64
-		MICHIGAN	22,310,396	2,128,858	0.0	-0.5	238,969	22,781	-1.6	-2.5	7.78	7.78
	ES	RED	7,396,840,365	708,000,493	-0.1	-0.8	73,016,189	6,646,055	-2.4	-3.5	8.44	8.88
	TYPES	WHITE PINK	5,881,477,855 1,116,997,713	498,784,281 83,142,671	1.1 4.5	0.9 1.9	70,112,435 16,170,911	5,796,072 1,255,619	-0.9 -1.2	-1.6 -4.4	6.99 5.76	7.17 5.52
-		TOTAL CHARDONNAY	2,546,756,794	213,057,535	0.3	0.1	29,657,241	2,406,913	-1.2	-2.6	7.16	7.38
		TOTAL CHARDONNAL  TOTAL CABERNET SAUVIGNON	2,693,192,358	258,110,669	3.0	2.6	24,835,606	2,270,866	0.8	0.2	9.04	9.47
		TOTAL PINOT GRIGIO/PINOT GRIS	1,340,653,629	113,266,160	3.3	3.5	17,337,504	1,440,969	2.2	2.5	6.44	6.55
		TOTAL PINOT NOIR	1,097,559,740	111,555,266	2.3	2.3	8,386,189	812,045	-0.5	-1.4	10.90	11.45
		TOTAL MERLOT	702,001,659	61,550,658	-6.9	-8.3	9,633,311	811,701	-8.8	-10.3	6.07	6.32
		TOTAL SAUV BLANC/FUME	992,399,526	83,727,034	6.7	7.0	8,709,558	726,760	5.9	5.9	9.49	9.60
	\LS	TOTAL MUSCAT/MOSCATO	634,471,097	55,895,576	-2.3	-4.8	9,569,739	831,396	-4.1	-6.4	5.53	5.60
	VARIETALS	TOTAL WHITE ZINFANDEL	268,036,679	21,688,210	-7.9	-10.1	5,372,682	430,824	-9.3	-11.4	4.16	4.20
	VAR	TOTAL MALBEC	250,693,005	22,978,507	-6.6	-7.5	2,350,763	209,786	-7.4	-8.6	8.88	9.13
		TOTAL RIESLING	232,170,151	21,869,937	-6.7	-8.5	2,537,206	234,968	-8.3	-10.5	7.62	7.76
		TOTAL ZINFANDEL	221,851,333	20,372,277	-3.6	-6.0	1,578,914	140,603	-4.9	-7.0	11.71	12.07
		TOTAL SHIRAZ/SYRAH	143,011,194	12,293,767	-8.3	-10.2	1,621,049	135,478	-10.2	-11.5	7.35	7.56
		WHITE BLENDS (ex. 4/5L)	223,182,109	19,391,713	-2.9	0.1	2,727,283	227,238	-2.5	-0.9	6.82	7.11
		RED BLENDS (ex. 4/5L + CHIANTI)	1,857,638,709	181,647,548	0.2	-1.1	17,023,014	1,617,015	-0.9	-1.9	9.09	9.36
		ROSE BLEND	566,058,361	37,607,173	16.0	16.0	4,814,343	333,781	14.9	11.7	9.80	9.39
		750ML	10,405,428,952	956,789,417	1.1	0.1	82,197,647	7,328,170	-0.8	-2.6	10.55	10.88
	SIZES	1.5L	2,019,490,214	171,185,199	-4.6	-4.5	34,527,187	2,921,587	-5.8	-5.3	4.88	4.88
	SS SI	3L	59,466,499	4,965,607	-8.2	-7.0	1,508,493	122,095	-12.1	-12.7	3.29	3.39
	GLAS	4L 197MI	75,112,222	6,428,253	-9.0 5.4	-6.4 2.5	2,368,173	201,069	-11.3	-7.7 4.0	2.64	2.66
	ن	187ML 375ML	102,114,249	7,825,432 1,813,599	-5.4 7.4	-3.5 5.7	1,231,643 73,638	93,344 6,930	-7.8 6.0	-6.9 -0.7	6.91 21.71	6.99 21.83
}		ex. 4/5L	19,169,204 940,982,682	79,366,463	9.5	8.6	16,660,262	1,394,337	7.7	6.3	4.71	4.74
		1L	30,956,342	2,428,659	9.5 9.4	4.1	462,014	35,812	7.7	2.5	5.58	5.65
	SIZES	1.5L	26,930,905	2,420,037	1.8	-1.1	529,810	42,879	1.4	-3.8	4.24	4.30
	X S	3L	673,706,162	57,557,503	8.8	7.6	12,947,640	1,096,801	7.8	6.3	4.34	4.37
	ВОХ	5L	482,229,166	38,764,950	-1.6	-2.5	17,345,794	1,374,650	-3.3	-5.2	2.32	2.35
		TETRA	240,816,206	19,644,128	12.5	12.8	3,187,530	255,147	8.1	8.1	6.30	6.42
L	Sour	an Nielen										

