September 2022 • \$5.95 The Industry's Leading Publication for Wineries and Growers www.winebusiness.com

The Future of Pinot Noir

in Washington State

SEPTEMBER 2022

Also:

The State of Vineyard Automation Today and Tomorrow

How Rising Interest Rates are Affecting Vineyard and Winery Lending

Innovations in Packaging: PACK Design Award Winners Announced



ICON DUOMO

LO STILE ITALIANO

Whilst the Bordelaise ICON is admired for its almost aristocratic elegance, this new variant is irresistible. Suggestive of the flamboyant domes of the Italian Renaissance, DUOMO reawakens traditional lines with shoulders adorned with a magnificent set of horizontal stripes.





"The cork is the final guardian of the wine we have labored hard and long to make as close to perfect as possible. As such, it is hugely important. I can tell you from my heart that I have never worked with better corks than the ones from Portocork. The only thing possibly better is the delightful and efficient people we get to deal with there.

We will be with them forever."

Manfred Krankl SINE QUA NON *22-time recipient of Wine Advocate's perfect 100 points



SÍÑÉ ÔÙÃ Ñ

WE OUN NON

Innovating and Leaving a Legacy



"Innovation" is about implementing new ideas successfully. Sometimes that involves an actual invention or refers to something new, like a change made to an existing product, though there is such a thing as a legacy of innovation. There's quite a bit involving innovation in this issue. Growers along California's Central Coast are turning to information tech-

nology and automation as labor costs soar; Design innovations have improved the performance of horizontal tank/bladder presses; A startup out of New Zealand is simplifying and automating routine lab-based sampling for winemakers; Winemakers in Bordeaux are planting new grape varieties that are more resistant to more frequent early spring frosts.

The "metaverse", however, might be a bit trickier to define. It isn't any one type of technology but is more about how we interact with technology. It's sort of like a virtual-reality based version of the internet where we're in one big video game. It's a marketing term used to sell virtual and augmented reality or immersive digital environments. It may be a challenge to define but an article in this issue indicates every winery will eventually need a metaverse strategy—as if managing the legalities of wine on the internet weren't already complex enough.

Inside we also reveal and recognize innovative packaging concepts from the ninth annual PACK Design Awards contest produced by *Wine Business Monthly*. Experienced, independent judges from diverse segments of the industry determined winners in five categories.

Cyril Penn – editor

WINE BUSINESS MONTHLY

September 2022 • Volume XXIX No. 9

Editor Cyril Penn

Managing Editor Erin Kirschenmann

PWV Editor Don Neel

Eastern Editor Linda Jones McKee

Copy Editor Paula Whiteside

Contributors L.M. Archer, Bryan Avila, Richard Carey, Christopher Chen, W. Blake Gray, Mark Greenspan, Michael S. Lasky

Design & Production Joan Olson

Director, Analytics Group Alan Talbot Editor, *Wine Analytics Report* Andrew Adams

Events Director Shelby Paul

Web Developers Burke Pedersen, Peter Scarborough

President & Publisher Eric Jorgensen Associate Publisher & Vice President of Sales Tamara Leon

ADVERTISING

Account Executives Hooper Jones, Laura Lemos, Ashley Powell, Julia Willmers

Account Support Representative Aidan O'Mara

ADMINISTRATION

Vice President - Data Management Lynne Skinner Project Manager, Circulation Liesl Stevenson Financial Controller Katie Kohfeld Data Group Program Manager Rachel Cunningham Data Group Coordinator Lila Brodnax Research Assistant Sara Jennings Public Relations Mary Jorgensen

Chairman Hugh Tietjen Publishing Consultant Ken Koppel Commercial Advisor Dave Bellon

For editorial or advertising inquiries, call 707-940-3920 or email *info@winebusiness.com*

Copyright 2022 Wine Communications Group, Inc. Short passages can be quoted without permission but only if the information is attributed to *Wine Business Monthly*.

Wine Business Monthly is distributed through an audited circulation. Those interested in subscribing for \$39/year, or \$58 for 2 years, call 800-895-9463 or subscribe online at *subs.winebusiness.com*. You may also fill out the card in this magazine and send it in.



AMORIM CORK

AUGMENTED Neuranted

With a unique CO₂ balance of - 393 grams, Neutrocork® Xpür is one of the world's most performing, new generation micro granulated stoppers. Xpür's 21st Century approach to supercritical fluid technology delivers non-detectable TCA, while fully protecting cork's natural, mechanical properties without the need for artificial components.





winemaking



WINEMAKER TRIAL

A Spa, Fitness Center, Two Pools and a Modern Winery12

Elusa Winery seeks to make a name for itself as part of the new Four Seasons resort *Andrew Adams*

Bladder Tank Presses18

Richard Carey

BUYER'S GUIDE

Select Membrane Press Vendors 28

Tech startup works to simplify and automate lab-based sampling for winemakers *Cyril Penn*

WINEMAKER TRIAL

and the effects of frost taint to determine the best harvest technology Bryan Avila

grape growing

Charles Smith Unleashes

Legacy Pinot Noir Project in Washington State.....

L.M. Archer

ASEV-NGRA PRECISION VITICULTURE DEMO DAY

INSIGHT & OPINION

An Elegy for Terroir

sales & marketing



2022 PACK Design Awards 60 Luxury Category Entrant S by Ray Signorello

PACKAGE & DESIGN SPOTLIGHT

Utah Label Goes Head to Head with World's Most Luxurious Wines70

Andrew Adams

RETAIL SALES ANALYSIS
Galas Tall 4 Deveent

Retail v	vine	Sales	rall 4	Percent	
in June					72

Wines Vines Analytics

technology & business

STATE OF LENDING

Rise in Interest Rates Hasn't Hampered Interest in Business Loans74 W. Blake Gray



Katja Loeffelholz, Attorney, Dickenson, Peatman & Fogarty

Departments

MONTH IN REVIEW	
WHO'S TALKING IN THIS ISSUE	
NEWS	
ADVERTISER INDEX	
JAKE LOBENZO Plavoffs	



WINEMAKER OF THE MONTH 86

Erica Stancliff, Trombetta Family Wines, eStCru, Sonoma County, CA

Wine Business Monthly (ISSN 1075-7058) is published monthly by Wine Communications Group, Inc., 584 First St. E, Sonoma, CA 95476. Subscription rates are \$39 for domestic; US\$49 for Canadian and US\$89 for foreign subscribers. Periodicals Postage Paid at Sonoma, CA, and at additional mailing offices. POSTMASTER: Send address changes to: Wine Business Monthly. 584 First St. E, Sonoma, CA, 95476.



OF ON TOP THE TOP SUSTAINABLE WINES

A SINGLE CORK STOPPER BALANCES 73X IT'S WEIGHT IN CO2, OFFSETTING THE CARBON FOOTPRINT OF THE BOTTLE, AND MAKING THE MOST ELEGANT PACKAGE THE MOST SUSTAINABLE.

WHAT'S TOPPING YOUR WINE?











Charles Smith

Founder, Golden West, "Charles Smith Unleashes Legacy Pinot Noir Project in Washington State", page 46

"Where great Chardonnay lives, so does Pinot Noir. Why don't I do what I've done throughout my whole career: pick a single site, put all my chips in, and go for it?"

Jonathan Walden

Winemaker, Elusa Winery, "Technical Review", page 12

"The thing about press wine is it's always a little sweeter, always a little higher in alcohol, and the tannins are not quite as polished. My goal is to work it back into the main blend, but I don't want to lower the overall quality over a few extra gallons."

Megan Beck

Director in food and agribusiness, BMO Harris, "State of Lending", page 74

"There is some pressure on cashflow, but there's stable growth in the wine industry, and asset value remains solid. We're still seeing wineries invest in more capacity, hiring more employees. We're still seeing wineries using bank loans to accomplish those objectives."

Gregory Gambetta

Professor of viticulture, Bordeaux Sciences Agro, "Facing Early Frost Risks from Climate Change, Bordeaux Experiments with New Blends", page 38

"How did Merlot come to be the dominant grape? We don't know. We do know that things could evolve again. It's just hard to imagine it happening fast."

Ruth Edwards

Vice president and lending manager, American AgCredit, "State of Lending", page 74

"As a responsible lender, it's important to tell our customers what their cost of the debt service is and never over-lend. If a bank over-lends and the customer is over-leveraged, it's not good for anyone."

From crush to cork, we're here for you.



A trusted partner for more than 80 years.

North American winemakers and wineries have trusted Scott Laboratories for our technical expertise and best-in-class products for generations. We remain steadfast in our commitment to support and assist winemakers and wineries through every product decision and winemaking challenge for many generations to come.

Learn. Explore. Buy. It's easy at ScottLab.com



SCOTT LABORATORIES

Committed to education, honesty and doing the right thing since 1933.

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



ASEV Announces Publication Changes, Expanded Open Access Format

The American Society for Enology and Viticulture announced changes to strengthen their publications, the American Journal of Enology & Viticulture (AJEV) and Catalyst: Discovery into Practice. The Publications Committee confirmed the ASEV Board of Directors approved their recommendation to consolidate Catalyst into AJEV starting January 2023. ASEV adopted a hybrid open-access model in 2021 and recently announced the option for published authors to retroactively apply open access publishing to their articles in AJEV and/or Catalyst. Catalyst was formed in 2016 to offer practical research with immediate application for the industry. The Committee felt it was timely to merge its content into the larger

Journal, which has been published since 1950. The newly merged publication will be available online only (with a print-on-demand option), continuous, and no longer tied to an issue format. Instead, article numbers will be assigned, shortening the window from article submission to publication. Newer approaches to article submission, including video format and active writing, will continue. For more information, visit ajevonline.org.



\$4 Million Endowment Supports UC Davis Department of Viticulture and Enology

The University of California, Davis, Department of Viticulture and Enology received a \$4 million endowment to support in perpetuity the research and education that has made the department world renowned in its field. The endowment, given anonymously, will fund unique projects that use and further develop analytical tools, advanced technologies and techniques, and equipment. The department is addressing a number of major threats to the wine industry, including climate change, disease and scarce water resources. For improved vineyard resilience the department is further developing highquality disease-resistant grapes, predictive modeling and remote sensors. Additionally, technologies that aid in carbon

capture and water reduction will advance sustainability in wine production. "We hope the bulk of this gift will go toward supporting graduate student education to help them become leaders nationally and internationally," David Block, professor and chair of the Department of Viticulture and Enology and professor in the Department of Chemical Engineering, said.



AVF Launches Justin Meyer Graduate Student Fellowship

The American Vineyard Foundation (AVF) established a fellowship to support viticulture and enology graduate student research in the Department of Viticulture and Enology at UC Davis. The Justin Meyer Graduate Student Research Fellowship honors the late, legendary winemaker Justin Meyer, AVF founder and long-time president. Meyer was also a graduate of the Department of Viticulture and Enology at the UC Davis. The fellowship will provide \$50,000 annually for three years to fund a PhD candidate at UC Davis.

Meyer's vision for a partnership between the wine industry and academia led to the creation of AVF. Since 1979, Meyer and his fellow vintners and grape growers worked to raise more than \$35 million dollars in research funding. The goal of the fellowship is to attract qualified graduate students while encouraging diversity in the wine industry.



Mount Pisgah is Oregon's 23rd AVA

Mount Pisgah is now recognized and becomes the 23rd federally recognized American Viticultural Area in Oregon and the 11th AVA within the Willamette Valley. The new AVA was granted approval by the Alcohol and Tobacco Tax and Trade Bureau on June 3, 2022. Located in Polk County, the Mount Pisgah, Polk County, Oregon AVA is characterized by the warmth of the nearby Willamette River, the mild influence of the Van Duzer winds, and the rain shadow of Laurel Mountain to the west. It is the Valley's second smallest AVA at 584 planted acres but one of its most densely planted. The AVA covers 5,530 acres with 584 acres planted across ten vineyards and includes three wineries.



Moët Hennessy Acquires Joseph Phelps

Moët Hennessy, the global luxury wines and spirits conglomerate, acquired Joseph Phelps Vineyards. The winery, founded by Joseph Phelps in 1973, is known for Insignia, a Bordeaux-style Napa-grown blend. The deal adds to a luxury portfolio that includes brands such as Dom Perignon, Moet & Chandon, Hennessy, Cloudy Bay and Belvedere.

"We will continue the wonderful journey initiated by the founder 50 years ago and pursued by his heirs today." Moët Hennessy CEO Philippe Schaus said in a press release. "Joseph Phelps has been to the Napa Valley what Nicolas Ruinart, Joseph Krug and Claude Moët were to the Champagne region, and likewise we will continue to develop this new House in

the respect of the founder's heritage and vision." WBM

Verallia, an agile & flexible glass packaging manufacturer

Calliope Height (mm/in) : 302 / 11.89 Weight (g/oz) : 580 / 20.46

Diameter (mm/in) : 92 / 3.62



Experience our unique know-how, discover our products.



RE-IMAGINE GLASS FOR A SUSTAINABLE FUTURE

P:707.419.7200 | E: info.usa@verallia.com | www.us.verallia.com | Showroom: Fairfield, CA

TECHNICAL REVIEW

A Spa, Fitness Center, Two Pools and a Modern Winery

Elusa Winery seeks to make a name for itself as part of the new Four Seasons resort

Andrew Adams

Andrew Adams is the editor of the Wine Analytics Report and grew up in the city of Sonoma, Calif., before graduating from the University of Oregon with a degree in journalism. In addition to working at daily newspapers for more than a decade, Adams worked in the cellar and lab at the former Starmont winery in Napa Valley before writing and editing at Wines & Vines magazine for nearly a decade.



Tank room exterior and outdoor gathering space

KIM CARROLL

It was just before 10 on a midweek morning in early June, and the reception area at the Four Seasons resort near Calistoga, Calif. at the northern end of Napa Valley was busy. Luxury tour buses idled near the lobby as bellhops and valets in crisp, black polo shirts fetched bags or drove off in one of the dropped-off Teslas, Porsches or Mercedes-Benzes. Inside the sleek, modern lobby a line of guests waited behind the glass walls to begin their stay at one of Napa Valley's newest resorts.

The scene was exactly what one would expect to see at a Napa hotel on a beautiful morning in early summer. What makes the new Four Seasons notable is not the expected—as the resort easily meets the new standard of Napa luxury, and it would be more shocking if a property worth a reported \$175 million failed to do so—it's that this entirely conventional resort property also has a modern winery tucked beneath the restaurant.

Elusa winery opened in time for the 2021 vintage, but the project has been many years in the making, and there's a library of vintages going back to



It's one thing to be able to accurately taste and identify flavors in a heady glass of wine. It's another thing altogether to deliberately put them there to begin with. StaVin's vast array of barrel alternatives give the discerning winemaker a veritable mixing board of subtle flavor controls. With lusciously abundant savings in operating costs.



© 2022 StaVin Inc, Post Office Box 1693, Sausalito, California 94966 telephone (415) 331-7849 fax (415) 331-0516 Visit us online at: stavin.com



The tasting room



Members' bottle shipment

IM CARROLL

2010. In 2013, winemaker Thomas Rivers Brown joined the project to help plan the winery and redevelop the resort's 4.7-acre estate vineyard. In spring of 2021 Jonathan Walden joined as winemaker just in time to get the cellar fully equipped to receive its first grapes.

The winery's library of past vintages is, in part, due to the fact the resort has been in the works for most of the past decade. Shortly after opening last year, the hotel and winery were acquired by Sunstone Hotel Investors while Four Seasons remains the contracted operator. In addition to the guest rooms and suites, the property also includes several private residences that also partially ring the estate vineyard. According to the winery, the name is derived from a Native American word that describes holding something precious.

Rivers Brown consults for dozens of projects and estates while he and his wife, Genevieve Marie Welsh, produce wines under their own label, Rivers-Marie. Equipped similarly to other cellars managed by Rivers Brown, Elusa employs a simple, hands-on approach to quality winemaking.

The organic estate vineyard is surrounded by hotel rooms, which in early June were running around \$1,200 a night, meaning all vineyard work needs to be scheduled and performed with due consideration of the guest experience. All work is performed by hand, and harvest is comprised of smaller, more numerous and very selective picks. Walden does have an advantage in that the vineyard management firm, Vinedresser, is owned by his brother Chris, who also manages other vineyards sourced by the winery. In addition to the estate vineyard, Elusa draws grapes from the nearby Kenefick and Armstrong ranches, as well as Pozzan Vineyard.

The Walden brothers are Napa natives but didn't have direct connection in the wine

business until Chris entered the field and later encouraged his brother to do the same. Jonathan started by taking classes in viticulture and winemaking from Napa Valley College, where he later earned an Associate Degree in Viticulture and Enology while pursuing full-time winemaking opportunities.

After his first gig in the cellar at Laird Family Estate, Walden worked at O'Shaughnessy Estate Winery in Howell Mountain for four years, spent a harvest in Australia and eventually landed at Dancing Hares through his good friend Maayan Koschitzky, who is the director of winemaking for Atelier Melka. After two years at Dancing Hares, Walden joined Philippe Melka at his own estate on Silverado Trail where he worked side-by-side with the famed winemaker in the cellar and even doused spot fires to protect the estate during the 2020 Glass Fire.

"Having the opportunity to work hand-in-hand with Philippe was eye-opening to me," Walden told *Wine Business Monthly* in an interview at the Elusa estate. "To understand his approach to winemaking and blending was huge. I took the job with Philippe, thinking I had a good grasp on high-end winemaking; and after one year with him, it just blew my mind."

He explained the experience further demonstrated how a talented winemaker can hit a specific wine profile spot-on while using that same experience and intuition to craft wines that are wholly unique. "The attention to detail that I learned, working with Phillippe, was on a whole different level," he said. "There's no recipe whatsoever; it's just taking things one step at a time and one tank at a time to create the best expression of each individual wine."

After the 2020 vintage, Walden was contacted by the hotel's former general manager about the winemaking position at Elusa. Following a lengthy interview process, Walden then left Melka's team to join up with Rivers Brown. "When I started here in May, the winery was not operational; we had a lot of work to do, so I hit the ground running," he explained. "We had tanks, and we had crush equipment, but no hoses, no clamps and gaskets, no pumps, nothing."

He said getting everything in place wasn't easy, considering time restraints, but the cellar was equipped in time for harvest, and he brought in around 35 tons last year. He is planning to roughly double that this year to around 80 tons, or about 4,000 cases, where production will remain for the foreseeable future.

Walden describes Rivers Brown as an exceptional winemaker who is also fun to be around and appreciated the younger winemaker's experience, working on-site in tandem with a consultant. "He's just a phone call away anytime we need him. We were doing some blending of the '21s last week, and it was great, very fun," he said. "We want to turn it into something that's unique to our winery and our site, with Thomas' influence, of course. He has a wealth of knowledge."

While every guest does receive a bottle of Elusa in their room, Walden says he's not making wine simply to serve the resort or the wider Four Seasons group. Success will be measured by wine club membership, DTC sales and maintaining a level of quality commensurate with expectations. "I think over the many, many years of construction, there were a lot of ideas floating around about guest involvement," he remarked. "This is



Private wine library overlooking wine cellar

IM CARROL

Automate Machine Management Prevent Pest Outbreaks Increase Labor Efficiency



www.intelliculture.com | 289-404-2653

the first year that we're having a lot of interaction, and we're navigating that as we go. We have folks coming through on tours, getting involved, even helping us sort grapes if they want to get their hands dirty."

Designed to best fit into a resort rather than as a stand-alone production facility, the winery is situated at the far end of a patio and courtyard adjacent to the main tasting room and another used for private tastings and blending sessions. Grapes are dropped off in half-ton bins in the tasting room parking area, and Walden then carries them by forklift through large glass doors that separate the cellar from the tasting room patio.