Source: Nielsen

# Wineries Can Generate Tax Savings Through Trials

Development of new products and improved processes can earn R&D tax credit

Jim Gordon

**PRIAM VINEYARDS IN COLCHESTER**, Conn. was already the first solar-powered winery in New England when the owners decided to go vegan as well. One challenge in qualifying for vegan certification from **BevVeg International**, a third-party, global vegan certification organization, was to find a reliable way to fine their wines with something other than animal-based isinglass or gelatin. They conducted trials with bentonite and vegetal pea protein to find the most effective product and procedure for clarification, which would also minimize the amount of filtering needed.

Along the way to vegan status, the 3,500-case winery also took advantage of a little-known tax benefit. The fining trials and other experimentation completed in the cellar and in the vineyard enabled them to collect a tax credit that reduced their most recent income tax bill by about 10 percent, according to co-owner **Jim Melillo**.

Priam Vineyards took advantage of a research and development tax credit offered by the federal government, as well as some state governments, that was put in place to encourage business innovation. A percentage of the materials and labor needed for qualified research and development work is taken straight off the tax owed—not as a deduction.

"The R&D tax credit works perfectly for wineries," said Melillo, who knew about the credits from previous experience in the pharmaceutical business. "That's what a winemaker does on an ongoing basis, look at the different techniques we try out in the vineyard, like herbicides and fungicides, and in the winery, like looking for different combinations of micro-ox, how to import tannins, whether to use American oak or French oak barrels versus oak staves and so on. You could say the base of how you are driving your business is through research and development."

Wineries and other businesses can apply for the credit by using Internal Revenue Service (IRS) Form 6765, but some, like Priam, use a consulting firm for help. Melillo worked with the firm Leyton, which describes itself as an innovation funding specialist focused specifically on R&D tax credits.

"Every single large vineyard and winery is already claiming this," said **Scott Manoff**, a senior R&D consultant. "Because they know they qualify, so why wouldn't they? Many other [smaller] wineries don't know about it, so they don't apply."

Manoff said Leyton's average client across all industries receives a \$50,000 tax credit per year, and his colleague, **Craig Hale**, said he often estimates the credit at 10 percent of what a company spends on R&D. He said it typically can be 6 to 10 percent on the federal level. Most states have their own percentage or method of calculation. California will credit 15 percent of the qualified R&D spend.

#### What Activities Qualify for R&D Tax Credits?

The accounting firm Moss Adams says the IRS uses this four-part test to determine what activities qualify as research and development when applying for the tax credit.

- Elimination of uncertainty: A company must demonstrate it has attempted to eliminate uncertainty about the development or improvement of a product or process.
- Process of experimentation: A company must demonstrate through modeling, simulation, systematic trial and error, or other methods—that it has evaluated alternatives for achieving the desired result.
- Technological in nature: The process of experimentation must rely on the hard sciences, such as engineering, physics, chemistry, biology or computer science.
- Qualified purpose: The purpose of the research must be to create a new or improved product or process, resulting in increased performance, function, reliability or quality.

#### **Credit Made Permanent in 2015**

The federal R&D tax credit for businesses was established in 1981 by the **United States Congress**; but, until recently, it was a temporary benefit that expired several times and had to be repeatedly renewed, arguably discouraging some small businesses from getting started if they didn't know how long the credit would last. In 2015 Congress made the tax credit permanent so it's now a more reliable incentive for innovation.

To apply, businesses consider how many employees are doing things that could qualify as R&D, how much of their time is spent on those things and what those things are. In the wine industry, trying new ways to crush, new yeasts, new ways to clean barrels, improvements in bottling and many other possibilities can be considered.

The government will look at employee salaries and the hours and costs related to their R&D work, the total of which is the "qualified expense." Up to 10 percent of that is the tax credit, which can be taken off the company's taxes owed if it's an established profitable business. If the business is a startup in its first five years of gross receipts, the credit can be taken against the **FICA** portion of payroll taxes.

The IRS takes into account either the company's three previous years' R&D costs, or it can go back as far as 1984 to determine the actual tax credit amount.

"If it's not saleable, that's a more supportable activity. The government wants to encourage companies to be innovative, and they understand there is some risk in doing that. If you're working on a \$30 bottle of wine and you end up with a \$5 bottle, you've learned something important."