While tight, the cellar does afford enough space to keep full bins cool and out of the sun as they await processing. The harvested clusters are dumped onto an Armbruster receiving hopper that feeds an inclined belt which drops the clusters onto a sorting table before they are processed in an Armbruster Rotovib destemmer. The grapes are then pumped by a Carlsen & Associates positive displacement pump via a 3" hose over the top of one of 16, 5-ton fermentation tanks manufactured by Santa Rosa Stainless Steel.

Fermentation is initiated by yeast or a spontaneous start given the condition of the grapes and will typically proceed in the high 80s Fahrenheit with two to three pump-overs per day, as needed, based on regular tastings. When the wine is ready, Walden will typically drain the free run and keep that separate from the press. "As you dip into the practice of extended maceration, I feel that the (press) wine quality can decline," he said. "The thing about press wine is it's always a little sweeter, always a little higher in alcohol, and the tannins are not quite as polished. My goal is to work it back into the main blend, but I don't want to lower the overall quality over a few extra gallons."



We're ready. Our Letina stainless tanks – jacketed, single wall, variable, you name it – are built in Europe and in stock in our Pacific Northwest warehouse, ready to ship.

AGERTANK.COM

Want more info? Call us today, or visit: agertank.com



Elusa also produces a Sauvignon Blanc, which begins with a whole cluster press and is fermented in a mix of neutral oak, new barrels and stainless-steel casks at cold temperatures and on the lees. The long, cold fermentation in small vessels and lees provides the texture and mouthfeel that help integrate the wine's bright acidity and ripe, fruit flavors. Both the red must and Sauvignon Blanc grapes are pressed with a Europress P24.

Helping Walden in the cellar is Cellarmaster Abner Ferrato Wyman, who was a semi-pro freestyle skier before getting into winemaking and has worked with Walden for the past five harvests. Walden said it had been exceptionally challenging to find interns for the coming vintage but wasn't too concerned as the duo has developed an efficient system over the years.

The winery tanks are linked to a VinWizard system for temperature control and some remote monitoring while Innovint is used to track and manage operations in the cellar. The wines will see around 60 to 80 percent new oak from French coopers, including Sylvain, Ermitage, Baron, Taransaud and Remond. "We want to find the right coopers, forests and toasts to elevate what's already there," Walden said of his oak strategy. "For me the goal is to let the vineyard speak for itself at the end of the day, to let the site shine, let the vineyard itself be the star."

Barrels are stored in a cool and dark temperature-controlled room adjacent to the cellar by a double door. Barrels are stacked three high along the sides of the long room, or an extra wide corridor which is directly below the restaurant and opens, on the far end opposite the winery, to hotel operations.

Even though Walden grew up in Napa and has spent nearly his entire professional career in the valley, he was still surprised by how unique Calistoga really is compared to the rest of the valley. "Although Calistoga sees high temperatures during the day, it's those cool nighttime temps, the diurnal shifts, that promote freshness and longevity in the wines. If you can nail the pick dates so there is still some good acid, along with mature tannins, you're in a great place."

Elusa's mainstay wine is a Calistoga AVA Cabernet Sauvignon priced at around \$140, as well as vineyard-designate Cabernets, a Cabernet Franc (\$125) and Sauvignon Blanc at \$65.

Working with some of Napa's top winemaking talents has given Walden an excellent vantage point to producing fine Cabernet. By drawing on those insights, as well as Rivers Brown's ongoing input, Walden is now charged with maintaining quality while also giving Elusa a distinct taste. "The biggest difference I see in various winemaking styles is pick dates, fermentation temperatures, time on skins and yeasts, of course," he concluded. "I'm always evolving as a winemaker, as well. I never want to be so set in my ways that I don't experiment. We want to find ways to differentiate ourselves, and it's been a very fun ride so far." WBM

Jess Lander contributed to this article.



"Capsules create a finishing touch on the package that are both memorable and distinctive, often times the last impression before the bottle is actually opened. The added advantage of tamper proofing the wine provides a real functional benefit."





A High-Build inked capsule top with a silkscreened gradient skirt. Magnificent look for the DUSK TIL DAWN Pinot Noir for Purple Brands Wines.

> **Maverick Enterprises, Inc.** 751 East Gobbi Street, Ukiah, CA | 707-463-5591

2601 Maxwell Way, Fairfield, CA | 707-403-3586 Showroom 475 Aviation Blvd. Suite 130, Santa Rosa, CA www.maverickcaps.com



ELUSA

400 Silverado Trail, Calistoga, CA 94515 | 707-403-6644 | elusawinery.com

Winery Case Production 2,000 cases

Direct-to-Consumer Sales (%) 100%

Average Bottle Price \$125

Winemakers Thomas Rivers Brown, Jonathan WaldenVineyard Manager Vinedresser Vineyard ManagementYear Bonded 2010

VINEYARD INFORMATION

Appellation Calistoga

Vineyard Acreage 4.7 acres
Varieties Grown Cabernet Sauvignon
Soil Type Rocky Loam
Climate Zone 2
Additional Varieties Purchased Cabernet Franc, Cabernet Sauvignon, Sauvignon Blanc
Vineyard Sourcing Elusa, Kenefick Ranch, Armstrong Ranch, Pozzan Vineyard
Tons Used vs. Tons Sold 100% used
Sustainability Practices Organic vineyard, partnering with sustainable vineyards

BUILDING THE WINERY

Year Built 2021 Architect Matt Hollis Architects

Contractor Suffolk Construction

Interior Design Hirsch-Bedner Associates

Landscape Architect Bright-view Landscaping Flooring/Drains ACO

HVAC Johnson Thermal

Cellar Humidity Control Smart Fog

WINERY Cooperage

Barrels 60% to 80% new; Sylvain, Ermitage,

Baron, Taransaud, Remond

Barrel Washing System Gamma Jet, Swash Steamer

Winery Equipment

Forklift Toyota Electric Hoses Kanaline Pumps Jabsco Punch-down Devices Must Fabrication Pump-over Devices Crush Fabrication Racking Wands Must Fabrication Presses EuropressP24 Tanks Santa Rosa Stainless Steel

Tank Heating/Chilling System VinWizard

Crushpad Equipment

Destemmer Armbruster Rotovib Receiving Hopper Armbruster SBA 4000 Vibrating Sorting Table Armbruster VST 3000-2

Winemaking

Analytical Equipment ETS Laboratories
 Yeast, Nutrients, Enzymes Laffort, Scott Labs
 Ozone McClain

PACKAGING

Capsules Amcor Corks Portocork Glass Saverglass Label Design Chanda Williams Label Printing Multi-Color Corporation Website Design Wine Works

SOFTWARE

Compliance ShipCompliant Tasting Room POS Commerce 7 Wine Production software Innovint

WAREHOUSING

Case Goods Storage Valley Wine Warehouse

BUSINESS

PR Agency J. Wade Public Relations

PRE-ORDER

DIRECTORY/BUYER'S GUIDE

Pre-order the **2023 Directory/Buyer's Guide** for only **\$95**.* Get the most current and comprehensive print and online guide to wine and grape industry professionals, products and services in North America.



*Print edition available in January 2023. \$95 rate includes shipping within the U.S. only. Rates for other countries apply

PRE-ORDER TODAY!

winesvinesanalytics.com/order



winemaking



The continuous press, Ampelos, is an augmented, intelligently operated three-press unit by Della Toffola.

Bladder Tank Presses

Richard Carey

In winemaking, the separation of the juice from the grapes is one of the more important processes that affects wine quality. The design of grape presses has evolved during the last five decades, and the horizontal tank/bladder press has become one of the better pieces of equipment for producing the highest quality juice for making wine. More recently, new innovations have been introduced that have made significant improvements in these presses.

The ideal grape tank press has an identifiable list of attributes, beginning with a system designed to separate all the liquid and extract from each individual grape berry with just the right mix of flavors, colors, and textures, with no adverse compounds. It should also deliver this juice in economically feasible quantities. Each technological improvement should make the equipment capable of improving the quality of the juice, while leaving behind the least amount of insoluble material.

The next important aspect in selecting the ideal horizontal tank press is to select one that when the grapes have been pressed, can be cleaned as quickly and easily as possible so it can be used for the next batch of grapes. The press must be cleaned to the point that there is no transfer of unwanted material, such as microorganisms, color compounds, seeds, skins, etc., from one batch to the next. The final requirement is to reduce the environmental cost of operation by using the least consumable materials in the form of energy for equipment operation and the least amount of cleaning agents and water. This article will examine pressing equipment from six different companies that encompass a broad scope of the implementation of the ideal systems proposed above. These companies offer the range of attributes that anyone looking to purchase a horizontal tank press should consider in order to find the features that best suit that winery's requirements.

Anyone with a basic understanding of presses knows the intricacies and complexity of the equipment, and so in this article, *WBM* is launching a new element that we hope will add to the reader's ability to understand how the equipment works. The online version of this article will have video links that can be activated to help the reader develop a better understanding how different presses actually work.

Over the many decades that horizontal tank presses have been on the market, innovations have continuously been introduced to improve on the quality of juice derived from these presses. The companies included in this article are: SK, distributed by Prospero Equipment; Europress, distributed by Euro-Machines USA; Bucher Vaslin, distributed by Bucher Vaslin North America; Della Toffola, distributed by Della Toffola USA; Diemme, distributed by Collapack; and Siprem, distributed by ATP Group.

With the importance of this piece of equipment to the smooth operation of a winery, it is not surprising that there is simplicity in the process of operation, but a complexity in the options that it takes to deliver the equipment to meet the specific specifications of the customer.

Tank Presses come in two basic types—open or closed. The open horizontal tank press is probably the most familiar: as the press is filled, juice is drained out of the tank through the slots in the stainless steel housing of the press.

There are two tank design elements that separate the juice from the skins. One of the oldest mechanisms is an axial bladder that has been used by Willmes and Della Toffola. The axial mounted bladder can allow for the juice to drain continuously, and the tank can be slowly rotated during the filling operation. In this mode, more juice can be removed before actual pressing begins.

Other tank suppliers have selected a side-mounted bladder. The sidemounted bladder requires the press to remain with the slots aimed down so that juice can drain as it is filled from the axial position of the tank. The computer program can allow the tank to rotate when filling through the axial input, but the grapes are not able to drain as quickly because half the tank is not open to the outside. The grapes are moved more in the side mounted position, which can cause some maceration during the rolling process.

Some companies, such as EuroPress, have added a third type of press, which is a combination of both by adding attachments that turns an open model into a closed model.

It is not surprising that larger wineries want the highest quality juice, but the volumes they produce do not generally fit into a batch type process represented by tank presses. This article will conclude with one final grouping of horizontal tank presses that examines how larger volumes of grapes can be managed to increase the volume of grape wine and juice pressing.

Factors to Consider in Selecting a Tank Press

There is too much variation in this equipment to take one manufacturer's tank press and then make direct comparisons with features on other companies' equipment. I will therefore select specific items within a company on how they deal with various aspects of their models. The same vendor may have a range of different models with various features. The goal of these



DURABILITY MEETS SUSTAINABILITY

FREE FLOW WINES REUSABLE STEEL KEGS

The only *traly* zero-waste package for wines served on-premise

INFO@FREEFLOWWINES.COM | FREEFLOWWINES.COM | 415.626.1215

FREE FLOW

descriptions should serve as a guide to help wineries determine what are the important factors for their winery.

On its most basic level for the majority of purchasers of a tank press, the initial choice is the size of the press to buy. That choice can be a real compromise for the smaller wineries. The smaller the smallest batch a winery processes, the smaller the basic tank size the press will have to be. For example, a 20 Hl press can press as little as a few hundred Kg of grapes but will press up to 3 to 4 tons of fermented grape skins or 2 to 3 tons of fresh grapes. When pressing the smallest batch, the bag needs maximum expansion to press the few hundred kg small batches. Occasionally processing the smallest batches is possible but pressing small amounts frequently does create additional wear on the press, and inefficiencies make losses a bit higher as well.

SK equipment has three ranges of sizes. Their models include an M series, the L series and the X series. While each of the series has many choices of options for the winemaker, the M series comprises a range of small equipment sized for smaller wineries. This series also comprises their simplest programmatic capabilities, from a simple push button control to a somewhat more advanced controller that can be preprogrammed for up to 5 different press cycles, with options to increase that number to 10 preprogrammed choices. The other two series have the standard 10 program variations, that comprise 6 programmed choices, 3 sequential and one special program.

EuroPress has 24 preprograms that can be modified, as well as 120 pressure levels that can be selected. They are all controlled from a 10[°] color touch screen on the press. Like the computer console of EuroPress, Della Toffola's control system has 20 preprogrammed options that are offered on all presses up to 80 Hl. Bucher Vaslin has a programable mode specific to each of the three model groups. The smallest (5 to 15 Hl) has two program modes. The other two have 4 pressure groupings with a couple of program modes that can be chained together to build program sequences. Diemme has both open and closed presses

When making the decision between an open or closed tank press, often the difference is based on the potential for oxidative action. This is one of the areas of great controversy and has gone back and forth over many years. Hyperreductivity is a big issue in using horizontal tanks. In open tanks, the juice is moved from the tank into a drip pan and then to a tank where sulfiting can proceed and minimize the oxygen contact with the juice. However, if minimizing oxygen is important for a winery's production at this stage, the closed tank system offers a convenient way to minimize oxygen content by inserting nitrogen gas into the tank space.

A closed tank requires a different method for juice removal. While it is not necessary to have the reductive environment in a closed tank, it is easier in this type of tank to inert the atmosphere. Therefore, the next element to look at in any closed tank press are the channels for juice removal. In closed tank systems, the juice moves from the tank internally through a series of slots in stainless steel channels to the drip pan, or some cases, directly to a closed vessel that can then be sent to a receiving tank. These channels present another dilemma: that of cleaning the channels. Winemakers should look carefully at this issue to be sure that the press selected will meet the winery's need for cleaning and sanitation. There are a number of aspects that require attention and can be important, such as the polish of the slots or the ability to open the channels for inspection to be sure they are clean.



A compromise for closed versus open tanks is offered by EuroPress in their dual system. EuroPress has designed their tank to allow caps to be added over their slots so that the press can be switched from an open tank to a closed tank.

There are many advances in computer programming that can add a significant value to a press system. It is important for a winery to examine the differences between the presses to see which of the program options best fit their grapes. Most have a set of basic programs, from the simplest offered by SK to others where a winery can jog or rock the tank during pressing, to more sophisticated sequential pressing that are part of "canned" installed programs. Some companies offer flexible programs that can be designed to fit special needs and conditions.

Bucher Vaslin has added several new technical controls to their software that balance some of the software controls of the press cycle with a process known as Organ. This is a flow control system that measures the rate of juice flow and adjusts the press cycle to optimize juice removal.

Other innovations in the equipment include inerting the atmosphere with nitrogen, a process that is found on almost all of the systems. These options range from the SK iteration that inserts nitrogen into the tank during the filling process to an external bag filled with nitrogen, as in the case of Bucher Vaslin's nitrogen "lung" that inflates and deflates as grapes and juice go in and out of the press.

The next issue that should be investigated is the cleaning procedure. This is one that needs the most careful investigation to be sure that the press will meet the winery's needs. Some presses can take as much—or more—time to clean as it does to press the grapes. The smaller the press tank size, the less automation is involved in this process. It isn't until the press size is above about 50 Hl that more automation begins to be included. In smaller presses, manual hosing down of the interior and exterior are the norm. The smoother the interior with the bag and the walls, the easier it will be to clean. Look for nooks and crannies where seeds, skins and rachis attach. Sometimes smaller presses are cleaned by someone standing inside the press and using a hose.

The cleaning process is more automated with larger systems, and wands may be inserted into drain channels and spray balls may be placed in the tank. Some drain channels have levers to flip open to expose the internal surface area.

Larger Format Systems

It should be obvious that a tank system is a batch process. Larger wineries that have big volumes of grapes of a single variety have taken to increasing their throughput by stringing together more than one press at a time so that batch level volumes can be efficiently handled. EuroPress has a series of 6 50Hl presses on one platform, which is the equivalent of a 320 Hl tank.

Another way to increase volume throughput is to increase horizontal tank size. Larger wineries that want to improve the quality of their wines have been requesting larger and larger size tank presses as one avenue for volume increase. Bucher Vaslin has presses ranging from the 750 ROI, with a 750 HI tank, down to their smallest tank, the 5 HI system. This large press can hold about 20,000 gallons. The press can hold 220 tons of fermented red wine, or 90 tons of axial fed white wine. Press time is 95 minutes for reds. It then takes 20 minutes to dump, plus the time to refill the press. On a daily basis (an 18-hour day during harvest), this press could supply about 1,300 to 1,500 tons of fermented red wine.

One company has introduced a continuously operating press. Siprem produces three model ranges for continuous operation: PCM100 for capacities of 10 to 16 tons per hour, PCM200 that has the capacity of 18 to 25 tons

per hour and the PCM 400 that can press 32 to 45 tons per hour. They do this by inserting 6 chambers in the press tank space. By varying the pressure applied at each chamber, de-juiced must is successively pressed tighter in a peristaltic progress down a continuously rotating slotted drum. The video referenced in the online version of this article shows this process in action.

As impressive of an addition to the offering as this continuous press is, it is not the highest capacity system and may be a bit more flexible to process fruit on a daily basis. Della Toffola has introduced an augmented intelligence driven tank press system: the Ampelos system for grape pressing. The Della Toffola system controls up to three batch process tank presses into a seamless production system that can process from 9 tons per hour to 125 tons per hour by using from 3 50 Hl presses to 3 320 Hl presses. This translates into 162 tons to 2,250 tons for the Della Toffola system in one day. The operator can also select from its onboard computer processor to press to a specific color for the wine. A color palate chart allows for the selection based on the pressure for each range of pressing.

Due to the computer processing of multitudes of tasks that need to be finely tuned, the Ampelos can single out one press that is dedicated to one wine type and the other two can be pressing another, either white or red, mix or match.

The beauty of this system is that by taking one press off-line for a separate single stream use, the other two presses continue to maintain the continuous operation at half speed. At the end of an 18-hour day, the system can clean itself with a push of a button, or it can be programmed to start cleaning at a a particular time, including after hours when the press is not in operation. Thankfully no personnel need be present for cleaning. It is all automatic. The wash system will also reprocess the wash water, retaining a significant portion of the water to maximize the system's water use efficiency.

Automation

New innovations over the last several years have made grape pressing more automated, which has had a significant impact on grape production. Production managers who want to streamline their production currently have two basic approaches to consider for large scale grape pressing. Siprem has developed what they claim to be the first continuously operating press. With this press, grapes move continuously through a rolling, open tank press, and through 6 to 7 sheaves that put additional pressure on the skins at each stage. At the end of the process, the grape skins fall out, exhausted of their juice.

Della Toffola takes a different approach to continuous press operation. Using Augmented Intelligence, their system ties together as many as three conventional bladder presses. Using a timing system, a complex plumbing system and process control parameters, a discontinuously operating system of three presses is turned into a continuous system.

The discontinuously operating system has one significant advantage. While the Siprem system is locked into one continuous stream of product at a time, the Della Toffola system offers production managers a choice. They can run the presses as a continuous unit, or they can remove one press from the system, and then run two presses for one grape variety and use the third press for another grape product.

Both systems are novel and have many advantages, from reduction in labor costs to streamlining what has been a batch operation for quality wine producers.

Slotted Tank vs Closed Tank Press

EUROPRESS





The EuroPress graphic shows the bladder pressing down on the grapes and the juice draining into the drip pan.

The photo on the right shows the conical drain slots on the EuroPress that help to minimize solids plugging the drain slots, which can slow the removal of wine or juice from the tank.

BUCHER VASLIN



This Bucher Vaslin press exemplifies the solid tank exterior of the closed tank press. The bladder is inside and presses down, similar to the open tank shown above.