Liddy Steele, Moss Adams

## What Activities Qualify?

The IRS says qualified R&D work must have, as its purpose, a new or improved product or process and must meet three other major criteria (SEE SIDEBAR). The credit is calculated on the basis of increases in research activities and expenditures—and as a result, it's intended to reward companies that pursue innovation with increasing investment, according to Moss Adams, a public accounting firm that has long assisted businesses with R&D tax credit applications. The R&D doesn't have to be new to the industry. It simply needs to be new to the company, which must have activities that meet the four-part IRS test.

**Liddy Steele**, a Seattle-based R&D tax services manager for Moss Adams, said that new product development can include adding a new varietal or blend to a winery's profile, in which case the expenses, including labor, supplies, contractors and lab tests, could apply.

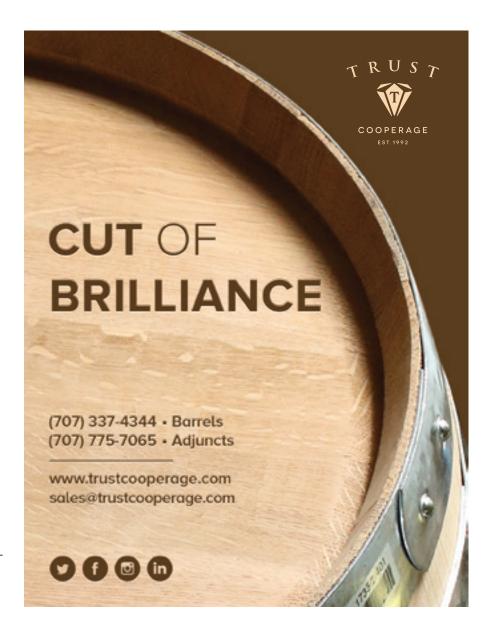
Ironically, the new product doesn't have to be saleable to qualify. In fact, Steele said, "If it's not saleable, that's a more supportable activity. The government wants to encourage companies to be innovative, and they understand there is some risk in doing that. If you're working on a \$30 bottle of wine and you end up with a \$5 bottle, you've learned something important."

The second type of qualified activity is process development. She has worked with wineries that are developing improved ways to use flash processing to remove undesirable bacteria from wine, to test new ways to use oak staves during fermentation and to remove smoke taint from wine. As for vineyard activities, Steele said she has seen qualified development of irrigation practices across agribusiness sectors, and qualified research in pest mitigation and harvesting techniques and technology.

Steele said Moss Adams' fees for helping clients with the R&D tax credit vary, generally from 10 percent to 25 percent of the tax credit amount.

Manoff at Leyton declined to quote an average fee amount but touted the company's practice of not only putting accountants on the case but also attorneys, engineers and scientists to build the best case for the credit.

He wrapped up his argument by saying that winery and vineyard companies engage in so many trials and make such constant improvements that practically any one of them could qualify. "The real gist of this is that the business is going to get some money out of this, and there's no downside to doing it," he said. "The government has more money to give away than current companies are asking for." WBM





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## Winemaking & Wineries

Marcus Rafanelli joined L'Ecole as winemaker. He comes to L'Ecole from Walla Walla Community College's Institute for Enology & Viticulture, where he has been the instructional technician and cellarmaster, overseeing 65 students and the production of College Cellar's wines. Prior to that, Rafanelli worked at wineries spanning the globe, including Weingut Dr. Loosen (Mosel, Germany) and Two Hands Winery (Barossa Valley, Australia).

Randall Grahm, founder of Bonny Doon Vineyard, received the American Wine Society Award of Merit at the organization's national conference in St. Pete Beach, Fla., last December. In an acceptance speech, Grahm humbly and humorously discussed several particularly vivid career failures.



Randall Grahm

SARA REMINGTON

ularly vivid career failures

over the past 35 years, as well as plans for the future at his estate vineyard in San Juan Bautista. (FPS)

Joe Hunter was appointed national sales manager for Wayfarer Vineyard. Hunter joined the Pahlmeyer family in 2014 as the company's western division sales manager, U.S. and Canada, for Pahlmeyer, Jayson by Pahlmeyer and Wayfarer, after 24 years in wholesale distribution with Admiralty Beverage and Young's Columbia Distributing in Oregon. Cleo Pahlmeyer launched Wayfarer Vineyard wines with her father Jayson in 2014 and continues to lead the vineyard and winery as president.

Constellation Brands, Inc. promoted Garth Hankinson to executive vice president and chief financial officer (CFO), effective Jan. 13, 2020. Hankinson succeeds David Klein, who left this role at Constellation and is now chief executive officer at Canopy Growth. In his new role, Hankinson will be responsible for oversight of all aspects of the company's finance operations, including financial planning and analysis, treasury, investor relations, information technology, as well as corporate development activities. He will also serve as a member of Constellation's Executive Management Committee.