AXIAL POSITIONED BLADDER



Along with the Willmes press, the Della Toffola systems are the only users of a centrally arranged bladder that expands from the axis of the tank in all directions. The tank can be rolling during filling to remove juice while the tank is filled. If desired, or if processing whole cluster grapes, the tank can be filled from the door positioned at the top without continuous draining. The new Della Toffola membrane material used in this bag is a more flexible material that allows more thorough cleaning.

SIDE MOUNT BLADDER



These two photos are examples of side-mounted bladders for pressing grapes. On the left, a Bucher Vaslin press has a press-fitted attachment. On the right, a Diemme press has a bolted type of attachment. Both attachment systems are not conducive to rolling the tank while filling but does allow rocking the tank to allow drainage to occur during filling.



for cooling, the jackets reduce grape temperatures as they come from the field. The jackets also can be used to heat the grapes to increase enzymatic treatments of the juice.

Cooling Jackets These three photos show

These three photos show different jackets for cooling on three different EuroPress tanks. The photo on the left shows the SK version of cooling; the two photos at the top of the next column are different EuroPress versions. When used



Drain Channels



Bucher Vaslin has patented electro-polished self-clearing drain channels that are designed for more efficient use of the drainage surface. The channels are shaped for self-cleaning during pressing as the tangential flow across the surface pushes pressed skins and seeds down the surface, exposing drainage to fresh fruit..



These two photos show the EuroPress dual drain channel system, where the channels can be removed for cleaning and then reinstalled.

The Della Toffola system for press cleaning with closed tanks has a tested, efficient washing system as well as a new mechanical method for cleaning the inside of the drainage channels. This patented rolling ball system continuously cleans the inside of the channels, which avoids any need to dismantle them until the end of the season.





66 T

he attention to detail and communication at Bin to Bottle has been a godsend for us. They are clean, wellequipped, large enough to handle anything, but organized enough to take care of our small lots. Most importantly, the staff all cares.

Steve Matthiasson

Premiere Viticulture & Matthiasson Wines

Custom Crush, Bottling, Canning and Bulk Storage Available

> Email: matthew@bintobottle.com Phone: 707-492-5270



Inert Gas Comparisons



The above schematic from Della Toffola shows a typical type of system that replaces ambient air with an inert gas, usually nitrogen.



The Bucher Vaslin system for maintaining an inert atmosphere above the grapes in the press is unique in its approach. Located above the press, an external bag is used for nitrogen storage and acts as a lung. The left photo shows the pressure rising as grapes enter the press and push the nitrogen into the bag above. The photo on the right shows the decompression of the bag when the nitrogen has been pushed into the press tank. The decompressed bag helps to conserve the amount of gas used during pressing..

Programming Consoles

This series of images shows a progression of computer consoles that control presses. There are a wide variety of options for programming a press. Anyone considering the purchase of a press



should evaluate the programming system to see if it is appropriate for their winery's use. For SK Basic control, the operator programming allows two operation modes: manual press operation and automatic operation. In the manual mode, the user starts and ends a particular operation by pressing a button.

Prospero's SK press has basic programming that allows two operation modes: manual press operation and automatic operation. In the manual mode, the user starts and ends a particular operation by pressing a button (drum rotation, compressor, vacuum pump on/off), or the user can choose

Experience Service Expertise



888-539-3922 • waterloocontainer.com Follow us on Facebook 🗭 and Linkedin in between five standard pressing programs in the automatic mode. The incorporated, factory preset programs are the result of many years of experience and are adjusted for different types of grapes.



The above two screens show two Bucher Vaslin screens. In this next step of operation control, the first image shows one of several static programs followed by a sequential program.

EUROPRESS		C training to	1 1000	E textee
The second s		International Property in Linear Street or other		and the second se
	-	And in contrast of the second second	8	
0 2 9		(Const. Score and the publicance		
		Free of Street Street Street	H	And in case of the local division of the loc
Charles and Connect		Enies Starssister Think	minter and	Contract of Contract of Contract
	20 00117	The state of the s	COL	
	Transaction of		Constanting of the	Contraction Carl Cost Long Carles
- MILLING	-	Contraction Contraction	(All all all all all all all all all all	playing the second second second

Finally, Europress is an example of programming for larger press sizes that require a greater degree of control and consequently have a more elaborate console. The program on Europress, shown above, starts with an overview with 8 different pressure steps visible on one screen. The user can select program names, such as Chardonnay, sparkling, etc., has the ability to receive or send signals to or from the press drum, and can query the press drum concerning programmable drum movements such as rocking. The program comes with multilingual capabilities for 15 languages.

Automation

DELLA TOFFOLA CONTINUOUS PRESS



With the Della Toffola continuous press composed of three axial bladder presses controlled by augmented intelligence, grapes can be fed continuously





The CIA at Copia – Napa November 16, 2022

Presented by winejobs.com The wine industry's leading online job site

Registration is by invitation only. To request invitation or sponsorship information contact: info@WBMevents.com

Bladder Tank Presses

into the three presses that can be controlled to run multiple streams of product in a continuously producing system. Depending on the tank model size, the system can process from 9 to 125 tons per hour. With this threepress system, operator control has multiple choices: the presses can run as one continuous system; run two different products, one continuously at halfrated capacity with one discontinuous side stream; or run three different products run discontinuously. The operator controls parameters such as wine/juice color from a palate of choices, including press times and intensity for each press individually.

SIPREM CONTINUOUS PRESS



The Siprem continuous press system uses a peristaltically operating press. It continuously feeds in a stream of grapes that moves progressively through six to seven pressing chambers, which remove juice at increased pressures at each successive stage. Each stage can be set to desired pressures by the operator. The Siprem system can be sized from 10 to 45 tons per hour. **WBM**

PUTTING MORE AWE IN AN AWESOME PARTNERSHIP.

We're the ingredient suppliers who infuse greater flavour in your beverages. Thoughtful collaborators supporting your sustainable practices and adding efficiency to your operations.

A customer care team dedicated to growing relationships and helping communities thrive.

> More awesomeness is waiting for you at wwwBSGcraft.com



MetLife Investment Management

Agricultural Finance



Custom Structured Agricultural Loans

- Agricultural real estate lender for more than 100 years
- Intermediate and long-term fixed or adjustable-rate mortgage financing
- Real estate secured revolving line of credit

Rates are attractive—contact us today. 559.435.0206 | www.metlife.com/ag

This document is solely for informational purposes and does not constitute an advertisement of any investment advisory services, securities or investments

© 2020 MetLife Services and Solutions

COMPLETE CONTROL Easy, Affordable, Accessible





Brix/Temp

Tracking





Scheduled

Pump-Overs

Temperature Control

Secure **Cloud Access**

Alarm Notifications

www.acrolon.com

World Cooperage

You know your fruit - we know our oak. Together, let's craft a beautiful wine to achieve your cellar goals.



BUYER'S GUIDE

Select Membrane Press Vendors

This list of select vendors is generated using the Wines & Vines Buyer's Guide. To see a full list of vendors please visit: *winesvinesanalytics.com/buyersguide*

Membrane Press Directory

ATP Group	Windsor, CA	(707) 836-6840	atpgroup.com		
Bucher Vaslin North America	Santa Rosa, CA	(707) 823-2883	bvnorthamerica.com		
Carlsen and Associates	Healdsburg, CA	(707) 431-2000	carlsenassociates.com		
CARLSEN CARLSEN ASSOCIATE	67 5 CE		esigns, manufactures and represents equipment for many aspects provide everything from complete crush pad packages to valves, fittings		
Criveller Group	Niagara Falls, ON	(707) 431-2211	criveller.com		
CRIVELLER GROUP		Complete crush pads, bottling equipment, automatic and semi-automatic labelers, filtration equipment, custom fabrication of rotofermenters, plunger tanks, stainless steel tanks, various pumps and fermenters			
ColoPack Solutions	Napa, CA	(707) 258-3940	collopack.com		
Defranceschi SACMI USA	Des Moines, IA	(515) 276-2052	defranceschiusa.com		
Della Toffola USA	Santa Rosa, CA	(707) 544-5300	dellatoffola.us		
Euro-Machines	Fairfield, CA	(707) 864-5800	euromachinesusa.com		
GW Kent	Ypsilanti, MI	(734) 572-1300	gwkent.com		
ITek Wine	Paso Robles, CA	(805) 243-8003	itekwine.com		
Nuance Winery Supplies	St. Catharines, ON	(289) 929-1671	nuancetrade.com		
P&L Specialties	Santa Rosa, CA	(707) 573-3141	pnlspecialties.com		
Pellenc America, Inc.	Santa Rosa, CA	(707) 568-7286	pellencus.com		
Prospero Equipment	Pleasantville, NY	(914) 769-6252	prosperoequipment.com		
PROSPERO 5 INCE 1972 5 O 5 INCE 1972 5 INCE 1972 5			nnical support to all small, medium and large scale wineries, breweries		
Revolution Equipment Sales	Santa Rosa, CA	(707) 573-3154	revolutionequipmentsales.com		
Vintner Vault	Paso Robles, CA	(805) 226-8100	thevintnervault.com		

Congratulations on a successful 50 years.
 We have enjoyed working with you and look forward to the next 50!

BRANDON RICE Director of Winemaking Ancient Lake Wine Company



Custom Engineered Stainless Steel Tanks





Automating Data Collection from Fermentation Tanks

Tech startup works to simplify and automate lab-based sampling for winemakers

Cyril Penn

Jacob Manning was researching

yeast and fermentation kinetics in the lab at the University of Otago but when he reached out to winemakers, he was surprised how much time they spent just taking samples from fermentation tanks. He had naively just assumed technology to automate sampling was already in place. He was interested in applying machine learning to fermentation kinetics and



So far, the company has worked deployed roughly 1,000 sensors at 14 wine companies across Australia and New Zealand, most of them large wineries, Manning told *WBM*.

Manning said winemakers thus far been using the sensors to measure pH, temperature, volume, micro ox or redox, etc. offering a holistic view of what's happening with a ferment. The key thing for most winemakers at this point, he said, is "just the

yeast systems but in reaching out to wineries, realized new research wasn't helping anyone and wasn't being applied.

"I was like, 'this is crazy.' The winemakers we were talking to and working with would spend almost all their time just simply sampling tanks and trying to keep on top of ferments," he said. "You go out and talk to 150 winemakers and you realize what's their true core problem."

"I was like okay, well, let's make sure we solve that problem first because it seems like a waste of time going out and sampling tanks regularly and taking them back to the lab."

Five years later, Manning is the chief executive officer of a company that says its automating and scaling the collection of data from fermentation tanks and intends to apply machine learning to deeply understand what's really happening in terms of fermentation kinetics and yeast systems.

The company, called Winely, says it has deployed proprietary sensor technology and provides network infrastructure to retrieve the data, process it, and put it onto a dashboard. Wine being sampled never leaves the tank, making it possible for winemakers to continuously and autonomously monitor and manage the fermentation status of their batches.

Previously, the only way to gain insight into fermentation was to put very expensive and hard-to-come-by precision sensors into a tank, generally limited to one sensor per attribute.

Winely's sensors measure key attributes such as pH, temperature and Brix (sugar and potential alcohol content). Winely measures and delivers data around areas of the fermentation process (which it calls "TrueBrix").

Winely recently announced new sensors withstand even the most rigorous red wine ferment and high-pressure conditions and that the company continues to update algorithms to improve accuracy, advancements made possible after working with winemakers during the most recent Southern Hemisphere vintage. The company announced the next version of its technology will be available for in California as well, and Southern Hemisphere customers can pre-order for vintage 2023 (for more, see *www.winely.ai*). basic stuff," like wanting to prevent a stuck fermentation.

Labor Savings: Safety First

Many winemakers know that it's dangerous to be up on that catwalk, especially at night, pulling samples from a tank. However, with AI, they can do it on their phones during multiple intervals of the day as they please. This makes it a lot safer for the workers, who are often on those catwalks, where temperatures can reach upwards of 110 degrees in certain times of the year. Winemakers are also exposed to hydrogen sulfide daily while manually sampling their tanks, and it's toxic. AI technology eliminates these dangerous factors in the work environment.

An additional benefit is that AI allows for significant savings on labor costs. As most winemakers know, winemaking is also an energy-intensive process with enormous power draws. Another benefit of AI technology is that it can reduce power usage by letting winemakers know when they should be cooling their tanks, as well as when to carry out pump-overs.

Because winemaking is such a complex, nuanced process, it can take 36 hours to produce data about actions that should have been taken 36 hours earlier. Winemakers' eyes often light up after using AI for the first time, Manning said. The ability to learn of a problem earlier than they would using the standard process enables them to pre-emptively react, which is a game-changer, he said.

In the more distant future, Manning thinks artificial intelligence will help winemakers truly understand fermentations and that this understanding will lead to winemakers using more exotic yeast strains as they better understand what they need to do to control a fermentation. "We'll start to do things more naturally. We will be able to put in less chemical additives at the start of fermentations," he said.

"By having data in real time, you unlock these possibilities of using more exotic yeast and managing things," Manning added. "That's all just from understanding the data and, and being able to look at what's happening, and being able to react when you need to." WBM

TricorBraunWinePak.com | 1-800-DRINKWINE





Your Global Partner in Packaging

STOCK BOTTLES AVAILABLE NOW! BROWSE ONLINE OR CONTACT US TODAY.

TricorBraun WinePak provides unparalleled access to the highest-quality packaging from domestic and international sources, with stock bottles ready to ship from our regional warehouses today.

Visit tricorbraunwinepak.com or call 1-800-DRINKWINE to learn more!

WINEMAKER TRIAL

Mitigating Frost Taint via Harvest Method

A Washington winery studied the correlation between MOG and the effects of frost taint to determine the best harvest technology.

Bryan Avila



Bryan Avila is a formally trained enologist, seasoned commercial winemaker, ACUE Credentialed Educator and co-founder of the Vintners Institute. The Vintners Institute is a grassroots, next-gen effort to bring wine industry producers and allies together, online and in-person, to innovate with nature, educate the workforce and inspire good leaders. A freelance writer for *WBM*'s Winemaker Trials, Bryan would love to hear

what you are doing in your vineyard and winery to overcome challenges, grow better grapes and make better wine. Contact: *bryan@vintnersinstitute.com*

TRIAL LEAD: GABRIEL CROWELL, DIRECTOR OF TECHNICAL SERVICES, FOUR FEATHERS WINE ESTATES, PROSSER, WASH.



Gabriel Crowell ignited his passion for wine while working abroad for a fine wine importer in Cyprus. After returning to the United States, he attended Washington State University where he earned his B.S. in viticulture and enology. Crowell co-owns a luxury wine shop called Non-Vintage Wines in Tri-Cities, Washington and recently launched his own brand of traditional method sparkling wine. Crowell currently leads the white and sparkling wine programs at Four Feathers Wine Estates, as well as their technical services department.

Background:

Washington state has an established reputation for growing world-class Cabernet Sauvignon and is second only to California in overall production volume in the United States. Cabernet Sauvignon is also the most planted grape variety in the region, and any grower or winemaker knows that it is one of the last varieties to come off the vine in any given vintage. This means that winemakers walk a fine line between ripeness and frost damage—especially in cooler vintages, like in 2019. Once a vineyard is subjected to frost, the frozen plant tissues, namely leaves, freeze, making their contents easily extracted. When once-frozen materials other than grape (MOG) reach the fermenter, they release their contents into the must, resulting in what amounts to a tea-like infusion, which consists of dominant red-rose and floral aromas and a dumbed-down palate. These rose characters mask varietal grape aromas and create a disjointed palate experience.

Washington State University has been at the forefront of frost taint research and has provided insights into its origins and prevention. While the institution's research goes into much greater detail, one thing is clear: frozen grape leaves cause a "taint" dominated by rose smells. A plausible assumption would be that an off-aroma that smelled like roses would resemble a mark of perfection, but the contrary is true. Too much floral smell masks delicate varietal aromas, with dominating artificial red aroma and reduced astringency. If no

Experiment Overview							
SOARING EAGLE: Block 15 Cabernet Sauvignon							
Date of Receiving: 10/22/2019 15:00							
Treatment Details	Replicate (#)	Vintrace Lot (#)	Vessel	Pounds (lbs.)	Gallons (gal)	MOG (%)	
Mechanical Harvesting (Optical Sorting)	R1	19CSSEMHO	OT5	2173	179	1.20%	
Mechanical Harvesting (Optical Sorting)	R2	19CSSEMHO	OT7	2251	186	1.02%	
Mechanical Harvesting (Optical Sorting)	R3	19CSSEMHO	OT6	1967	162	1.02%	
Mechanical Harvesting (NO Optical Sorting)	R1	19CSSEMH	OT4	2138	176	2.58%	
Mechanical Harvesting (NO Optical Sorting)	R2	19CSSEMH	OT3	2344	193	2.06%	
Mechanical Harvesting (NO Optical Sorting)	R3	19CSSEMH	OT2	2327	192	1.93%	
Hand Picking	R1	19CSSEHP	OT10	2809	232	0.35%	
Hand Picking	R2	19CSSEHP	OT8	2870	237	0.34%	
Hand Picking	R3	19CSSEHP	OT3	2815	232	0.35%	

Our Pursuit of Excellence for Enhanced Natural Cork Quality

Like you, we understand the unique privilege of working with an agricultural product. In our pursuit of providing the highest quality natural cork stopper possible, M. A. Silva invests in research and constantly innovates at every step in the process.













LEARN MORE ABOUT OUR TECHNOLOGY & INNOVATION AT MASILVA.COM



The machine-harvested method with the selective harvester. A Pellenc harvester outfitted with a Selectiv' Process 2 Harvesting Head was used.

decisions are made by the winery, the customer perceives the wine as plonk, and the brand reputation is compromised. This leaves the winery with the choice of declassifying the wine into a "value" program, treating the wine to remove the taint or preventing the taint in the first place by removing the once-frozen MOG that affects the flavor.

In winemaking, an ounce of prevention is worth a pound of cure, so handpicking grapes and intensive sorting on the crush pad ensure that this taintladen MOG does not make it to the fermenter. These practices require an army of labor, making this option cost-prohibitive for most price points. To keep costs reasonable, winemakers must either pick grapes before their time or rely on a combination of automated processes to remove the frozen MOG at harvest time—or risk stripping some aroma by employing additional downstream treatments to the wine, such as RO and column-based regimens.

This article studies three picking methods, the MOG each generates in the process and the varying influences on the rose aromas that come from frost taint through sensory analysis.



Trial Objective:

The trial was published internally to compare harvest methods on the mitigation of frost taint. "Frost/Rose taint contamination in wine is a result of fermenting grapes from vines that have been damaged by an extreme frost event. The commonly believed contaminating compound is rose oxide, a form of monoterpene coming from materials other than grapes (MOG). The focus of this trial is to determine if different types of harvesting methods can mitigate the levels of floral taint perception in Cabernet Sauvignon."

Trial Description:

This trial was based on Cabernet Sauvignon sourced from the Wahluke Slope AVA. The experimental design and method of analysis for the trial are as follows:

The three harvesting methods were:

- Hand-harvesting (HP),
- Machine-harvesting with selective harvester (MHO) and
- Standard machine-harvesting without selectivity (MH).

Nine tons were harvested on Oct. 22, following two freeze events on Oct. 2 and Oct. 10, and 1-ton ferments were performed in triplicate. Qualitative sensory analysis was conducted, during primary fermentation and after secondary fermentation, by a professional wine tasting panel.

Conclusions:

As described in the Four Feathers' trial report conclusion: "Findings showed that there was correlation between the amount of MOG and the perception of floral taint in the given harvest treatments." The mechanically-harvested lot with MOG of 2.19 percent showed the highest perception of floral aromatics whereas the mechanically-harvested lot with the selective sorting
capability reduced the MOG to half that amount at 1.08 percent and showed some signs of floral taint. Of course, the hand-picked lot yielded the lowest amount of MOG at 0.33 percent with the least floral characteristics detected of the three lots but required the most labor to sort it. Crowell concluded, "Results suggest that to lower the perception of floral aroma after a freeze event, actions should be taken to hand-harvest if commercially viable." Crowell noted that in this trial, the perception of the mechanically-harvested lot with selectivity was so close to the hand-picked sample that in most cases, this technology would be employed before hand-picking, and this is especially true with the larger lots.

POST-MORT Q&A

What was the motivation to conduct this trial? Why were you interested in reducing the effects of frost taint?

Crowell: Washington state faces more freeze taint issues than many other regions. We also pride ourselves on our ability to produce rich, tannic and full-bodied wines. This riper style means longer hang times, which lead to





more opportunities for frost taint. This is really an abatement process that is common for Washington wine styles. In a perfect world, we would just pick before the frost; but when these weather reports come out, everyone wants to pick. Many wineries simply don't have the capacity to harvest all the winegrapes at once.

That said, we wanted to know if it is worth the labor and financial investment to address this issue on the grape side as a preventative measure, or the wine side, removing the taint with an RO-based process. Unfortunately, the chemicals involved with rose taint have no active site, so treatment for these compounds is less selective and can strip other aromas that contribute to varietal complexity.

Depending on which program is at risk for frost damage, the information gained by this research would let us know if we should hand-harvest to prevent the taint or just mechanically-harvest it then treat that taint as a wine later.

Which grape varieties did you study? Why did you pick those?

Crowell: Cabernet Sauvignon was an obvious choice for us because it is usually the last variety to come off the vine. This is especially true with some of the older vineyards because they hang for a super long time, so their freeze risk is elevated as winter closes in. They also represent some of our prized vineyards that are important to our overall brand.

How did you design your experiment? What parameters did you measure?

Crowell: We harvested in three different ways that are options that we can choose at Four Feathers: a hand-picked control, mechanical harvesting and a mechanical harvester with added mechanical destemming and sorting capabilities. These 1-ton lots were fermented in triplicate for a total of nine lots. I calculated the percent MOG by manually measuring and weighing any materials other than grapes per volume from bucket samples of berries, coming off the destemmer for each harvest method.

Who else worked with you on this trial?

Crowell: Becca DeKleine and the winemaking team provided input, and I had a lot of help from the cellar team that helped prep the micro-fermenters. There is also abundant research, correlating MOG with the presence of frost taint aromas in wine, but I had not heard about it, until 2020, when I began planning this experiment. While looking into the subject, I attended a

lecture given by Washington State University on the subject matter, which gave me a solid background.

What were your initial hypotheses before beginning the experiment?

Crowell: Based on our background research, we figured that keeping frozen leaf material out of the fermenter was important, but we didn't really know what the magnitude would be from one harvest technology to the next, using our own equipment. Maybe any form of our mechanical harvesting would be good enough to mitigate the taint? That would be the best-case scenario.

Mitigating Frost Taint via Harvest Method



Gomberg, Fredrikson & Associates

Market Intelligence for the Wine Industry



We perform extensive market research and data collection to create the wine industry's leading shipping, pricing and market reports; helping sales and marketing teams make informed business decisions.

PRODUCTS

Gomberg-Fredrikson Reports

The Executive Market Reports of the Wine Industry put your business in context among current wine industry market trends.

Price Service

Competitive supplier pricing for more than 20,000 products. Featuring an interactive tool that allows you to create your own pricing report from the entire wine pricing database.

Price Analysis Report

Highlights of the Price Service data help subscribers identify industry trends and market shifts by region and wine variety.

Did you encounter any difficulties during the trial? If so, how did you address these complications?

Crowell: We didn't have any issues with the execution of the trial. The hardest part about a trial, like this, is that you can't control exactly when you will have a frost event, the level of frost you get and other factors, like the wind. It can also be tough to obtain good sensory data when using a small number of panelists. To ferret out the differences in subtle wine flaws, these differences have to be pretty noticeable to get good results.

How did you evaluate or measure the effectiveness of the application(s)? What was the most important outcome of the trial?

Crowell: We used a double-blind sensory evaluation method that was designed to detect specific attributes of frost taint. Our tasting panel was trained, using this method beforehand, to minimize the amount of differences between tasters. We even used our trained tasting panels to see if frost damage was detectable during fermentation.

Were the results as you predicted or did anything unexpected occur?

Crowell: We know that the less MOG there is in the grapes, the less rose taint there will be in the wine, so the general trend we got was expected. There's a natural level of all these aromas in wine, so the no-frost control gave us a good target number to compare the hand-picked and mechanical methods. We were happy to see how well the mechanical harvester with selective sorting did compared to the no-frost and hand-picked controls. We were happy with the selective harvesting method as our best practice for processing larger commercial lots with frost taint. These wines were about half as affected as mechanically-harvested lots and showed only three times the perceived taint versus six times higher with standard mechanical harvesting in our blind studies when compared to hand-harvesting.

What was your and your team's impression of the resulting wines?

Crowell: Each wine lot was well-monitored and fermented out clean. They were eventually blended back into the production lot after the trial samples were pulled. It was clear that mechanical harvesting alone did not help with frost taint, so that was good information.

Do you plan to conduct a follow-up trial to re-test these results?

Crowell: This was a productive trial. These results are conclusive enough that we think we are good with the data we have on Cabernet Sauvignon. We would certainly be interested in looking at varieties other than Cabernet, though. We will take those as they come. At this point, however, everyone is focused on smoke taint.

What are your next steps with the technology?

Crowell: We have implemented the findings of this study. We now have data that show we can hand-pick the lots if it makes economic sense. If it's a high-end or prestige batch, we would decide to hand-pick the block. We would also use MOG measurements to assess the feasibility of using basic mechanical harvesting with perhaps other frost taint removal technologies, such as RO or fining, for larger programs that may be on the edge. **WBM**



Save the Date

March 14-16, 2023 | Lancaster, PA

Connect

Numerous Networking & Social Events

Learn

3 Full Day Workshops & 20 Conference Sessions

Source

200+ Exhibiting Companies

EasternWineryExposition.com Hosted by WINE BUSINESS MONTHLY

grape growing

Facing Early Frost Risks from Climate Change, Bordeaux Experiments with New Blends

Pam Strayer

When an early spring frost ravaged the 2021 vintage in Bordeaux, a painful reality hit home—one-third of the crop was destroyed.

"With typical revenues a little more than 4 billion euros (\$4.57 billion USD), that means we were down about 1.2 billion euros (\$1.37 billion USD) for the year," said Christopher Chateau, communications director for Conseil Interprofessionnel du Vin de Bordeaux (CIVB, better known as the Bordeaux Wine Council).

Despite the crisis, an opportunity also arrived in the form of the results of an 11-year trial of alternative varieties. After the data were analyzed, six varieties were selected, but only allowed for Bordeaux AOC and Bordeaux Supérieur wines.

Many prominent sommeliers moaned that a sacred institution was being tampered with. They

worried that the great red wines of the Médoc, St. Émilion and Graves beloved for so many decades by British high rollers, Decanter point followers and Liv-ex traders—might disappear and be replaced with inferior, newfangled blends that at best, might taste like the classic wines' distant relatives.

Those fears were unfounded, according to French agricultural officials. Only about 5 percent of Bordeaux produces super high-end wines—and those wines are not expected to start planting the newly approved varieties anytime soon.

A more accurate picture of the region requires recalibrating the popular image of Bordeaux as a strictly high-end wine producing region.

Imagine instead a single, vast wine region that includes producers from as wide a span of the industry as Napa and the Central Valley–all under one geographic umbrella. That is closer to the real Bordeaux, which produces vast quantities of wine, at price points ranging from 3 to 5 Euros per bottle



on supermarket shelves to megabucks wines collectors covet.

The newly approved grapes are only allowed for Bordeaux AOC and Bordeaux Supérieur wines, and these come primarily from the right bank—Bourg, Blaye and Entre-deux-Mers—where the varieties are expected to have a big impact. The Bordeaux AOC producers include 5,000 winemakers, 327 négociants and 27 co-ops.

The Problem with Merlot

The region depends on Merlot, an earlier ripening grape. Bordeaux's most popular grape, it is grown on 66 percent of Bordeaux's red wine acres (which are the vast majority—88 percent—of total acres). Merlot has begun to ripen earlier, putting its harvest date

smack in the middle of the warmest months of the summer. That results in flabbier, less balanced wines with lower acidity.

"As climate warming shifts everything earlier, Merlot gets shifted even earlier. And so, the ripening takes place in a time of the year that's not as nice because it's too hot," noted Greg Gambetta, a UC Davis graduate who is now professor of viticulture at Bordeaux Sciences Agro. "When you talk to people, Merlot is mentioned as the major concern because of these reasons."

As English-born Bordeaux vintner Sally Evans described it in a recent BBC podcast, "We leave our grapes to ripen, as long as possible, as late as possible, because we want the aromas to develop and we want the complexity of the aromas. But you then get the higher alcohol . . . you can certainly taste it if it's been a hotter year. If you have a long period of drought, then the yields will be a lot lower, and the fruit itself will be a lot more jammy, a lot less juice and a lot more stewed flavors."



WINEGRAPES CLEAN PLANTS · UBERVINES

Large Vines Big Returns

- Optimized for your vineyard design
- Advance production
- Reduce labor
- Increase profit
- NPV up to \$25,000 per acre

12" Standard

Source: ASEV Catalyst Report funded by Wonderful Nurseries

JOHN ARELLANO Sierra Foothills Lodi & Clarksburg San Joaquin Valley (559) 804-6949

STEFAN DANIELS

North Coast Central Coast (415) 309-3930 TIA RUSSELL North Coast Southern Oregon San Joaquin Valley (209) 815-2399

JOHN DUARTE At Large (209) 531-6874 ED NEEDHAM San Joaquin Valley Arizona (559) 977-7282

STEVE SCHEUBER Central Coast San Joaquin Valley (209) 531-5065 AARON SALSEDO San Joaquin Valley Southern CA (559) 892-6028

JOEL MYERS Oregon (503) 435-8932 Duarte Nursery[®] Clean, Clonal, Containerized.

21.26

35" UberVine

24 Magnum Vine®

1-800-GRAFTED duartenursery.com | Hughson, CA sales@duartenursery.com

- 🖪 🕒 🛅 🞯 -

Clean Plants For Your Future



The question is: can varietal diversity save a wine region with such deep traditions? Scientists who study wine and agrobiodiversity say it might mitigate up to half of the anticipated losses if there is a 2-degree Centigrade rise around the globe or a third of the losses if warming hits the 4-degree mark.

Merlot's History From 1855 to Now

There's also a question of how deep the tradition of Merlot, as the dominant grape in blends, goes.

"There was a time when Merlot was not the variety in Bordeaux," Gambetta said.

In fact, Merlot's popularity there is a relatively new development, historically speaking.

In 1855, the author D'Armailhac wrote in his definitive guide to the Médoc that Merlot had only arrived recently. By 1969, as Edmund Penning-Rowsell reiterated in his 1969 classic *The Wines of Bordeaux*, Merlot's advantages and disadvantages were already apparent.

"Merlot could be bottled in the third year, and one year in bottle would suffice," he observed. That made it attractive commercially.

Yet, in 1969, Cab was still king, he wrote, as it was "the leading red winegrape of Bordeaux . . . the grape on which Claret's reputation is founded." That fact led, in part, to Napa and California's embrace of Cab as the state's wine industry climbed to international acclaim based on Cabernet.

Today only the Médoc is an exception to the Merlot-dominant pattern in Bordeaux as the Médoc is the sole Bordeaux region that has more Cabernet Sauvignon planted than Merlot. In all of Bordeaux, 22 percent of red wine acres are planted to Cabernet Sauvignon.

The Merlot explosion in Bordeaux really did not begin until around 1964 when it accounted for a tiny number of hectares, primarily around Libourne.



Wine businesses strengthen our community.

Rooted in wine country, we help local businesses grow. It's as simple as that.

EXCHANGEBANK.COM

Vineyard | Winery & Equipment Loans | Inventory Financing





By 2020, Merlot ballooned to 70,000 hectares (172,974 acres) out of 271,450 acres total in Bordeaux, spreading outward from Libourne to other right bank regions, according to Louis Bordenave in his book, Bordeaux et ses Vignobles.

Though it produces much softer wines that can be drunk earlier, Merlot's faults were known, even in the 1800s. As Penning-Rowsell noted, "It has the advantage of being productive, but with a tendency to bud early, it is subject to spring frosts, which the Cabernets may escape. . . . In a poor season, it is liable to rot. A vineyard with a heavy proportion of Merlot may suffer particularly badly from wet weather at vintage-time.

"The wine from the Merlot matures more rapidly, and in these [1969] commercial times, this is a temptation to the growers."

Penning-Rowsell went on to quote local anti-Merlot gossip spread by those in the Médoc who looked down on Merlot, writing, "Unkind proprietors in the Médoc may whisper, with a pleasurable shake of the head, that their neighbors have unfortunately planted too high a percentage of Merlot; almost as bad as if the neighbors' daughters had taken to the streets!"

In Napa and across California, Merlot's fortunes did not echo Bordeaux's recent Merlot explosion. Compared to Cabernet Sauvignon, California has only 34,671 acres of it in 2021-or only about 6 percent of the state's totalcompared to 172,974 in Bordeaux. Even in Napa, whose model is historically based on Bordeaux, Merlot makes up roughly 4,000 acres (or 11 percent of the county's total). According to Napa's 2020 crop report, Merlot in Napa commands only half as much per ton as Cab-\$3,760 a ton versus \$7,920.

The main reason why Merlot isn't widely planted in Napa? "It's not cool enough here," sommelier Chris Sawyer opined.

"As Steve Matthiasson said," he continued, "'You can grow Cab anywhere in Napa Valley, but you can't grow Merlot just anywhere."

As an example, Sawyer points to Christian Moueix, the president of Petrus (a Merlot-based Bordeaux winery) that owns Dominus in Napa.

"He had the number one wine in the world, a 2018 Dominus, in the Wine Spectator last year [from Yountville]. He tried Merlot in Napa, and it just did not work there. So, Dominus is all Cab. So that shows you exactly what Steve Matthiasson is saying. You have someone that made world famous Merlot at Petrus, and it can't grow well in his area of Napa," Sawyer added.

But in Bordeaux, Merlot continues to be popular, even in the Médoc. Gambetta says current planting records show it continues to be planted.

Compare the percentage of Merlot in Latour blends in 1855 and in 2015. In 1855, the amount of Merlot was 5 percent. In 2015, the Latour Pauillac blend was 54.2 percent Cabernet Sauvignon, 41.7 percent Merlot and 4.1 percent Petit Verdot.

Bordeaux insiders say Merlot may, in part, owe its increasing popularity to the advent of the En Primeur system in which wines are sold before being released. It's said that because it softens the wine and makes it easier to drink earlier, it has gained an advantage compared to Cabernet Sauvignon, which must age more to bring out its full expression.

Earlier, according to Gambetta, "Cabernet was the problem child, and you needed specific 'terroirs' to ripen it. Most notably, it was thought that warm soils would impact some degree of water stress [which can advance ripening ever so slightly]. But I think this explanation is quite oversimplified.



WWW.VINTNERSADVANTAGE.COM SALES@MISCORP.COM

miscorp



Chr. Hansen Viniflora® Direct inoculation malolactic bacteria relied on by winemakers world-wide for dependable malolactic fermentations.

Learn More 口袋梁口

"First, the wine styles estates are going for across the Bordeaux AOCs vary a lot-from wines that are a majority Merlot to those that are more Cab-focused and everything in between," he added. "Even in AOCs that are noted for their Cab-focused wines, you will find estates doing wines that are a majority Merlot because they like that wine style and that is what they are going for. Today both cultivars ripen quite well in most seasons.





③ Sales@GusmerEnterprises.com 866.213.1131

Contact Gusmer today for all your winemaking solutions!

WBM September 2022 41

"How did Merlot come to be the dominant grape?" Gambetta queried. "We don't know. We do know that things could evolve again. It's just hard to imagine it happening fast."

The temperature change is also slow—rising 1.3 degrees Celsius, the equivalent of 2.3 degrees Fahrenheit) on average over the last 30 years, Gambetta noted, using data from a paper he co-authored with UC Davis researcher Sahap Kaan Kurtural who manages the Oakville Experimental Vineyard in Napa Valley. *https://oeno-one.eu/article/view/4774*



This heat map shows which parts of Bordeaux are warming earlier.

Gambetta explained: "Growers are not going to rip out a perfectly performing vineyard just to change varieties. Economically, that's not feasible. That means that adaptation by definition will be slow."

A Very Exclusive Club: The New Bordeaux Kids on the Block and How They Got to Be There

Bordeaux's answer to the problem with Merlot has been to open up the playground and allow producers to take baby steps toward changing their vineyard plantings and the grapes allowed in the Bordeaux AOC and Bordeaux Supérieur wines.

It all began in 2009 when the CIVB funded the VitAdapt study conducted by INRAE, the National Research Institute for Agriculture, Food and Environment (the French equivalent of the USDA) to record, over a period of 11 years, 52 cultivars in a 0.6-acre plot in Graves. The project's initial goal was to provide scientists with baseline data from a controlled experiment, conduct a trial and see how the grapes adapted and performed over time.

Vines were planted in 46 rows of 75 vines each with identical row spacing (1.8 m), inter-vine spacing (1.0 m) on one rootstock and at a uniform density (5,555 vines/hectare).

The vines were grown in the same vineyard block, with the same trellising system (double guyot) and the same IPM treatment. "Cover crop was maintained every second row (alternating every year), and weeds are controlled underneath the row by mechanical tillage," the study stated.

The vines were then watched carefully. Both yields and quality were monitored. The berries were weighed with ultra-precise, state-of-the-art technology.

As anticipated, vintage variation affected the grapes. Two of the 11 years were drought years, providing valuable data on water extremes in a land where irrigation is not permitted.

At the end of the trial, the INRAE scientists presented the data to the local syndicats—the groups that approve the rules for appellation labeling—who then reviewed the data, looking for grapes that ripen later.

"We think the new varieties present an opportunity for growers to be able to reduce the quantity of sugars and improve the acidity," stated VitAdapt researcher Agnes Destrac-Irvine, Engineer at INRAE. "We can't stop climate change impacts, but maybe we can just do some action to reduce the impact."

In the end, six of the 52 varieties were selected for approval. Arinarnoa, Castets, Marselan and Touriga Nacional made the list for reds. Alvarinho and Liliorila are the newly approved whites.

Two of the red varieties are recent crosses with Cabernet Sauvignon, and both were created in by INRAE in France—Arinarnoa (Tannat and Cabernet Sauvignon) created in 1956 and Marselan (Grenache and Cabernet Sauvignon) in 1961.

Another, Castets, is native to Southwest France and was historically grown in the Gironde ("cépage oublié").

The popular and late ripening Touriga Nacional is a mainstream grape in Portugal.

Albariño originated in Galicia and is grown in Portugal and Spain on the Atlantic coast several hundred miles south of Bordeaux.

Liliorila is a cross between Chardonnay and Baroque grapes grown in southwestern France.

Noted Sawyer, "These are not crazy ideas that they came up with. I think that the ones that they really picked out—these six—are very special, and I think that they're going to give us an opportunity to really follow what they can do. These blends are going to be something that's really important to us, moving on."

The approval also specified very sparse planting and blending of the new varieties. Only 5 percent of a vineyard could include the newly approved varieties, and only 10 percent of the total of a single wine could include newly approved varieties. Consequently, the wines that use these grapes can only be labeled Bordeaux or Bordeaux Supérieur AOC.

Some growers started producing the new varieties before the official announcement, anticipating that certain cultivars would be approved.

"Last year (the first year of permitted varieties), there were some producers who have already planted new varieties, but we have to wait for the first clusters," stated Destrac-Irvine.

The Benefits of Diversifying Cultivars

Gambetta says scientists are enthusiastic about increasing the varieties available for growers to plant.