A to Z Wineworks expanded its sales team, hiring Ron Mertz as its president of sales. Verette joins the company with more than a decade's experience in wine and spirits sales, having worked for Rebublic National Distributing Company (RNDC) for eight years and on the supplier side with Constellation Brands for four years. Most recently he served as a division manager for RNDC in Texas. A graduate of Texas Lutheran University, Verette is based in San Antonio and is responsible for conducting business in Texas, New Mexico, Colorado, Kansas, Louisiana, Oklahoma and Arkansas.

Additionally, the winery also hired Laura Standley as its new regional manager for the Southeastern region. Standley was previously area manager for RNDC, where she oversaw on-premise sales teams in the competitive Miami area. She is a Certified Specialist of Wine, Level One Sommelier, and has successfully completed the WSET Level II course. Standley will focus on the key Florida market for the near-term.



Laura Standley

The Family Coppola hired Gary Sitton as its new vice president of wine-making. In this role, Sitton will be run the winemaking operations for all three wineries: Francis Ford Coppola Winery, Virginia Dare Winery and Domaine DeBroglie in Dundee Hills, Ore.

Bundschu Company hired Towle Merritt as vice president of operations and general manager of family owned winery, Gundlach Bundschu. In this role, Towle will lead day-to-day business and production operations across the Bundschu Company portfolio of brands. Towle joins the company after helping build vineyard management company, Walsh Vineyards Management—a company that provides vineyard services for over 5000 acres of vineyards on 170 properties in the Napa-Sonoma area.



**Towle Merritt** 

3 Badge Beverage Corporation's mixology division hired Gustavo Baena as Midwest market manager. Based in Chicago, Baena now oversees sales for the 3 Badge spirits portfolio in Illinois, Indiana, Kentucky, Michigan, Minnesota, Ohio and Wisconsin. Baena comes to the company from Stoli Group USA, where he was the state manager of Illinois. He was previously the field sales manager at Constellation Brands and, before that, the Illinois market manager at Tequila Avión.

Miller Family Wine Company welcomed Nick de Luca to its team as grape sales manager; he brings more than 24 years of California wine industry experience to his new role with the company. In his new position, de Luca is responsible for overseeing grape sales for Bien Nacido, Solomon Hills and French Camp Vineyards, while colleague Ian Fainer will remain focused on bulk wine sales for the Miller Family Wine Company.

**Delicato Family Wines** appointed **Mary G. Burnham** as its new director of public relations and events. Reporting to **Jon Guggino**, executive vice president of marketing, Burnham leads Delicato Family Wines' public relations efforts for the company's portfolio of 30-plus brands. A respected wine communications leader, Burnham joins Delicato with more than 20 years of experience in the public relations and wine industries.

### **Directory:** Grapes & Bulk Wine Select Vendors

Company	Location	Phone	Web Address
Agajanian Vineyards & Wine Co.	Madera, CA	559-448-0558	www.agajanian.com
Allied Grape Growers	Fresno, CA	559-276-7021	www.alliedgrapegrowers.org
Bill Tobey - Wine Broker	Sacramento, CA	916-729-3570	
Case By Case Wine and Grape Brokers Inc.	Lakeport, CA	707-671-4126	casebycasebrokers.com
Ciatti Co.	Novato, CA	415-458-5150	www.ciatti.com
Cicero's Wine Grapes and Juice	Riviera Beach, FL	330-240-3019	www.ciceroswinegrapes.net
Collinwood Grape & Juice Co.	Cleveland, OH	216-451-8697	www.collinwoodgrape.com
Eagle America Consulting Services	Shingle Springs, CA	949-280-7160	www.eagleamerica.wine
Gino Pinto, Inc.	Hammonton, NJ	609-561-8199	www.ginopinto.com
Granel	Santa Rosa, CA	707-494-8723	www.granelwines.com
H&H Wine Brokerage	Napa, CA	707-252-8888	www.hhwinebrokerage.com
Herb Barber & Sons	Westfield, NY	716-326-4692	www.herb-barber-sons.com
Musto Wine Grape Co.	Hartford, CT	877-812-1137	www.juicegrape.com
Mancuso Wine Brokerage	San Francisco, CA	415-474-8280	www.mancuso.com
North Coast Winegrape Brokers	Lower Lake, CA	707-350-3000	www.northcoastwinegrapes.com
Ramsey N Aswad Co., LLC Wine Grape Brokers	Visalia, CA	559-636-3421	www.winegrapeguru.com
Turrentine Brokerage	Novato, CA	415-209-9463	www.turrentinebrokerage.com
Vino Tinto Consulting	Paso Robles, CA	909-239-4911	
The Wine Co., Inc.	Sacramento, CA	515-771-9463	www.thewinecompany.com

Hope Family Wines promoted Rachael Rosenbloom to division vice president, retail chains for national accounts, leading its efforts to expand growth in the grocery channel. Rosenbloom has managed all channels of business in Southern California for Hope Family Wines since 2016. Also joining the Hope Family's team is Andrea Kelly, who has taken on the role of regional sales manager, Pacific. She now oversees the California, Hawaii and Nevada markets.

Grgich Hills Estate appointed Peter Heyworth as general manager of sales and marketing, effective Jan. 7, 2020. Heyworth joins the Grgich Hills Estate team from pH Beverage Consulting, where he worked with several brands to develop portfolio strategy, product innovation and sales management tools. His career history also includes executive level positions with Dutton-Goldfield Winery, Independent Distillers and Foster's Wine Estates Americas.

**Ste. Michelle Wine Estates** appointed **Peter Click** as vice president of international sales, replacing longtime international sales chief **Al Portney**, who recently retired after 25 years with the Washington-based winery. Click will represent Ste. Michelle's portfolio of wineries from Washington, Oregon and California in more than 100 countries and manage a team of 10 salespeople worldwide.

## Distributors, Importers & Retailers

**BevMo!** promoted senior vice president of merchandising, **Josiah Knutsen**, to president and CEO, effective Dec. 2019. He succeeds **Dimitri Haloulos** who led the company over the past four years. Knutsen joined BevMo! in 2018 to run all aspects of the retailer's merchandising for its beer, wine, spirits and other business lines. Before joining BevMo!, he spent 17 years at **Safeway** and then the **Albertsons Companies**, following the mergers of those two companies in 2015.

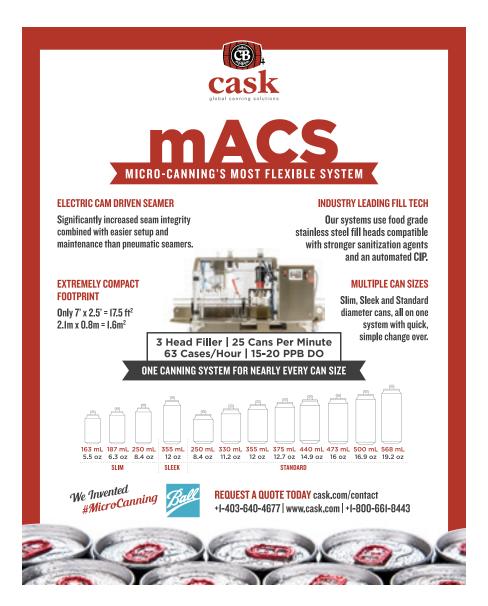
Jim Buckley, who has been with family owned-and-operated fine wine import, marketing and sales company, Quintessential, for the past four years, has taken on the new role of vice president of business and development, East. In this new position, Buckley is now responsible for brand management of the company's South American and South African portfolios, as well as for California's Foppiano Vineyards. In addition, Quintessential also appointed Scott Evans to the newly created role of vice president of business development, West. His territory will cover the Southwest and Western U.S. Evans new role also makes him the brand manager for most of Quintessential's California portfolio, as well as wineries from Spain, Italy, Portugal and Australia.

# people

SPI Group hired Christophe Chauvet as CEO of Tenute del Mondo, a collection of wine estates from around the world. Chauvet studied business in Ireland and Bordeaux and his experience in the beverage industry includes time with Castel Group, Diageo, Pernod Ricard and LVMH. It was with LVMH that he spent 20 years, opening and overseeing extensive business for them in several Asian markets before ending his time there as international director of estates and wines, managing 13 estates worldwide.

## **Industry Services & Suppliers**

Activ8 Commerce (previously Active Club Solutions, Inc.) promoted Molly Gregg as vice president of their web design department. As a former web designer for the company, Gregg has been managing and performing a broad range of digital and website projects and programming duties, including the design and launch of Activ8's new website and email campaigns. In Gregg's role, she will continue to offer current and future Activ8 clients the ability to hire Activ8's in-house web design, development, and digital marketing services.



Bin to Bottle welcomed Liz Cohen as its new logistics manager. Cohen brings more than 25 years of marketing and business operations experience, the last 18 years of which were in the wine industry. Her wine background includes vineyard management, hospitality and marketing for wine and spirits brands, including the last five years with Vintage Wine Estates as director of marketing. The company also appointed Matthew Glynn as its new chief operating officer. Glynn was formerly a general manager and senior winemaker at Treasury Wine Estates and the senior winemaker at Diageo's Acacia, prior to its acquisition by Treasury Wine Estates. He also held positions at Gallo and Beringer in the U.S., and spent time working harvests in France, Australia and New Zealand.