"In the scientific realm, we would love to see a lot more varietal diversity because we know that's a good thing. We know that for climate change, biodiversity is one of the best levers that we have to adapt the whole system of viticulture to climate change." Other regions in France, like Châteauneuf du Pape, give winemakers a much wider array of choices with 13 permitted varieties of grapes that can be used in blends without restrictions, i.e., in varying amounts. Though winemakers there, too, are challenged by increasingly fruitier vintages, they can use blending as a way to mitigate some of the impacts.

As INRAE researcher Adrien Rusch and others have pointed out, agrobiodiversity research by Harvard assistant professor Elizabeth Wolkovoch, published in 2018 in Nature Climate Change, shows that there are more than 10,000 varieties of Vitus vinifera of which 1,100 are used commercially. But only 12 cultivars—1 percent of the total—dominate 70 to 90 percent of global production.

"Increasing diversity within crops may be a powerful way to reduce agricultural declines from climate change," Wolkovich wrote with colleagues in a 2020 paper entitled, "Diversity buffers winegrowing regions from climate change losses". Using primarily French databases, she and her co-authors analyzed the potential impact varietal diversity could have and concluded it could be hugely significant. The paper's authors concluded, "We find that cultivar diversity halved potential losses of winegrowing regions under a 2°C warming scenario and could reduce losses by a third if warming reaches 4°C."

Aron Weinkauf, vineyard manager and winemaker at Spottswoode in Napa, Calif., noted for its climate-conscious, environmental mission, echoes Gambetta's pro-biodiversity sentiment. In 2018, Weinkauf planted about 10 varieties in a small scale trial on 0.8 acres at the estate vineyard in St. Helena. The selection included some of the newly approved grapes (Arinarnoa, Marselan and Touriga Nacional) as well as Assyrtiko, Carignan, Manseng

Keep Spotted Lanternfly Out of California



SPOT THE SPOTTED LANTERNFLY? CDFA Pest Hotline: 1-800-491-1899

> Report online: cdfa.ca.gov/plant/reportapest/



Vintuitive

Innovative Winemaking Tools



The next generation of pumpover technology

- Easily tunable to meet your needs
- Flow conditioners support spray patterns for round, square, or rectangular tanks





- 3-piece venturi that's easy to use and clean
- Gently entrains a large volume of air or additives into wine during pumpovers
- Available with stainless steel or plastic inserts
- Manufactured locally in 1.5 and 2" diameters

VINTUITIVE *Winemaking Tools LLC* www.vintuitiveWMT.com Noir, Mourvèdre and a few others. He is also trialing 25 rootstocks, a project begun in 2014.

"Obviously, things are changing. We don't know exactly how everything, including the system, is going to adapt, so trying to have more diversity out there is an absolute benefit. We talk about global warming, but the greatest thing to expect is that the extremes are going to be more extreme, and they're going to happen more often," he said.

"So ultimately, the variables are just going to become greater. And what that does to vine stress, how it affects new and evolving pest pressures, how it affects quality and yield. If you only have a single varietal on a single rootstock, you're very likely to be affected uniformly," Weinkauf added.

Biodiversity can mitigate some of the extremes, he noted. "Where you have more diversity, that gives you a larger spectrum, so you can tolerate more of those variables."

He expects vintages that may push into new extremes. "There's going to be wet years. There's going to be dry years. There's going to be high mildew pressure years. There's going to be low mildew pressure years. There's going to be warm years where acids are going to be driven out of the fruit. There's going to be cool years where your fruit will hang onto the stronger acids," he said.

"If you get too much light exposure on fruit or too much sun exposure on fruit, you can damage the skins and damage the tannin production. So all of those things feed into wanting to diversify."

As Destrac-Irvine reiterated, "We just want to give another tool to the growers to adapt their vineyard. They're not obliged to change if they don't want to change varieties. They can continue to go with the old, classical Bordeaux varieties. It's not an obligation, just a proposition from the INAO (Institut National de l'Origine) institution to help them to have more tools to adapt."

The Promise of the New Varieties

Stated Sawyer, "One thing I liked about the study is that they found that even in drought-like situations, 2016 and 2017, these grapes [the newly approved ones] could really perform well. These were the ones that made the cut. There's a lot to be learned from that.

"I was with a winemaker from Bordeaux the other night, Nikko (Nicolas Boissonneau of Vignobles Boissonneau in Entre-deux-Mers), talking about Castets. He really likes it. It is a forgotten variety. It's got thicker skins; it's very resilient and disease-resistant, which is really great. So that it's kind of like a guaranteed factor, where its potential is as far as really what the flavors can be. Can it add a burst of dark fruits or is it blue fruits? That's going to take some years to know."

Many have pointed to Marselan as a grape with a lot of potential that Sawyer has already seen in Uruguay, China and India—places where "this grape is a big deal."

He added, "I could see Marselan being on its own by itself, just because it's Cabernet and Grenache. I like its texture a lot. I think that's really one of the things that they've probably found, too—they couldn't really spell out everything about each one of the grapes—but for me, it's got a little bit of natural richness. It smooths out the Cabernet component, and it shows up with a little bit more aromatics. I think it's the super most promising of the grapes that they've got right now."



avalara.com

Get a more comprehensive compliance solution for your winery.





What Happens Next: Participatory Science and a Bigger Data Picture

Destrac-Irvine says the single block study was just the beginning of INRAE's research, which is now approaching what may be a more exciting phase locally and a very impactful study nationally.

"The first study was to discover the varieties and their behavior. The second step is to be able now to have information on the same varieties but in different climates and soil conditions."

Now that the Bordeaux AOC and Bordeaux Supérieur vintners are on board with the six new varieties, Destrac-Irvine says some producers in the Médoc, the Haut Médoc, Listrac Médoc and Margaux in Médoc are interested in exploring the potential for the newly approved varieties. "We expect to start seeing statements this summer," she predicted.

But nationally, bigger studies are afoot on a never before seen scale in what may be the largest, long-term, open-source database of winegrapes. Called LACCAVE, the project was announced in 2021 and is being conducted nationwide in France as both professional researchers and growers are invited to participate in collecting data over a long period of time to assess the impact and taste of hundreds of climate changes on varietals across all the wine growing regions of France. It's just one of a number of INRAE projects that are utilizing participatory science.

According to Destrac-Irvine, "What we want to do is to invite the growers to participate in the adaptation to studying climate change.

"LACCAVE is looking at a lot of things on a national level because of the problem of not only temperatures but also the problem with vine stress—the problem of water availability. So here and in other parts of France, all the researchers are thinking about different tools to adapt in their vineyards and even including the change of varieties...it's really a thing that all the communities in France are thinking about."

The program even extends "to giving the information at the school level, for example, to explain what's happened with climate change and what is to describe what is biodiversity and what is the action that we can do," she added.

The story is clearly not over, and vintners in Bordeaux are not expecting immediate solutions.

Stated Gambetta, "The scientist in me says that next evolution will take its course, right? Some of those grapes will be winners, and some of them will be losers. As the varieties move forward, we will know more, but it'll be some time."

At the same time, Gambetta noted that changing the varieties is not the only option in dealing with climate change. "The growers understand that climate change is a very big concern, and they're open to new techniques. I think that the whole idea of changing varieties is really concerning to them. I don't think it would be their first choice. I think that they'd much rather adapt to climate change via management strategies. That's one of the reasons why rootstocks are so interesting because you get to maintain the varietal up top, which is going to maintain your wine style. So, you get adaptation," he said.

"I think for an industry that's based on a variety of identity, this ends up being way more interesting and way less scary for the grower. Changing varieties is a last resort," Gambetta added. "But the flip side is that it could be really interesting, too. It could be niche. There could end up being niches for it just because the wines could be interesting and good."

Noted Sawyer, "What I really loved about Nikko, when I was sitting with him and asking him questions about the study, was that he said, 'Oh Chris, we're doing this not for us. We're doing it for our next generations because we have to realize these things for them.'" **WBM**



The Leading Source for Wine Industry Data

Wine Analytics Report:

A monthly interactive digital publication. The latest wine industry metrics, market analysis and trends shaping the wine industry. Ensure your company's success by making informed business decisions based on market conditions and emerging new trends.

Wine Analytics Database: **NEW!**

The Wine Analytics Database features a data cube structure allowing users to easily access and interpret data from multiple sources measuring different dimensions of the North American wine business. Time series data from 2010 to 2022 for multiple data sets. Visualization with charts, graphs and data tables.

Winery Database:

Online system, enabling 24/7 access to our proprietary database that includes winery profile and contact information on over 11,000 North American wineries, and over 30,000 contacts.

Distributor Market Service:

Enables wineries to identify, contact and monitor U.S. Distributors by state. Monitor your competitor's distribution and know the wineries represented in Distributor's portfolios. For Distributors and Importers, this searchable database allows you to identify current distributor relationships among U.S. Wineries.

> Contact Alan Talbot at: alan@winesvinesanalytics.com

winesvinesanalytics.com • 707.940.4744

WINES VINES ANALYTICS

Charles Smith Unleashes Legacy Pinot Noir Project in Washington State

L.M. Archer

"And so the idea of what's going to happen in American wine is what's really exciting about this project in particular."

-Charles Smith, Golden West Pinot Noir



Charles Smith is on a quest to show that Pinot Noir can grow well in Washington state.

The trademark black t-shirt and shock of white curls comes into view first. "Can you see me?" Charles Smith, former band promoter turned House of Smith Wines winemaker is in the house. Or Zoom chatroom, anyway.

Wine for the People

"I didn't really want to talk about it until I finally got the wine that I was setting out to make," says Smith. He's talking about Golden West Wines, his groundbreaking Washington state Pinot Noir project launched in 2018. "The first vintage or two, we made wine that got excellent reviews. I guess 93 points for a \$20 bottle of wine a couple of years in a row is not a bad thing. But I felt the wine that I really wanted, what I envisioned, we nailed it finally."

Smith plans to produce 150,000 cases within 10 years; an artisanal project planted to commercial scale. Currently, the 2020 production totals 27,000 cases, with 68,000 cases slated for the 2021 vintage. Smith underscores the \$20 bottle price will remain, though he also admits to the potential for premium, small-batch Golden West offerings in the future. Just not now.

"I lived hand-to-mouth for most of my life," he said. "I think everybody deserves more for their money. And if you're going to actually receive somebody's hard-earned income, I want to get up earlier than anybody else, stay up later than everybody else and, during the night, I want to dream about what I'm going to do the next day. And that's how I approach my wine. The overall thing is, I'm making my wine for the people. I want to make something that is far beyond anybody's expectations."

The restless impresario knows a thing or two about exceeding expectations. Founder of K Vintners in 1999, he's crafted everything from award-winning Syrah to value-conscious blends. In 2010, Smith sold his House Brands and Magnificent Wine Company portfolio to Precept Wines. In 2016, he sold Charles Smith Wines to Constellation for a whopping \$120 million. His current House of Smith empire comprises K Vintners, Sixto, Wines of Substance, Vino Casa Smith, PopUp Sparkling, B. Leighton, and Golden West.

Despite his stratospheric success, Smith never lost sight of his by-the-bootstraps beginnings. "When I started my winery, the only employee for the winery for the first seven years was me," he says. "I was the accountant. I self-distributed my wine in Washington state. I drove it door-to-door in my '87 Chevy Astro van. And when I started House wine, and sold it, it was 90,000 cases. I was the only employee. When you start with \$5,000 borrowed, you don't have a lot of employees."

Early on, what Smith lacked in employees, he made up for in passion and most of his greatest commercial hits started out as personal passion projects.

"I mean, going back to something like Kung Fu Girl—who knew that there was going to be 300,000 cases of single vineyard Riesling for \$12 called Kung Fu Girl that everyone wants to drink?" he asked. "Not because they think it's funny, but because they found that while they didn't know they actually loved Riesling like the way I love Riesling, they found out, 'Wow, we love Riesling, too!' And the idea was based on that love, and that is reason why I did this."

Hibernating Bear

Not one for half-measures, Smith purchased 500 acres in the Royal Slope AVA specifically to plant Pinot Noir—an uncommon variety to be planted in the state. "Right now, we have 373 acres of Pinot Noir in the ground," he said of Golden West Vineyard. "As of this spring, there'll be 500 acres planted when we get done planting."

Smith already sourced Chardonnay nearby for his Sixto and Wines of Substance labels. "Where great Chardonnay lives, so does Pinot Noir," he says. "Why don't I do what I've done throughout my whole career, pick a single site, put all my chips in, and go for it?"

One of Washington state's newer appellations, Royal Slope AVA gained approval in 2022. Contained with Columbia Valley AVA's nearly 60,000 acres,



This aerial image shows the river and slope influences of the Golden West vineyard.

it spans just 1,900 acres, planted mostly to Cabernet Sauvignon, Syrah and Chardonnay. The area shares some of Columbia Valley's arid and semi-arid continental climate characteristics, but with a twist: various elevations, some rising over 1,700 feet, keep Royal Slope cooler than nearby wine regions like Wahluke Slope AVA.

In a state where Cabernet Sauvignon and Syrah predominate, statistics about Pinot Noir prove slim. According to the 2017 Washington Vineyard Acreage Report compiled by the USDA/National Agricultural Statistics Service, Pinot Noir plantings totaled 626 acres statewide. Additionally, the Washington State Wine Commission 2020 Wine Grape Production Report revealed that while the state produced 178,500 total tons of red wine, Pinot Noir accounted for only 1,650 tons.

Smith's vineyard changes the equation. With Bourgogne as his lodestar, Smith noted similarities between his vineyard and Pinot Noir's Old World birthplace. Both share



a similar 47th parallel. Both share a continental climate. Moreover, unlike other areas of eastern Washington that endure 100+-degree heat during summertime, Golden West enjoys temperatures in the mid-80s, not unlike those of Bourgogne.

The reason for the lower temperatures stems from the site's proximity to the Columbia River, and its higher elevation. River-generated winds continually sweep upslope to the 1,600 foot-plus vineyards. These winds lower temperatures in summer and prevent frost in winter. During growing season, grapes benefit from slower ripening, resulting in lower sugars, lower alcohol, and higher acidity.

Soils prove vaguely similar. While Burgundian soils comprise mostly limestone and marl, Golden West features limestone, broken volcanic rock and sand. "We have a lot in common with places that make really highly perfumed, powerful, deep and dense wines," says Smith. "The things that you would look for if you're going to look for someplace in North America to produce Pinot Noir."

This compelling combination of components—climate, aspect, soils convinced Smith to grow Pinot Noir in Washington state. "Great winemakers grow great grapes," says Smith. "When David Lett started in the 1960s, everyone thought he was crazy. 'Pinot Noir in Oregon? You're insane!' Well, now he considered one of the fathers of Oregon Pinot Noir. They didn't set out to do that. I didn't set out to do it. But it's Washington—why not?"

Aside from overlooked terroir, Smith contends Washington state lagged in Pinot Noir plantings for a few other reasons. Firstly, the state's early emphasis upon white varieties. "The thing is that people eventually planted red grapes," said Smith. "Why did everybody think red wine wouldn't be brilliant in Washington state?"

Secondly, the region's historic focus upon urban production centers in western and eastern Washington hampered Pinot growth. "Just because



you're in a center of population, and it's easier to market, doesn't mean that that's where the most brilliant wine will be produced," he added.

Instead, Smith considers Golden West a new way forward for Washington state wine, one based upon expansion and experimentation. "Washington is in its infancy of winemaking. We have so much dirt that has never been turned over," he said. "I think the industry should be very excited about new places to grow wine—not just where I happen to be in Washington. I think that's what makes this project so exciting, that it's right underneath everybody's noses. It's been here all along, since they planted Pinot Noir in Oregon in the 1960s. A hibernating bear is a really interesting thing when it is awakened, you know?"

Perfect Alchemy

Despite Smith's maverick mindset, the former rocker views himself as 'an Old World guy,' with a serious respect for Old World winemaking traditions. "That's how I feel inside," he stated. "I'm an Old World guy living in the New World. I've always been that."

To that end, Smith farms sustainably, eschewing synthetic chemicals in the vineyard. He picks early morning at first light, performing triage in the field. At the winery, he prefers whole cluster, adjusting according to vintage. He also insists upon 100 percent native fermentation, though maceration varies according to vintage. "I mean, there's no recipe. On average, 37 days is about right," he recalled. "And it goes to barrel dirty after pressing."

Once in barrel, the wine ages undisturbed on its gross lees for approximately 11 to 13 months prior to drawing off, assembling, and bottling. Smith employs 20 to 30 percent new oak on his Pinot Noirs, using only barrels of "the highest caliber possible," with light to medium toast. The rest age in neutral, 600-liter demi-muids and puncheons.

"My philosophy is use the appropriate barrel for the appropriate wine. I think there's a perfect alchemy," he said. "I prefer the neutrality, and I'm also concerned that we go to barrel dirty, and that we rest on the gross lees without being disturbed. You know, it's more of a textual aspect. I'm known for making very smooth wines. It should be inherently pleasant to drink, and really balanced."

The Promise

Smith inserts himself into every aspect of the Golden West project, including wine label design. "A label should say something about the wine," he noted. "I think it should communicate the language of wine to the people that are

going to drink it and tell you something about what you're gonna find in the bottle."

Smith collaborates with long-time friend and Danish clothing designer Rikke Korff for all his labels. "It was supposed to look like somebody made it with their hands," said Smith. "When we look at Old World producers and wines, we think about the artisan producer, and we think about their sense of balance in nature. And that's why the label looks as it looks, the colors in balance with nature. It's highly visible."

He proves equally involved in the label's wording. "Back in the day, they said 'Go West, young man' to find your fortune," Smith explains. "The West was always considered the Promised Land, where everything was possible. And the wine itself is called "Golden West 'The Promise' Pinot Noir" because for me, it's to fulfill the promise between myself and the person who buys a

bottle of my wine. I came out here to the Golden West to seek my fortune and fulfill my promise through the work that I do."

Legacy

Ultimately, Smith regards Golden West as his legacy project. "I believe it'll be my legacy. When does one ever have the chance to be the first?" he asks. "I wasn't trying to be the first in a meaningful way. I mean, there are other people making Pinot Noir in Washington state, in very small batches, and very much under the radar. I sell wine in 50 states, and in 28 countries. When I say, 'in a meaningful way,' I mean, where more people can have access to it, in a volume where there's wine to be had. So, in that way, I can be the first to ever try from Washington state. And to do it in a way that deserves to exist. I mean, I don't plant enough grapes over 10 years to produce 150,000 cases of single vineyard wine unless I mean it."

Clearly, he means it. A shrewd businessman with an artisan's soul, Golden West reflects Smith's quest for self-expression. "My wine has to have heart," he concluded. "Otherwise, it'd be heartbreaking for me. It really means something to me. It means everything. You know, I can't force people to love the wine, the wine must be something you can love." WBM



Welcome to the new age of Winemaking





Tank Temp Control

Unmatched anytime/anywhere features for controlling, viewing and alarming with single and multi temperature sensor options



Integrated Winery Control Monitor and control every aspect of your winery operation including temperature, pumpover, headspace gassing, refrigeration plant, power usage, water, barrel halls, waste, fermentation and grape receival via one remotely accessible interface



Power Savings

Intelligent control of your refrigeration plant driven by the status of your wine, pulse cooling, off-peak load scheduling, circulation pump control, task scheduling and more...



For more information please contact us:

phone 720 284 2059 email kelly@vinwizard.us website vinwizard.com

ASEV-NGRA PRECISION VITICULTURE DEMO DAY

Data-driven Farming and Vineyard Automation

Cyril Penn



Jovany Cruz, technology and innovation manager at Scheid Vineyards, discusses vineyard apps.

Vineyard Tech at Scheid Vineyards

Jovany Cruz, technology and innovation manager for Scheid, discussed two apps the company uses: Tule Vision and HeavyConnect.