Maverick Enterprises, Inc. hired Steven Grande as its new sales representative. As an extension of Maverick, Grande will be based in Sonoma County and serve the Sonoma, Napa County and Pacific Northwest areas. In this new position he will be working with customers to provide support and closure solutions for tin, poly, pvc and sparkling foils.

**Vicard Generation 7** hired **Wesley Chamberlain** as part of its sales team; he has more than seven years of account management and sales experience in the wine industry. Chamberlain's territory will include Sonoma, Mendocino, Washington, Oregon and Texas.

Bouchard Cooperages promoted Kris Conemac to general manager and chief financial officer. Conemac had previously served in the role of accounting director and has over 15 years of experience in the barrel, oak and wine businesses. Conemac will manage the company's sales team, its international operations and its offices in the US, Australia and New Zealand. The company also promoted Paolo Bouchard to business development manager. In this new role, he will focus the company's efforts in reaching customers in new markets and developing the application of new products. Additionally, Bouchard Cooperages welcomed back Gerhard Ziemer to its team as international barrel and tank consultant. Ziemer started his barrel sales career at Bouchard Cooperages in 2003 and was most recently sales manager at Artisan Barrels & Tanks Inc. for the past 12 years. Ziemer will be focused primarily in California, Washington State, Texas and BC Canada markets.

Darren Michaels joined Scott Laboratories in December 2019 as the company's new fermentation outside technical expert. Having worked in a variety of roles within the industry, Michaels will now focus on fermentation and process application support for the Pacific Northwest, including a special focus on sparkling wine and the enzyme portfolio. He will also be active in the non-wine sector for Scott Labs, which continues to grow.

#### **Obituaries**

Beaujolais icon **George Duboef** passed away on Jan. 4, 2020, in Beaujolais, France. He was 86. With his passing, the wine industry lost one of their most passionate advocates. The Duboeuf family mourns this loss, but has stated it is greatly comforted by the outpouring of sympathy and condolences from colleagues and fans of wine all over the world. "During his 86 years with us, he brought much personal joy and inspiration to our lives as well as to those he touched throughout his career. We loved him and will continue to honor his legacy personally, and through the wines he nurtured and loved, for many years to come," said Duboef's son, **Franck Duboef**, in a public statement.

California Association of Winegrape Growers (CAWG) was saddened to share that Richard Keehn, a founding member of CAWG and the first chair of its board of directors, passed away on Dec. 20, 2019. Thanks to the foresight and efforts of Keehn and fellow founding members, CAWG has become an effective statewide organization that protects and promotes the interests of California winegrape growers. Keehn served as CAWG's chair for four years (1974-1978) and as a director for seven years. He also contributed his leadership and expertise to several other agricultural endeavors.

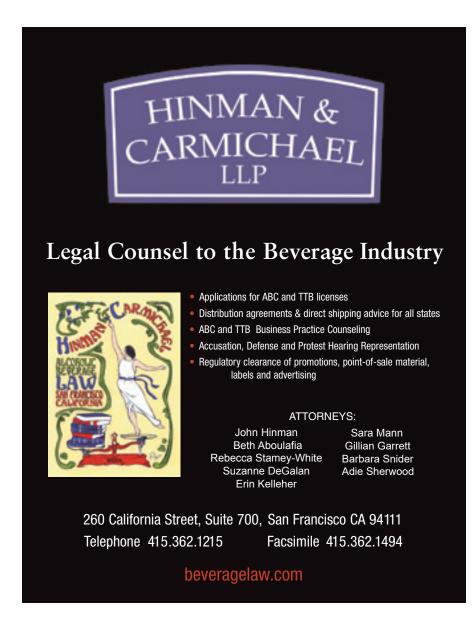
Motion Industries, Inc. named Chris Pacer as vice president of the company's newly formed central group, effective January 1, 2020. Pacer has more than 24 years of experience within the industry. He spent the last 22 years with Motion Industries, which were dedicated to various key roles throughout the organization. In his new position, Pacer will report to Mark Stoneburner, Motion Industries' senior vice president of eastern sales and branch operations, mergers and acquisitions.

#### **Associations & Education**

Chair of the Australian Wine Research Institute (AWRI) board, Louisa Rose, announced the appointment of Dr. Mark Krstic as the new managing director of the AWRI, effective February 1, 2020. Krstic succeeds Dr. Dan Johnson, who led the AWRI since 2011 and is taking up a new position as pro vice chancellor research innovation at Macquarie University in Sydney.