Tule Vision helps growers make irrigation decisions (see "Tule Technologies Adds Field Installations, Expands Irrigation Management Services," *WBM* July 2015; "What's Cool: Vineyard Water Management From Tule Technologies," *WBM* March 2015; and "Tule Vision App allows growers to obtain midday leaf water potential readings by taking short videos of their vines," *winebusiness. com* Feb. 20, 2020). HeavyConnect is a data collection app that can be used in various ways. Scheid uses it to track pests (mealybugs, mites or any issue in the field), for shoot counts, crop estimation, accessing information about different vineyards, and for generally taking operations paperless and onto one platform.

Scheid director of viticulture and technology Craig Winn said the company has been looking at a range of technology options, including electric tractors and other vineyard automation tools in development. At this point, his "favorite" vineyard technology involves sensors; sensors from

As labor costs increase, grape growers continue to adopt new technology. Some are already doing whatever they can to take labor out of each step of the process of growing winegrapes without negatively affecting quality. When labor gets to the point where it's prohibitively expensive or unavailable, growers will turn to robots. Machine vision and artificial intelligence technology already being deployed for orchard and row crops will play a role in the vineyard, driven by farming costs.

The American Society for Enology and Viticulture and the National Grape Research Alliance presented an intensive one-day event in California's Salinas Valley that showcased how data-driven approaches and precision viticulture technologies can improve business. Demonstrations took place at Scheid Family Wines, Valley Farm Management, Monterey Pacific and Tanimura & Antle. Tule—coupled with sensors from Davis Instruments that run data through HeavyConnect—make things "super-efficient," he noted.

The tour at Scheid also included demonstrations by Nutrien Ag Solutions and Biobest Sustainable Crop Management.

Innovation at Monterey Pacific

Monterey Pacific farms nearly 17,000 acres of winegrapes. Company president Steve McIntyre talked about taking labor out of growing grapes at almost every step of the process (harvesting, pruning, suckering, shoot-thinning and more) without negatively influencing quality while improving uniformity. He discussed labor, trellis systems and planting scenarios.



Solutions from Above provides the drone technology while Biobest provides the beneficial insects being delivered by drone.



Deloitte.

Stressed vines produce better wines But stressed business leaders? That's not sustainable.

Winery Solutions and Services. Decant the possibilities.

Contact us to learn more: Winery@deloitte.com

Copyright © 2022. Deloitte Development LLC. All rights reserved.



WEED-IT is on display at Patricia Lane Vineyard in Greenfield.



JENNY DEVINE

Jeff Leher, equipment supervisor with Monterey Pacific, developed a unit that integrates a compost spreader into a three-point mounted, in-row ripper. It's been modified to spread compost and a mixture of compost and biochar right behind a combined ripper and compost spreader unit. It was designed so the compost biochar mixture will go directly into the ground on the backside of the shank. Monterey Pacific has been beta-testing GUSS (Global Unmanned Spray System), a semi-autonomous sprayer system. A single operator can remotely monitor up to eight GUSS sprayers from a laptop. The GUSS machines use GPS, light detection, vehicle sensors and software to run through the vineyard without an operator. There's an Orchard GUSS, and a smaller Mini GUSS for vineyards.

Herbicide Application

Monterey Pacific demonstrated WEED-IT. WEED-IT uses optical eyes to look for weeds rather than just haphazardly spraying. It only turns the nozzles on when it sees a weed. That saves in material costs per acre and on application time too because you're not filling up as much when you're spraying.

Biochar Application

Doug Beck, soil scientist and agronomist with Monterey Pacific, talked about precision agriculture, along with the agronomic benefits of biochar (see Vineyards Experiment with Biochar as Soil Amendment," *WBM*, April 2016, for more on biochar trials at Monterey Pacific).

Beck noted that precision agriculture, in general, can be defined as a management strategy that takes temporal and spatial variability into account to improve uniformity and sustainability in production. He said eliminating variability improves quality. "The more variability you have in your blocks, the more difficult and more expensive it is and the less chance you have of really exceeding your wine quality standards because you have those variables."



CYRIL PENN

A VERIS unit was set up to measure electrical conductivity and organic matter in soil. Combined with a software program, it will map those two indices in order to help with precision farming. That includes applying compost and bio char, as needed, in specific areas, according to a generated map.

Specialty Specialty

Cost-Effective Wastewater Treatment Systems



Contact industry experts and engineers for your

Winery Wastewater Treatment Solutions

(707) 373-7490 info@stswatertreatment.com | STSWaterTreatment.com



Steve McIntyre discusses the labor situation and High Wire Mechanized Pruning.

High Wire Mechanized Pruning

At Patricia Lane in Greenfield, Monterey Pacific farms two vineyards with a "high wire, mechanically-pruned trellis system"—one has 40 acres planted; the other is 100 acres.

The setup consists of a 48'-52' high cordon with a rectangular box that gets developed over the first five years of the vineyard. For the first three years, it's a modified sprawl with a catch wire to hold the cordon. That wire is later removed. Mechanical pruning starts in year four, and by year five the rectangular box puts out 8-9 tons of fruit with smaller clusters, looser berries, more shade and with good air movement to reduce disease.

Monterey Pacific has been using minimally-pruned, box-pruned vineyards for more than a decade with a number of varieties, including Pinot Noir, starting with the 100-acre vineyard converted from VSP trellising. "Our experience has demonstrated that the wine quality for that \$20 bottle of wine or a \$15 bottle of wine is just as good and, in some cases, better," McIntyre noted.

"Australia's been doing this for eons," he added. "Really, this is a response to labor. We are at \$15 an hour for general labor (in California). It's a little bit more here because of the competition for labor. There's a provision in that law that has it go up 3.5 percent a year from here on out or increase by the inflation rate, whichever is higher. We've got to do something."

Extra Tall Dormant Bench Crafts

Three years ago, when the Monterey Pacific team was scheduled to prep and plant the 40-acre block at Patricia Lane, they got behind schedule, so instead of rushing to plant, the nursery held the vines until the following year. It added a cost at the nursery, about \$1 per vine, but saved costs in the vineyard. Eight months later, the site was prepped and ready to plant. Once planted, the vines produced higher tonnage, faster than the vineyard block planted just a few yards away the year before.



Look, no hands. Case New Holland showed off a versatile over-the-row tractor and harvester that can be fitted with various implements, including a picking head. It can be operated as a trimmer. The machine employs sensors to help it steer. Cameras measure row spacing, wheel angles, etc. The system can steer its way down the row for the operator.

This modification of the UberVine concept—which Duarte Nursery developed with an extra-long rootstock cane—takes it a step further with more time in the nursery to deliver a bare root vine that's dormant, does better in the wind and is nearly 48" tall after 24" dormant vines are grown an extra year. Vines delivered—as potted, rooted, dormant tall vines—yielded 3.5 tons per acre after just 16 months in the ground and continue to do well, McIntyre noted. He said the practice saves nine months of cultural costs and provided an extra ton per acre in the second leaf without overstressing the vines.

Green vines don't do well in the wind in Monterey, even in tubes, but holding the vines at the nursery for an extra year worked well, McIntyre added.

Electronic Timekeeping

Jason Smith is president and CEO of Valley Farm Management, which has been farming for 50 years and has about 2,500 acres in 12 locations. Valley Farm Management worked with Reliable Business Solutions this year to add electronic timekeeping and eliminate issues with paper timecards and better track breaks for legal compliance. "We needed an efficient use of employee time to maintain our 40-hour week and minimize overtime and needed better budgeting for labor and equipment," Smith said.

Applying AI to AG

Over at a site owned by Tanimura & Antle, a large row crop farming outfit, Stout Smart Technologies showed off its Smart Cultivator and Smart Sprayer. Both machines incorporate AI machine learning and robotics. They're quite expensive and are used for row crops, but Stout AgTech's CEO, Brent Shedd, said viticulture could be on the company's development path.

Shedd said the smart cultivator is essentially a "smart hoeing" crew that cultivates the ground while eliminating weeds. Information from cameras goes through a "convolutional neural network" tied to a monolithic artificial



John Deere demonstrated the Smart-Apply Intelligent Spray Control System Air Blast Sprayer Add-on Kit, which employs a machine vision system and is towed behind a tractor. Smart-Apply can reduce the potential for chemical drift and help decrease the amount of product being applied. It's already used widely for row crops.



Burro showed off vision-based robots, used by table grape growers and nurseries. They're outfitted with cameras in front and back and with GPS and a radio that communicates with a base station.

intelligence model on the back end. The machine interprets what kind of weed it's looking at.

"One of these machines takes 25 to 30 people out of your field. That's how you calculate the ROI," Shedd quipped.

Shedd offered a high-level view of how artificial intelligence applies to agriculture and viticulture, noting that machine vision, i.e., taking pictures, is used in systems, such as Smart-Apply, Burro and Case New Holland, artificial intelligence at the back end interprets what machine vision is showing and does something about it.

He said the key area that's going to matter in agriculture and viticulture with robotics is artificial intelligence, actuating and telling robots what to do, whether it involves an arm grabbing something, blades cutting something or other tasks. He warned that growers should be skeptical about companies from outside of agriculture that are touting technology. "If it's a winery who













Stout AgTech CEO Brent Shedd

built it to solve their own problem, it's probably going to work," Shedd said. "If it's a technology company coming out of who knows where in Silicon Valley and it's a bunch of technologists saying, 'We know this can work in your space,' look out—because they don't know your space."

There's a whole world of change that's coming to viticulture, and robotics are going to start coming through with smart machines, Shedd remarked. "A lot of it is going to be driven by the vineyards themselves, saying, 'I'm just tired of this. I can't get the people I need. I have to automate this some way.' Desperation yields innovation. When you need it bad enough, you make it come into reality. That's going to drive the timeline."

"When things evolve to a point where there's no labor or the labor is prohibitively expensive, the wine industry will turn to robots," E. & J. Gallo Winery grower outreach specialist Keith Striegler, one of the people that helped organize Precision Viticulture Demo Day, said. "It will be driven by what the costs are." Taking labor out of growing grapes at every step of the process, without reducing yields or quality, is "what we all want to be doing," Striegler observed. "There may be ways to do it that we're not really even thinking about right now." **WBM**



Keith Striegler of E. & J. Gallo Winery and author Cyril Penn

Artesa Vineyards & Winery, Ascentia Wine Estates, B Cellars, B R v, Bedell Cellars and Corey Creek Vineyards, Bell Wine Cellars, Ber ry, Benziger Family Winery, Bergevin Lane Vineyards, Bergstrom Wi Winery and Tasting Room, Black Hills Estate Winery, Black Stallion ry, Blackbird Vineyards, Bogle Vineyards, Bouchaine Vineyards, Buc The Wine Industry's Leading Online Job Site Cakebr Cameron Hughes Wine Co., Castello di Amorosa, Caymus Vineyards state Vineyards & Winery, Chance Creek Vineyards (Bock), Chappel 'harles Krug Winey, Chateau Bianca, Mateau Dian, Chateau Mont Vir ion Cont ir Jogs wine Group, ipa ss Estates, comersione cenars, Cru state Wines, Darioush Winery, Dashe Cellars, Dario Porte annry, I ards, Del Dotto Vineyards, Delicato Vineyards - Custon Desource Gi ine Estates, Diageo Chateau & Estate Wines, Dierberg/Star Lane Vin ine Carneros, Ltd., Domaine Chandon, Domaine Serene Vineyards & on Sebastiani & Sons, Dono Dal Cielo Vineyard, Dry Creek Vineyard WinMoretwineries-use winejobs.com ine, Fantesca Estate & Winery, Far Niente Winery, Ferrari-Carano Via ry, i**than any Fother online job Site**ry & V Family Wines, Francis Ford Coppola Presents, Frank Family Vineya Sonoma Caves, Fritz Winery, Frog's Leap Winery, Galante Family Wi ora Wine Cellars, Goosecross Cellars, Grgich Hills Estate, Groth Vine ry, Gundlach Bundschu Winery, Hagafen Cellars, Hahn Family Wine HCreated & Managed byly Estate, Heitz Wine Cellars, Hess Co Vinery, Hudson Vinevards, Ironstone Vinevards, J F J Bronco Winer ard WINE BUSINESS: MONTH Lick Neal & Son Vineyard Mgr ordan Vineyard & Winery, Joseph Phelps Vineyards, Justin Vineyard eller 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 ry, Lucas & Lewellen Vineyards, Lynmar Winery, Marimar Estate Vir nery, Martinelli Winery, Medlock Ames, Mendocino Wine Co./Parduo

INSIGHT & OPINION An Elegy for Terroir

Larry Brooks



Larry Brooks is known as a winemaker's winemaker based on nearly four decades of practice. There are few styles of wine he has not made, but he primarily focuses on Pinot Noir and Chardonnay. Brooks began making wine at Acacia Winery in Carneros in 1979. He transitioned into the role of COO and VP of Winemaking for the Chalone Wine Group in the mid 1990's where he managed the original five wineries, developed Echelon, and managed the acquisition and development of Sagelands in Washington and Provenance in Napa. Consulting led to his role as Winemaker/GM for Tolosa in San Luis Obispo between 2006 and 2014. Today, he consults across California and is working on a book *www.avoluptuary.com*.

My love affair with German Rieslings began in my senior year of high school in 1967 several years before I was legally allowed to drink in New Jersey. Luckily for me, at that time you could buy wine and beer in New York at age 18, and my friends and I would regularly drive into Manhattan to fill the trunk of the car with cases of beer and slender brown and green hock bottles. Like most teenagers, we were fairly broke, but even so, we had standards. The bottles had to be cork-finished. We tried to spend no more than \$1.00 a bottle. This is roughly equivalent to a \$10.00 bottle these days, so it wasn't great wine, but it was, to my untutored tastes, delicious.

Over the decades, both my expertise in winetasting and my pockets have deepened, but the love of German Riesling has remained steadfast. For some reason it saddens me the most when I think how the terroir of these beautiful river valleys will be destroyed by the climate crisis. Temperatures are increasing in all wine growing regions, yet it seems particularly tragic to me that the wines of the Rhine and Mosel will lose the very specific character that these unique sites and soils have produced for more than a thousand years. As much as I love Burgundy and Champagne, wine regions that are equally threatened by a warming world, for me the idea that the type of Riesling that I've known my entire drinking life will cease to exist is simply heartbreaking.

... for me the idea that the type of Riesling that I've known my entire drinking life will cease to exist is simply heartbreaking.

Terroir, that "taste of somewhereness" as a British wine writer so aptly phrased it, is the result of many things. Soil is the primary determinant. But without the correct range of temperature, a given variety will not express typical character, much less any specific terroir. It's almost ironic that the very best scientific studies on terroir were done with Rieslings in Germany.

While the trend of increasing atmospheric CO_2 and risks of the current global warming have been recognized since the '70s, the actual warming in most growing areas began in the late '80s. Many have described the climate

In less than 30 years, at the rate of current trends most of the world's historically famous terroirs and the wines they produce will be unrecognizable due to temperature increases.

crisis as a slow-moving disaster—its dangers largely unperceived by our brains evolved to respond to more immediate risks. But to winemakers working with vineyards expected to produce wine for 30 years or more, a decadal approach to time perception should not seem abnormal. Over the 40 or so years of my own wines made largely in coastal California, the changes are obviously apparent. In my first decade as a winemaker, there were three cold vintages. In the most recent decade only one of the vintages could be called cold. While this is anecdotal, the warming trends are confirmed by all detailed weather data. It's steadily getting warmer. The extremes on the warm side of the spectrum are getting more frequent and more severe. My first decade as a winemaker had only one hot vintage. I've seen two of the last five years have had extremely hot weather during ripening. In 2020 a temperature of 120°F was reached here in San Luis Obispo, a cool coastal area only 10 miles or so from the Pacific Ocean.

Agriculture, in general, is under threat from climate change. The dangers are primarily the direct result of the heat but also its effects on patterns of rainfall and water supply. Fine wine production is particularly vulnerable. The best wines in almost all regions are produced at the cooler end of their optimum temperature range. One has only to look at Napa County to see this clearly. Pope Valley, which is just over the Vaca Mountains from Napa Valley, is considerably warmer than Napa Valley, and the price of the grapes and wines it produces is less than a third of what Napa Valley wines bring. In a relatively short time Napa Valley will be warmer than Pope Valley is now. In less than 30 years, at the rate of current trends most of the world's historically famous terroirs and the wines they produce will be unrecognizable due to temperature increases. For anyone who loves fine wine, this is a disaster. It is a threat of unprecedented and existential scale.

This threat can be responded to individually, and some wineries are doing so. Individual efforts are admirable. But there are limits to what any individual or organization can do. In a recent conversation with Jason Hass, who is expending tremendous effort in this area, he estimated that if Tablas Creek did everything possible, they would still only be able to eliminate 40 percent of the carbon emissions associated with producing and selling wine. Even if every winery did everything in their power, it would still not be enough. And in fact, only a minority of wineries are focused on significantly reducing carbon emissions.

It will take political will and legislative change to reduce carbon emissions enough. One thing all vintners can do is engage with their local, state and federal representatives to treat this threat for what it is-dire! It doesn't matter where on the political spectrum you fall. We all breathe the same air. The thermometer reads the same for all parties. It's time to recognize that climate change is terribly threatening to agriculture and to start demanding that our government prioritize food and wine over coal and oil.

If you love fine wine, it's time to get on the phone and get out the checkbook. Your elected representative won't know you care about this unless they hear from you. It doesn't matter if you voted Republican or Democrat. Whoever you voted for needs to hear from you on this subject. Because you can be certain they are hearing from the oil industry and, more likely than not, taking their donations. The organizations that are working on this need your support as well. While agriculture only employs a small percentage of the population, it's an important voice, and it needs to be heard loudly and immediately on this subject which threatens it. WBM

High-Quality Products for Winemakers WE HELP YOU MAKE PROCESSING EASIER

The Next Gen D-Selector 6



Combo destemmer/auto mechanical sorter with optional crushing unit.

Destem directly onto an automatic mechanical sorting line, then direct berries into the crushing unit, pump hopper or fermentation bin.

Reduces MOG to a bare minimum.

For online catalogs visit spectrellising.com For more information & pricing call 800.237.4594



BUY FROM THE LARGEST GRAPEVINE NURSERY IN NORTH AMERICA!

WE OFFER:

- The Most Tested Vines
- In-House Testing Lab
- The Largest Selection
- The Largest Sales & Support Team
- State-Of-The-Art Facilities



WonderfulNurseries.com 27920 McCombs Road, Wasco, California 93280

661.758.4777

© 2022 Wonderful Nurseries LLC. All rights reserved. WONDERFUL, WONDERFUL NURSERIES and the accompanying logos are trademarks of Wonderful Nurseries LLC or its affiliates.



2022 PACK Design Awards

Luxury Category Entrant S by Ray Signorello Takes Home Best in Show

Classic Luxury Series Redesign Alternative /N	on-glass
---	----------

FROM SUBTLE DETAILS to fun and daring designs, wineries across the country submitted their innovative packaging ideas to the ninth annual PACK Design Awards, hosted by *Wine Business Monthly*. A panel of independent judges decided that it was the luxury package from Signorello Estate that stole the show. Subtlety is "striking" in this design, featuring copper accents, topography and the heirloomed, monogrammed cufflinks of the owner. Judges said it was "well done!" and "beautiful", and appreciated the clear, insightful description of the style of wine on the back label.

Each year *Wine Business Monthly* hosts the annual wine industry competition to cultivate fresh ideas and perspective about new packaging designs. Year after year, the PACK Design Awards have helped build a sense of community around packaging design advocates and recognize those companies that are pushing the envelope when it comes to new takes on the classics and alternative formats.

Once again, the PACK Design Awards were held fully online. As a fully digital event, those who submitted entries were asked to upload images of

their packages, rather than ship bottles to *Wine Business Monthly*. WBM partnered with Outshinery to create clean, clear and perfect images for all participants, to ensure an even and fair online judging. To view all the entries, visit the Packaging Showcase at *www.wbmpack.com*.

Now more than ever, wineries and brands need to rethink the way they reach their customers, with packaging at the forefront. A package does not only need to stand out on a shelf, but it also needs to pop on a screen, attracting those purchasing wine online.

Experienced, independent judges that represent wine retail and distribution, e-commerce, wine writing and wine education came together to determine the winners in five categories—classic, luxury, redesign, non-glass format and series—as well as the Best in Show, which was selected from the first-place winners in each category.





Amcor, the largest range of capsules and closures for Wine, Sparkling and Spirits.

Contact us at +1707-257-6481 info.capasules@amcor.com www.amcor.com







SOFTGARD

Tin









HOOD Tin Polyaminate

CAPGARD Aluminium

Polyaminate

STELVIN The original wine aluminium closure



Best Classic Format Design

This category is open to traditional 750ml bottles. Packages were judged on their visual appeal, design functionality, appropriateness for the price segment and the creative utilization of the classic bottle format.



1st PLACE

Onip \$22

FROM THE WINERY: This package was designed as a charitable project by King Estate Winery for the people of Ukraine. The label Onip (pronounced Oh-peer) is the Ukraine word for resistance. The design was made for screen print and uses the colors from the Ukraine flag. The glass is used as a knockout for the text with a metallic ink border. With 100% of sales dedicated to Ukrainian relief efforts, the wine sold out in less than four days.

COMMENTS FROM THE JUDGES: "Cool all around."

"My first reaction was confusion, but when it sunk in what they did here, I loved it. This is cool—striking—and I love the fact that it sold out fast."

"Fantastic example of cause marketing."

Contributors

DESIGNER: Taylor King BOTTLE VENDOR: TricorBraun Wine Pals CLOSURE VENDOR: Amcor LABEL VENDOR: Custom Label



Dry Creek Vineyard 2021 50th Anniversary Fumé Blanc \$16

Contributors

DESIGNER: Auston Design Group BOTTLE VENDOR: TricorBraun WinePak CLOSURE VENDOR: Amcor LABEL VENDOR: CCL Label



3rd PLACE

19 Crimes Cali Rosé \$13

Contributors

BOTTLE VENDOR: Stranger & Stranger BOTTLE VENDOR: O-I CLOSURE VENDOR: Amcor LABEL VENDOR: MCC Label Direct

Best Luxury Package Design



Open to any packaging format that retails for \$40 and higher at a 750ml equivalent, whose packages are designed to compete and succeed on high-end restaurant wine lists and in fine wine shops against luxury wines from around the world. Packages were judged on their visual appeal, design functionality, appropriateness for the price segment and quality of packaging materials used.



1st PLACE

S by Ray Signorello \$75

FROM THE WINERY: S is crafted from diverse appellations such as Howell Mountain, Rutherford, and St. Helena, with a vision to produce a modern, plush Cabernet Sauvignon. The label creation for S was inspired by the simplicity and elegance of Ray's heirloom monogrammed cufflinks, given to him by his father, Ray Sr., the visionary co-founder of Signorello Estate. Behind the monogram is an embossed modern "S" pattern that hints toward topography lines and multiple vineyard sites.

COMMENTS FROM THE JUDGES: "Well done!"

"The label is striking, even if the average consumer isn't much interested in Ray's cufflinks, or won't make out the topography meaning in the wavy lines. I do like the fact, though, that the back description is pretty clear about the style of the wine."

"Beautiful"



Contributors

DESIGNER: Lisa Hobro Design BOTTLE VENDOR: Saxco International CLOSURE VENDOR: G3 Enterprises CAPSULE VENDOR: Cork Supply USA LABEL VENDOR: Multi-Color Corp., Wine & Spirits



2nd PLACE

Dry Creek Vineyard 2021 50th Anniversary Cabernet Sauvignon \$100

Contributors

DESIGNER: Auston Design Group BOTTLE VENDOR: TricorBraun WinePak CLOSURE VENDOR: Cork Supply USA CAPSULE VENDOR: Cork Supply USA LABEL VENDOR: Global Package



3rd PLACE

Lasseter Trinity Ridge \$150

Contributors

DESIGNER: Lisa Hobro Design BOTTLE VENDOR: Global Package CLOSURE VENDOR: Amorim Cork America CAPSULE VENDOR: Amcor LABEL VENDOR:: Multi-Color Corp., Wine & Spirits

To view all entries, visit: *wbmevents.com/pack/entries*



Best Package Series Design

The Package Series Design is open to entries consisting of two or more pieces that work together as a cohesive whole. Packages were judged on the cohesiveness of the series, their visual appeal as a series and as individual bottles, design functionality and appropriateness for the price segment.

1st PLACE

One Stone Cabernet Sauvignon & Rosé of Pinor Noir \$20 and \$18



FROM THE WINERY: Each label features an original painting commissioned from local artist Audrey Jackson whose distinctive artistry cohesively ties each wine together. They have performed exceedingly well in the market receiving enthusiastic feedback from consumers and trade. Our label images were not created in a digital media program—they were painted onto canvas–giving them a tactile authenticity that makes its own innovative mark on the shelf. Our labels tied to our story stand out from the competition.

COMMENTS FROM THE JUDGES: "The authenticity of the label art actually comes through on the labels!"

"These painted images really do stand out, and I like their connection to the women behind the program."

"Bravo!"

Contributors

DESIGNER: Audrey Jackson BOTTLE VENDOR: TricorBraun WinePak CLOSURE VENDOR: MA Silva USA CAPSULE VENDOR: Amcor LABEL VENDOR: Multi-Color Corp., Wine & Spirits



Bandit Wines \$9.99 / 1L



Contributors DESIGNER: Insite Design, Ontario Canada CONTAINER VENDOR: Tetra Pak PRINTER: Tetra Pak. **3rd PLACE**

Soleil Mimosa \$15



Contributors DESIGNER: Vint Studio - Scout Driscoll BOTTLE VENDOR: Gallo Glass Co. LABEL VENDOR: CCL Label CLOSURE VENDOR: Atlas Packaging



Celebrating California's Resiliency

For over 60 years, Gallo Glass has supported, grown, and prevailed through difficult times with our partners. We are still here for your long-term supply needs and offer the real sense of security you look for in a wine bottle manufacturer. Enjoy our broad range of color and bottle selections that continue to support California's wine industry.



MODESTO, CA I galloglass.com



Best Package Redesign

The redesign must have been introduced to the marketplace between May 1, 2018, and May 1, 2021. Packages were judged on the successfulness of the redesign, their visual appeal, design functionality and appropriateness for the price segment.



1st PLACE

Waterbrook Winery \$45

FROM THE WINERY: The previous Icon package design was starting to feel bland. Our goal with the redesign was to exemplify the series' name: Icon. The design needed to be distinct and recognizable—an instant classic. The new design brings a higher level of sophistication and elegance, while maintaining a similar simplicity from the previous design that also works to highlight Waterbrook's iconic monogram.

Contributors

DESIGNER: Amanda Rockwell **BOTTLE VENDOR:** Ardagh Glass Packaging — North America **CLOSURE VENDOR:** Portocork America **CAPSULE VENDOR:** Amcor LABEL VENDOR: Multi-Color Corp., Wine & Spirits

COMMENTS FROM THE JUDGES: "By maintaining the same font style in both labels, it makes the leap less abrupt for a regular consumer of the wine who may not link the logo of Waterbrook to the W."

"I think there's a marked increase in the perceived value of the wine in the new package. The Waterbrook logo is appealing, and the Icon tier is highlighted well."





2nd PLACE

J. Lohr Vineyards & Wines \$13

Contributors

DESIGNER: Bergin Screen Printing and Etching **BOTTLE VENDOR: Saxco** International **CLOSURE VENDOR:** G3 Enterprises **LABEL VENDOR:** Bergin Screen Printing and Etching





FEL \$40

Contributors

DESIGNER: Lisa Hobro Design **BOTTLE VENDOR:** TricorBraun WinePak **CLOSURE VENDOR:** Cork Supply USA **CAPSULE VENDOR:** Cork Supply USA LABEL VENDOR: Multi-Color Corp., Wine & Spirits

Guala Closures North America



presents



Enjoy the benefits *of an* Aluminum Closure *with the* look of a Traditional Cork

> Manufactured in Fairfield, California U.S.A.



Tel 707 425 2277 Email: info@gualaclosuresNA.com www.gualaclosures.com



Best Alternative/Non-glass Design

This category is open to any packaging not in glass bottle format. Examples include: single serve, cans, wine boxes, bags, plastic, large format, etc. Packages were judged on their visual appeal, design functionality, appropriateness for the price segment and creative utilization of the alternative packaging format.



1st PLACE

Wise Villa Winery \$5.75 / 250mL 4-pack

FROM THE WINERY: Be smart, drink Wise! We wanted to create a product that is easy to take on the go without losing the integrity of an elegant glass of wine. Our canned wine is perfect for enjoying at a picnic, bringing to the beach, pool, or any other on the go activity. The Chardonnay-colored, matte finish on the cans makes them easy to grip while giving them a velvety texture. The intricately designed owl on the front represents our company's branding and plays into the "wise owl" idiom. Cheers!

COMMENTS FROM THE JUDGES: *"GREAT example of a canned package"*

"I love the information delivered about this wine in a can. If the wine is good ... we need more like this."

Contributors

DESIGNER: In House CONTAINER VENDOR: Can Van LABEL VENDOR: Label done by Labeltronix

2nd PLACE

Bandit Wines \$9.99/1L

Contributors 30X DESIGN: Insite Design, Ontario Canada CONTAINER VENDOR: Tetra Pak PRINTER: Tetra Pak **3rd PLACE**

Tap 3 Innovations \$29.98/3L



Contributors DESIGNER: Argency

PINOT GRIGIO

We're here for all seasons



Leverage our 80 years of experience to provide you with a broad range of packaging solutions and supply chain services.

Our industry has seen the ups and downs of change, and Saxco has built supply chain relationships that can sustain all seasons.



1-877-641-4003

sales@saxco.com

www.saxco.com

Utah Label Goes Head to Head with World's Most Luxurious Wines

Andrew Adams

CHANELA

Chanela Vineyards)

St. George, Utah chanelavineyards.com annual case production: 1,000 cases Avg. bottle price: \$35

Entered in the Luxury category of the 2021 Pack Design Awards, the Chanela brand packaging design features premium materials used in a simple, yet elegant, design. The winery's name sits at the center of an embossed paper label that also bears the varietal and vintage.

"We wanted to go head-to-head with the best wines out there," said winemaker Doug McCombs who manages production for Chanela, along with his own brand, IG Winery. "If we slapped 'Utah' all over the label, people would just view it with all the prejudices they have of Utah wine."

When McCombs opened IG Winery in 2012, it was the first in Southern Utah since the late 1800s and today produces around 1,400 cases a year. According to the Wine Analytics Database, there are now 16 wineries in the state that make nearly 45,000 cases of wine. While the state's total production remains modest, McCombs observed the quality of wine coming off the Chanela vineyard is anything but, and he and owner Gary Ellis want the brand to stand on its own merit. The decision to go with premium packaging reflects the market they expect the brand will be in "when it grows up."

Ellis, a Las Vegas casino owner and restaurateur, bought the property in 2004 and developed a vineyard two years later. The 55-acre property is located at more than 4,000 feet elevation on the slopes of Pine Valley Mountain. McCombs said the area's extreme diurnal fluctuations, as well as sandy loam and decomposed sandstone soils, have helped the vineyard (which was redeveloped in 2017) produce some exceptional wines already, and McCombs has high hopes for future vintages.

Ellis created the name Chanela by using letters from each of his three daughter's names while Los Angelesbased designer Victor Corbera developed both the classic label and a more casual expression of the brand for a second wine. The second label bears the Chanela name in a larger, cursive script, and the wine itself is **Packaging Vendors:**

Designer: Corbera Creative Bottles: West Coast Bottles Closures: Ganau America capsules: Wine Country Closures labels: MCC Wine & Spirits

a blend of second-tier wines. "It really depends on how good the fruit is coming out of the vineyard," McCombs remarked. "The 'formal' label is really for outstanding, very superior quality."

McCombs said the vineyard is comprised of around 20 acres planted to a wide variety of varieties as they fine-tune what does best in the area and what tonnage to expect. (Tempranillo and Sangiovese appear to enjoy the climate the best while Cabernet

Sauvignon can produce high-quality fruit but at low yields.) High-elevation, desert grape growing comes with many challenges, including dramatic swings in temperature and weather throughout the growing season.

In step with improving grape growing and winemaking every year, McCombs plans to build sales centered around a new production facility and tasting room in the St. George area. Located between Las Vegas and Zion/ Bryce Canyon national parks, the area sees more than enough visitor traffic to support a tasting room.

And when asked about operating a beverage alcohol business in the ultimate control state, McCombs answers in a way that it's clear he's been asked such questions many, many times. He said the initial permit process was straightforward and relatively simple while state regulators and ordinances aren't too onerous or seem biased against alcohol production. It sometimes seems harder to convince people outside of the state that you can make wine in Utah than it is dealing with state officials, McCombs observed, recalling a bulk wine seller who incorrectly insisted the wine could not legally be trucked and delivered to Utah.

Retail sales in a state-controlled system are more challenging, hence the decision to focus on the tasting room model. McCombs can ship packaged Chanela wines across the United States even though the state is one of a few that remains closed to shipments from wineries in other states. "It's much easier to open and operate a winery in Utah than in California," he added. **WBM**






Anything Is Possible[®] with Berlin Packaging BerlinPackaging.com · 1.800.2.BERLIN Berlin Packaging is the world's largest hybrid packaging supplier," providing award-winning packaging solutions for wineries and distributors of all sizes. We partner with suppliers around the globe to source premium stock bottles and closures for every vintage and varietal.

Our Studio One Eleven[®] design & innovation division develops world-class custom structural designs and branding strategies that win both online and on the shelf. And our warehousing and inventory management expertise make us the perfect one-stop shop for all your wine packaging needs. Berlin Packaging is here to help you Package More Profit[®].

A monthly, interactive digital publication.

WINE ANALYTICS REPORT

The wine industry's leading data source for market strategy and analytics

Subscribe today! wineanalyticsreport.com • 415.453.9700

Retail Wine Sales Fall 4 Percent in June

Wines Vines Analytics

Produced by **Wines Vines Analytics**, the *Wine Analytics Report* is the industry's leading source of market insights, objective analysis and data.

Sales Value Down 4 Percent in June

Off-premise table wine sales fell 4 percent versus a year ago to more than \$1.1 billion in the four weeks ended June 18, NielsenIQ scan data showed. Sales in the latest 52 weeks totaled \$16 billion, down 6 percent from the previous year. Box wines at \$4-plus per 750ml continued to see momentum, with sales up 2 per cent in the latest four weeks. The latest 52 weeks saw decelerating growth among wines selling for \$20-plus a bottle.

Sales Volume Down 6 Percent in June

Off-premise table wine volumes fell 6 percent versus a year ago in the four weeks ended June 18 to 11.2 million 9L cases. The decline contributed to a contraction of 9 percent in the latest 52 weeks to 156.2 million 9L cases. Sales volumes continued to decline more sharply than sales value, underscoring the shift in spending to more expensive wines. Box wines saw more aggressive growth in volume versus value during the period, signaling a value-conscious consumer. Most other categories continued to see value hold ground relative to volume. This was the case with \$25-plus bottles, the only price tier showing volume growth in the latest 52 weeks.

Half-Bottles Continue to See Growth

Glass remains the dominant packaging material for wine, accounting for 89 percent of all sales through NielsenIQ retail outlets in the latest 52 weeks. But the data for table wine sales indicate that when it comes to glass, less is more. Sales in half-bottles posted the strongest growth in the 52 weeks ended June 18, rising nearly 14 percent to \$61.6 million in sales. While this is just a fraction of the \$14 billion worth of wine sold in glass during the period, 375ml format has overtaken 3L bottles to rank fifth among the six glass sizes NielsenIQ reports. It's also closing in on 4L bottles, which together with 3L bottles have lost ground to boxes in recent years. But the 187ml format has also slipped, falling 14 percent in the period on lower demand from a range of hospitality uses and the rise of glass alternatives for smaller formats.

The shifts have helped bring the 375ml format into its own, a point underscored by average bottle price. Traditionally, the format has commanded the highest average bottle price, with the price two years ago averaging \$23.80 per 750ml. During the most recent 52 weeks, the average price was \$22.56 per 750ml, distinguishing the format as the only glass format to see a decline in pricing over the period. This points to sales of less expensive wines. Yet the format hasn't been left behind entirely by premiumization. During the latest four weeks, the average price increased 2 percent to \$23.04 per 750ml. **WBM**





Methodology

Sourced from NielsenIQ, 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. NielsenIQ figures are updated and released every four weeks.

NielsenIQ Table Wine Category Segments MARKET: Total US xAOC+Conv+Military+Liquor Plus PERIOD: Week Ending June 18, 2022