The Tasmanian Wine Show committee named Chuck Hayward as its international wine judge for the 2020 competition. Hayward, the proprietor of Vinroads, a sales and marketing consultancy focused on Australian and New Zealand wines based in San Francisco, Calif., assessed the entries at the wine show, which took place in Launceston from January 13-16, 2020. Hayward was responsible for selecting the winner of the International Judge's Trophy for Export Wine of Show that is supported by the Tasmanian Government Department of State Growth.

Neil Collins, winemaker and owner at Lone Madrone, winemaker and vineyard manager at Tablas Creek Vineyard and proprietor of Bristols Cider, was nominated and named the 2019 Paso Robles Wine Industry Person by the Paso Robles Wine Country Alliance membership—an organization representing more than 450 companies, including wineries, vineyards and associated businesses. The award honors those who exemplify outstanding leadership and vision within the Paso Robles wine community. Collins was recognized by industry colleagues at the Paso Robles Wine Country Alliance's Annual Gala on January 23, which took place at Cass Winery. WBM



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## winemaker of the month

## **Molly Lonborg**

associate winemaker, Halter Ranch, Paso Robles, CA

"Every month I look forward to receiving my copy of *Wine Business Monthly*, and I try to set aside time to sit down and read through each publication from start to finish. Each magazine is packed with so much information; and as a life-long learner, I find it fascinating to expand my knowledge of the vast world of wine through the many articles that *WBM* provides. The articles are always relevant, well-researched and cover a vast range of topics within the industry from an honest perspective. I feel confident implementing many of the topics discussed because there is usually a case study involved where the topic is tried and tested by peers in the community.

The wine world is ever evolving, and one of my favorite things is to experiment in the winery; I'm constantly trying to find the next thing to enhance the quality of our wines and vines. WBM greatly assists with this by discussing new technology and equipment and delving into tried and true methods and why particular winemakers/vintners choose particular styles of winemaking and grape growing. I was particularly interested in a recent article entitled "Wine Management Strategies, from Fermentation to Stabilization" in which Ted Rieger summarized a UC Davis seminar focusing on wine production and the effects of different processes on wine quality. This made me think about our choices for yeast strains, fermentation vessels, nutrient additions and filtration."



winery NAME AND LOCATION: Halter Ranch is a vineyard and winery situated on the west side of Paso Robles in the Adelaida District. Founded in 2000, Halter Ranch has a rich history and a commitment to sustainable methods and environmental stewardship. The ranch today spans over 2,000 acres, with 281 acres of SIP (Sustainability in Practice)-certified winegrapes, 15 acres of walnuts and 10 acres of olives.

**ANNUAL CASE PRODUCTION:** We produce around 28,000 cases, depending on the vintage.

**PLANTED ACRES:** 281 acres of vineyard footprint although it is not all currently in production

CAREER BACKGROUND: I graduated from Cal Poly in 2009 with a degree in earth science and a concentration in wine and viticulture. I worked my first harvest in the lab at Orcutt Road Cellars and continued my career with an internship and full-time position at Justin Vineyard & Winery before coming to Halter Ranch in 2011.



WHAT HAS BEEN YOUR BIGGEST PROFES-SIONAL CHALLENGE? There are so many challenges each day. How to choose just one? Although every vintage provides its own unique challenges, those are fun, as they provide endless opportunities to learn. The biggest challenge that continues for me is managing my time so that I can find a way to be a part of what is going on in the vineyard while also dedicating my time to the cellar, helping with sales, tasting as much as possible, increasing my wine knowledge and also finding a work-life balance. This harvest was a big challenge for me: I returned to work in September with a newborn baby and have a husband that also works in the wine industry. My husband, Jordan Lonborg, is the viticulturalist for Tablas Creek Vineyard. Luckily, overcoming challenging times only makes us stronger!

VARIETALS THAT YOUR WINERY IS KNOWN
FOR: We predominantly grow Rhône and
Bordeaux varietals although we also have
Carignan, Petite Sirah, Tannat, Tempranillo,
Vermentino, Mondeuse and Alicante
Bouschet.

## jake lorenzo

## Art

**ONE OF THE THINGS** Jake Lorenzo loves about wine is that it is democratic. Everyone can play. While it's possible to spend a fortune on wine, you don't have to be rich to get a delightful bottle, and you don't need college degrees to figure out what you like. Learning about wine is a never-ending pleasure. Unfamiliar grape varieties find their way to the market, new wine-makers make their debuts, and recently planted vineyards come into full production.

Food has much in common with wine; that's why they pair up so well. Everyone eats. The rich may dine on waygu beef, lobster and caviar, but many of us do just as well on more affordable food products. Chuy Palacios can make a banquet out of rice and beans and so can any home chef from Louisiana. For centuries, delicious comfort food has been made from the parts of animals that wealthy people prefer not to eat. This detective would hate to think of life without pozole, and I've watched Chuy make his with pork snout, feet, ears and cueritos.

Great food and wine show up in the most unexpected places, especially if you are adventurous about trying things. Last week, La Super Favorita had rambutans, which look like nuts or golf balls covered with spiky, red-colored hair sprouting out at all angles. Crack open a rambutan and you expose a

soft, slightly jellied inner bulb (not unlike a grape) that tastes and looks like mild lychee nut. Jake Lorenzo found them exotic and delicious, but half the people at my table were afraid to eat them.

I have always been partial to crisp, dry Gewürztraminer. It is versatile, pairs well with all sorts of food and exudes aromas of spicy lychee nut because it shares the same linalool compound. Dry Gewürztraminer is hard to find, but just last month Jake Lorenzo discovered the 2018 Domaine Boyar Traminer. Full of classic spice and with a moderately oily palate reminiscent of Alsace, the wine is a delight. It comes from Bulgaria, and it sells for about \$10.

Jake Lorenzo's life focuses on travel and friends. It concentrates on life at the table where we cook and eat scrumptious food while imbibing luscious wines. We are able to do this on a modest budget, and it gives Jakelyn's mother and me great pleasure.

Another thing that gives us pleasure is art. Some people say that making wine is an art. This detective is not so sure of that. It seems more of a craft to me in that it is an occupation requiring manual dexterity and skill, not to mention a basic understanding of grape growing, fermentation science, mechanics, refrigeration and sales. One man's art is another man's day job.

When it comes to wine, most people think that labels qualify as art. We used to direct all our guests to Imagery Winery so they could see the original art from which their artist label series was derived. Jake Lorenzo's favorite label designer, Chuck House, contends that labels are not art at all, but I think he's just self-deprecating his skill set. Certainly, thumbing through his book, Icon: Art of the Wine Label, and looking at the stunning photographs will convince you that Chuck is an accomplished artist.

Like wine, art is democratic. Everyone can afford some kind of art. We have an eclectic collection in our home. While we have thrilling papier-mâché pieces from Artman, gorgeous weavings from Jakelyn's mother and a smattering of paintings and sculptures from local artists, our home looks most like a Mexican folk-art museum. Bright colored wooden animals adorn every shelf, and painted geckos cling to the walls. Masks, baskets and pottery crowd one another for space. There is a whole wall dedicated to Huichol artists, and my guitarrón is displayed proudly.

Jake Lorenzo collects art in just the way I look for high-quality bargain wines. You need to search out the talent, select those pieces that speak to you and bring them home to enjoy with your friends. All the art in our home has special meaning for us. It reminds us of places we've been and people we've met. It contributes to the atmosphere and influences the vibe of the house. I know



that we have distinguished art in our house, but we do not have blow-your-mind, one-of-a-kind, museum-quality art. Like bottles of Screaming Eagle or Romanée-Conti, we just can't afford it.

Last month, this detective made an amazing discovery. One of the world's most incredible sculpture collections is located right here in Sonoma's Los Carneros AVA at The Donum Estate. The art shown here is imposing: large-scale, contemporary pieces are set in the midst of a stunning vineyard land-scape. Close to 40 sculptures are displayed, produced by legendary artists like Ai Weiwei, Keith Haring, Richard Hudson, Yayoi Kusama and Zhan Wang and others. The collection is mesmerizing and the setting overwhelming. The chances of seeing art of this size, scale and quality are unbelievable, and yet here it is right in our backyard.

Jake Lorenzo collects art in just the way I look for high-quality bargain wines. You need to search out the talent, select those pieces that speak to you and bring them home to enjoy with your friends.

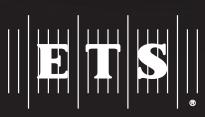
Jakelyn's mom and I signed up for the full-bore tour and tasting. That included tasting five wines, accompanied by four tiny plates of food designed to complement the wine, followed by a private tour of all the sculptures led by a knowledgeable, friendly guide who capably drove us through the grounds in a seasonal vehicle. The wines were delicious. The food was beautifully prepared. The art was mind-boggling.

This experience was not inexpensive: \$150 per person. You all know that private detectives have limited incomes, especially in wine country. For the two of us to spend \$300 for too little food to get us full and too little wine to get us sweetly juiced is not our norm, but the art rivals anything we've seen in all our years of travels. The Carneros landscape, with its views of Mount Tamalpais and San Pablo Bay, transcends even the grandest of man-made museum buildings. Just 15 minutes after our tour, we were back home on our porch drinking wine from our cellar and eating a simple tempura meal made with vegetables from our garden while we marveled at what we had seen.

The afternoon was expensive, especially for Jake Lorenzo, but we are definitely going back. **WBM** 

To see the art and for more information: www.thedonumestate.com/art





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