		Dollar Value		Dollar Value % Chg YA		9L Equivalent Volume		9L Equivalent Volume % Chg YA		Avg Equivalent Price Per 750ML	
	NielsenIQ	Latest 52 Wks - W/E 06/18/22	Latest 4 Wks - W/E 06/18/22	Latest 52 Wks - W/E 06/18/22	Latest 4 Wks - W/E 05/21/22	Latest 52 Wks - W/E 06/18/22	Latest 4 Wks - W/E 06/18/22	Latest 52 Wks - W/E 06/18/22	Latest 4 Wks - W/E 06/18/22	Latest 52 Wks - W/E 06/18/22	Latest 4 Wks - W/E 06/18/22
	TOTAL TABLE WINE	15,977,077,980	1,142,548,999	-6.2	-4.1	156,197,114	11,210,072	-9.4	-6.2	8.52	8.49
	BOX	1,572,596,241	120,704,823	-5.7	1.3	35,260,445	2,670,279	-7	-0.9	3.72	3.77
~	\$0-\$3.99	556,204,874	42,357,118	-8.9	-0.9	18,391,611	1,366,235	-10.1	-4.5	2.52	2.58
VERS	\$4+	1,015,814,391	78,256,351	-3.9	2.4	16,855,359	1,301,964	-3.4	3	5.02	5.01
PRICE TIERS BY CONTAINERS	Total Table Wine Glass	14,070,498,191	995,948,671	-6.3	-4.6	117,266,130	8,260,287	-10.2	-7.7	10	10.05
CON	Value Glass \$0-\$3.99	473,777,829	34,366,023	-15.6	-8.1	11,618,442	818,380	-17	-11.9	3.4	3.5
SΒY	Popular Glass \$4-\$7.99	2,659,781,663	194,406,135	-12.2	-5.8	39,359,875	2,808,555	-13.3	-8.7	5.63	5.77
EB	Premium Glass \$8-\$10.99	3,063,842,606	215,772,049	-10.7	-6.5	26,743,321	1,846,422	-11.4	-8.6	9.55	9.74
Ŀ	Super Premium Glass \$11-\$14.99	3,660,397,504	263,100,841	-4.6	-3.6	23,994,081 9,461,598	1,699,934 666,394	-5.6	-5.6	12.71	12.9 17.39
R	Ultra Premium Glass \$15-\$19.99	1,952,918,771 830,171,207	139,093,753	-0.8 1	-1.1 -0.9	3,138,554	231,476	-2 -0.2	-3.1 -2.6	17.2 22.04	22.29
	Luxury Glass \$20-\$24.99 Super Luxury Glass \$25+	1,405,338,581	61,917,974 84,189,847	3.8	-0.9 -9	2,775,977	168,730	-0.2	-2.0 -11	42.19	41.58
		4,380,817,194	323,635,975	-7.5	-4.8	41,441,351	3,022,751	-10	-6.6	8.81	8.92
	ITALY	1,440,723,746	98,837,300	-7.5	-6.3	11,354,481	778,299	-9.8	-8.5	10.57	10.58
	AUSTRALIA	649,007,920	46,733,801	-13.1	-8	10,366,438	744,972	-12.9	-9.2	5.22	5.23
	FRANCE	627,769,290	52,248,122	-5.7	-6.7	3,357,261	282,693	-10	-8.9	15.58	15.4
⊞	CHILE	359,464,888	26,043,589	-9.8	-2.1	6,189,760	452,329	-8.7	-0.9	4.84	4.8
IMPORTED	SPAIN	159,046,867	11,721,081	-5.5	1.5	1,135,589	87,276	-9.3	4.1	11.67	11.19
MP	GERMANY	78,552,228	5,457,125	-8.9	-7.4	668,555	46,395	-10.4	-7.1	9.79	9.8
	NEW ZEALAND	647,170,758	53,782,417	-0.3	2.4	4,412,390	360,034	-2.3	-0.8	12.22	12.45
	ARGENTINA	303,461,333	20,043,880	-11.7	-8.6	3,026,158	199,300	-13.9	-11.5	8.36	8.38
	SOUTH AFRICA	25,812,271	1,958,318	-9.9	-3.1	215,765	16,384	-8	-3.6	9.97	9.96
	PORTUGAL	49,823,206	4,094,373	-9.5	-2.8	484,250	39,367	-11.5	-6.6	8.57	8.67
	DOMESTIC	11,596,260,786	818,913,024	-5.7	-3.8	114,755,763	8,187,321	-9.2	-6.1	8.42	8.34
	CALIFORNIA	10,441,121,241	737,296,775	-5.2	-3.4	106,043,052	7,586,730	-8.9	-5.7	8.21	8.1
പ	WASHINGTON	584,465,296	41,259,494	-13.5	-8.6	4,597,309	319,649	-14.5	-10.9	10.59	10.76
STIC	OREGON	299,850,455	20,476,821	-4.6	-8.2	1,447,696	99,536	-7	-11.3	17.26	17.14 8.46
DOMESTIC	TEXAS NEW YORK	30,315,247 43,396,879	2,078,039 4,518,337	-14.5 -3.2	-12.5 10.7	314,883 453,456	20,460 35,605	-19.2 -8.6	-21.5 -1.8	8.02 7.98	10.58
	NORTH CAROLINA	44,910,155	4,518,557	-3.2	-0.1	445,557	30,547	-6.7	-1.8	8.4	8.71
	INDIANA	25,012,128	1,691,906	-7	-3.6	265,262	17,237	-8.4	-10	7.86	8.18
	MICHIGAN	25,817,294	1,602,116	-11	-11.6	254,680	15,229	-14	-14	8.45	8.77
6	RED	8,300,933,859	539,329,727	-6.7	-5.2	71,182,338	4,731,290	-10.3	-6.7	9.72	9.5
TYPES	WHITE	6,502,177,420	503,029,852	-4.4	-1.6	70,257,219	5,339,742	-7.4	-4.3	7.71	7.85
н	PINK	1,166,892,755	100,127,571	-12	-9.6	14,689,290	1,138,421	-14.5	-12.6	6.62	7.33
	TOTAL CHARDONNAY	2,707,835,944	206,524,804	-4.5	-2	28,773,654	2,174,519	-7.3	-4.3	7.84	7.92
	TOTAL CABERNET SAUVIGNON	3,168,215,223	208,369,271	-4	-3	25,341,516	1,712,864	-7.7	-3.6	10.42	10.14
	TOTAL PINOT GRIGIO/PINOT GRIS	1,466,832,044	114,865,632	-3.4	-0.7	17,933,121	1,378,200	-5.5	-3.1	6.82	6.95
	TOTAL PINOT NOIR	1,333,728,632	86,643,003	-3.4	-2.3	9,012,408	590,411	-6.6	-4.2	12.33	12.23
	TOTAL MERLOT	622,028,964	41,822,987	-11.3	-8.3	7,806,827	534,305	-13.5	-9.2	6.64	6.52
s	TOTAL SAUV BLANC/FUME	1,310,684,629	107,982,686	0.5	3.4	10,787,461	871,799	-2	0.7	10.13	10.32
TAL	TOTAL MUSCAT/MOSCATO	597,704,122	41,372,908	-13.8	-10.2	8,303,052	571,484	-15.9	-12.6	6	6.03
VARIETALS	TOTAL WHITE ZINFANDEL TOTAL MALBEC	223,701,871 237,343,135	16,315,361 15109 244	-14.2 -10.7	-10.9 -8.4	4,319,281 2,093,513	308,862 132,939	-15.2 -11.7	-12.8 -9	4.32 9.45	4.4 9.47
>	TOTAL RIESLING	228,574,615	15,109,244 16,054,017	-10.7 -11.5	-8.4 -9.5	2,093,513	132,939	-11.7 -13.7	-9 -11.3	9.45 8.44	9.47 8.56
	TOTAL ZINFANDEL	211,093,309	13,258,338	-12.6	-9.5	1,348,980	84,315	-13.7	-11.5	13.04	13.1
	TOTAL SHIRAZ/SYRAH	110,868,718	7,476,492	-15.3	-12.4	1,128,751	76,549	-18.2	-14.3	8.19	8.14
	WHITE BLENDS (ex. 4/5L)	250,595,569	19,025,011	-8.3	-4.9	2,638,078	196,049	-11.1	-6.5	7.92	8.09
	RED BLENDS (ex. 4/5L + CHIANTI)	2,145,066,033	135,217,188	-8.9	-8	17,399,578	1,116,606	-12.4	-9.6	10.27	10.09
	ROSE BLEND	678,043,425	64,767,320	-10.6	-9.7	5,169,467	460,153	-13.9	-13.8	10.93	11.73
	750ML	11,937,607,029	839,564,269	-5.6	-4.5	82,653,969	5,765,520	-9.4	-7.6	12.04	12.14
ES	1.5L	1,846,802,176	136,439,469	-10.8	-4.5	30,163,650	2,182,904	-12	-7.3	5.1	5.21
GLASS SIZES	3L	47,511,710	3,360,614	-14	-8.2	1,101,311	75,109	-17.3	-15	3.6	3.73
LAS	4L	65,605,757	4,823,966	-12.3	-6.5	1,986,556	142,436	-14	-10	2.75	2.82
5	187ML	87,720,499	6,215,480	-14.1	-11.3	985,481	69,034	-14.9	-13.1	7.42	7.5
	375ML	61,559,581	4,470,990	13.5	2.6	227,365	16,170	16.1	0.2	22.56	23.04
ZES	ex. 4/5L	1,109,237,265	85,034,905	-4.3	1.9	19,326,766	1,479,058	-4.1	1.9	4.78	4.79
	1L	34,765,844	2,693,940	1.2	3.5	493,155	37,998	1.2	2.7	5.88	5.91
BOX SIZES	1.5L 3L	18,394,413 817,157,815	1,350,510	-16.4	-1.6 0.8	336,523 15 570 830	23,945	-21 -5 3	-6.6	4.56 4.37	4.7
Ö		463,354,758	62,207,324 35,669,334	-6.7 -8.8	0.8 -0.1	15,570,830 15,933,576	1,188,099 1,191,206	-5.3 -10.3	1.6 -4.3	4.37 2.42	4.36 2.5
	5L									., .,	

Source: NielsenIQ

STATE OF LENDING

Rise in Interest Rates Hasn't Hampered Interest in Business Loans

W. Blake Gray

The wine industry has been quite volatile over the last two years, and the banking industry received a jolt in June from the largest Federal Reserve interest-rate hike in 28 years. So, you might wonder if credit is tighter for wine businesses these days.

Turns out that that's not the case, according to the bankers we spoke to for *Wine Business Monthly*'s annual banking story. There is plenty of capital available, and even at higher rates, plenty of wine businesses are accessing it.

"There's still a lot of liquidity out in the market," said Clay Popko, executive director of agricultural lending for PGIM. "The lending market is still very competitive in the wine industry. There's still credit available. We still have a lot of large equity funds that are looking at doing large vineyard plays. We have a lot of interest from investors, placing money with us. We've got money to lend."

"It can be tough for wineries to raise prices for all the tiers. . . . But there's stable growth in the wine industry, and asset value remains solid."

- Megan Beck, a director in the food and agribusiness group for BMO

The choices are a little different this year, though. Until recently, many borrowers preferred a variable rate on loans; now it's a tricky proposition, with interest rates expected to rise again soon.

"We are seeing much more demand for the protection that a fixed rate gives you right now," noted Ruth Edwards, vice president and lending manager for American AgCredit. "Your operating line of credit is typically variable rate. You want to use the funds, draw them down, pay them back. Companies that foresee a lot of changes to their corporate structure might go for a fiveyear loan, but now they might go for a five-year fixed rate. We have a lot of borrowers who work with us for a long time. They might fix a rate for 25 years. It's borrower strategy: expectations for change versus 'I have this vineyard, and I'm going to sell these grapes, and that's what I do.""

Credit has been so cheap for so long that for many newer businesses, this is the first time they'll deal with rising interest rates. Tom McGuire, senior vice president portfolio manager at Farm Credit West, said that higher rates might cause some companies to rethink expensive acquisitions. "To the extent that it lasts longer and goes up higher, it will be a greater effect," McGuire observed. "Not as many people are going to be interested in buying land and equipment and other business assets. That's going to suppress prices potentially in the long term. It could slow down the industry, particularly for support folks: people selling supplies and equipment, people selling real estate as well. But it takes time for that to settle in."

And it does come at a sensitive time for the industry.

"There are a number of challenges, which include disruptions in the supply chain and increased costs for fuel and freight," said Megan Beck, a director in the food and agribusiness group for BMO. "All of this has led to increasing costs. It can be tough for wineries to raise prices for all the tiers. There is some pressure on cashflow. But there's stable growth in the wine industry, and asset value remains solid. We're still seeing wineries invest in more capacity, hiring more employees. We're still seeing wineries using bank loans to accomplish those objectives."

Typically, an interest-rate hike slows down mergers and acquisitions because the cost for the buyer immediately goes up. But within two weeks of the June increase, LVMH bought Joseph Phelps Vineyards and industry consultants, Azur Associates, forecast more big deals to come.

"The market's been really active, from an M&A standpoint," Beck told *Wine Business Monthly.* "I expect that to continue."

Economic challenges are not unique to the wine industry. The S&P 500 had its worst first half of the year since 1970, losing more than 20 percent of its value. There is some debate about whether the U.S. will enter a recession, or perhaps it already has.

"We need to look back to what happened in the '70s and '80s," Popko told *Wine Business Monthly.* "It's not the exact same situation, but a lot of the same symptoms are out there. We're in an inflationary environment. We've got to get the rates up to slow down the economy. But at the same time, it's a fragile economy. We're hearing a lot from the tech sector about layoffs. We have to be very careful."

Change

For everyone, the past two years have been a time of great change. Wineries closed their tasting rooms then reopened them with different layouts. Many businesses cut staff at the beginning of the pandemic and then had to rehire. All of that takes funding.

"Normally, when a bank is making a loan, there's something else that's driving it: growth or change," said Rob McMillan, executive vice president of Silicon Valley Bank's Wine Division. "What's happening now is change. When we started to reopen, we had all this investment we had made in



Local expertise with a global perspective

Growing Ambition

Rabo AgriFinance supports wineries and growers nationwide by combining local expertise with global knowledge, unmatched financing capacity and access to opportunity-building networks.

Opportunity awaits. Learn more at RaboAg.com



outside tastings. It was all temporary. Now you're seeing wineries re-evaluating their physical tasting room. What are we going to do with tasting bars? Who wants to go someplace and stand three people deep? It's not appealing in the first place and really not appealing in a COVID world."

Edwards said that some of her winery clients have turned the need to remodel into an opportunity to plan for the next generation of customers: something the wine industry has been worrying about.

"We have a lot of customers who have areas of their tasting room that are for photo ops for people's Instagrams and different social media programs," Edwards told Wine Business Monthly. "There's a significant amount of disposable income with young people. When you go to wineries, you can see a lot of that generation."

Changing Climate Creates Collateral and Loan Woes

One recent problem for businesses on the West Coast, as well as Colorado, is fire insurance. The cost of insuring buildings has gone way up, and in some cases, underwriters simply do not want to insure a building. This is a problem because, traditionally, banks will not make a loan without the collateral being insured.

Some lenders have found ways to work around that. In California, the state runs the FAIR plan as the insurer of last resort. But its coverage is often limited. One banker who did not want to be identified for this item knew of a custom-crush facility that had to adjust its building plans because of difficulties getting insurance in that area with multiple owners and multiple clients.

"We've definitely seen the effects of that, the clampdown from insurers," McGuire said. "Several customers have not been able to reach their covenants to provide a certain amount of insurance. Sometimes it's the amount they'll get, or they can't get any at all. Some people have mitigated it by putting their own funds aside, kind of self-insurance. We have accepted some loans with lower insurance than we typically require on buildings.

"In the Central Valley, while we continue to see strong consumer demand for wine, there are some other considerations . . . such as the challenges growers are facing with grape prices remaining low, despite skyrocketing . . . costs."

- Marc Busalacchi, regional banking executive for American AgCredit

"In some cases where someone couldn't get insurance, we used what we call a 'forced placement," McGuire added. "The customer was thrilled that we could do that. A forced placement is where a lender would [insure] its interest in a property if the buyer didn't or couldn't. We can arrange to cover



TALK TO US

Meet with our Wine Team leader.

Scott McAdams

Commercial Banking Regional Manager & Wine Team Lead ScottMcAdams@bankofmarin.com (707) 265-2022



Member FDIC

at least our interest in the property. If anything happened, then our loan would be taken care of. It was significantly less expensive than what they would find in the market. It's a very strange situation. In other situations, we've just accepted a lower level: three-quarters of the level we would typically expect. You have to make a business decision. We have long-term relationships with our clients. If you want to continue working with them, that's what you have to put up with."

The threat of smoke taint is a relatively new worry, especially for vineyard owners. Crop insurance has changed in the past two years to better address this, but it's still something that lenders are concerned about.

"Hopefully, smoke events aren't an annual thing," McMillan said. "There is no question that some of this is newer for us. There's additional risk. Europe is ahead of us on this. Climate change impacts are a disclosure item. For public companies, if you have significant investment in areas with no insurance, that's a disclosure item. If you're cut off from water, that's a disclosure item."

Indeed, water availability is something that banks want to know about when granting a loan. This summer saw some large vineyards in the San Joaquin Valley decide not grow crops this year due to lack of water.

"In the Central Valley, while we continue to see strong consumer demand for wine, there are some other considerations we're staying close to, such as the challenges growers are facing with grape prices remaining low, despite skyrocketing input costs, more broadly, and high operating costs," stated Marc Busalacchi, regional banking executive for American AgCredit. "Water also continues to be top of mind in this region."

Banks Worked With Clients During the Worst of COVID Shutdowns

All the bankers we spoke with mentioned client relationships. In the wine industry, sometimes the same farming family will work with the same bank for generations. An advantage of that for the client can be that the bank will be more understanding as economic forces change.

"A lot of customers were terrified when COVID hit," McGuire said. "They were terrified that they were going to go out of business. So many of them pivoted, calling up customers and hitting the online market. It's amazing how many did as well or better or, at least, survived the downturn. Immediately, we started doing loan deferrals. We put payments on hold for up to a year. Some folks really needed it. Some folks thought they were going to need it, and it turned out they didn't. We didn't have any serious issues that arose."

But a relationship is just that. Sometimes you need a partner who knows how to say no.

"As a responsible lender, it's important to tell our customers what their cost of the debt service is and never over-lend," Edwards explained. "If a bank over-lends and the customer is over-leveraged, it's not good for anyone."

We asked if loan underwriting criteria has changed for banks. The Ag Credit banks said they haven't. Popko, who worked for American AgCredit for 25 years, before switching to PGIM, said PGIM hasn't. Right now, lending institutions are still competing to get business, but there is a limit.

"What we're seeing is there's still a lot of competition out there, and credit seems to be pretty easy to get," Popko noted. "A lot of people have been able to secure low fixed rates. We're calling people, and we're not getting a lot of those calls back. Those calls aren't coming now because people know they can't refinance and get a better rate. The activity we are seeing out in the market is people trying to expand. I haven't heard about people deferring projects yet. They're deferring refinancing, which drives a lot of activity. But people who need to buy vineyards are still buying vineyards. People who need to build warehouses are still building warehouses." "Wine isn't recession-proof, but it is recession-resistant. It doesn't take long for a consumer to decide that wine isn't actually discretionary, it's actually necessary."

> Rob McMillan, executive vice president of Silicon Valley Bank's Wine Division

Underwriting criteria vary from bank to bank, but the essentials tend to be similar.

"We want to see a successful history: basic fundamentals," McGuire said. "In the wine business, they need to be generating an operating margin that is favorable and, obviously, profitable, and also, not too much leverage. Higher leverage puts you more at risk. Too much leverage is something we look to avoid."

The Crystal Ball

Finally, we asked the bankers to look into their crystal ball and forecast what will happen with the economy regarding loan availability for wineries. The answers were surprisingly reassuring for the industry.

"Banks are in the business of supporting the industry," McMillan remarked. "We don't make it. We've gotta follow it. As I look at the industry, I see the higher-production, lower-price part struggling. The fine wine part is doing quite well. During 2020, we had a lot of clients that were hoarding cash. They weren't alone. Cash is king in uncertain times. We gave more, bigger loans out to some of our clients. As we've gotten though this, some of them are being paid back because they don't need all that cash.

"A recession affects different segments in different ways," McMillan continued. "Wine isn't recession-proof, but it is recession-resistant. It doesn't take long for a consumer to decide that wine isn't actually discretionary, it's actually necessary."

And as long as consumers are spending money on wine, banks will lend money to produce it.

"I still think there's a healthy lending market out there," Beck concluded. "Our clients are looking for ways to actively diversify their portfolio. I think there's capital available to support these transactions." WBM



HINMAN &

Legal Counsel to the Beverage Industry

- Applications for ABC and TTB licenses
- Distribution agreements & direct shipping advice for all states
- ABC and TTB Business Practice Counseling
- Accusation, Defense and Protest Hearing Representation
- Regulatory clearance of promotions, point-of-sale material, labels and advertising

ATTORNEYS: John Hinman Beth Aboulafia Rebecca Stamey-White Erin Kelleher Sara Mann Adie Sherwood Barbara Snider

260 California Street, Suite 700 San Francisco CA 94111 Telephone 415.362.1215 Facsimile 415.362.1494 beveragelaw.com

BUYER'S GUIDE

Select Wine Industry Focused Financial Institutions

This list of select vendors is generated using the Wines & Vines Buyer's Guide. To see a full list of vendors please visit: *winesvinesanalytics.com/buyersguide*

American AgCredit Santa Rosa, CA 호 (800) 800-4865 agloan.com

Bacchus Capital Management San Francisco, CA = (212) 486-3600 bacchuswinefund.com

Bank of America Merrill Lynch Santa Rosa, CA ☎ (707) 293-2553 baml.com

Bank of Marin Napa, CA ☎ (707) 265-2022 bankofmarin.com/wine



At Bank of Marin we take the time to understand our customers and develop trusted relationships. Backed by the resources of a community bank, our wine industry specialists have the expertise to serve the unique and often complex needs of your business

Bank of the West Wine & Beverage Group Napa, CA ☎ (707) 501-5150 bankofthewest.com BMO Harris Bank San Francisco, CA ☎ (415) 354-7509 bmoharris.com/wine



BMO's Food, Consumer and Agribusiness Group's Wine Finance Practice provides comprehensive capital solutions and financial services including access to a full suite of corporate lending, equipment financing and investment banking capabilities.

Comerica Bank San Francisco, CA ☎ (415) 954-0830 comerica.com

Equitable AgriFinance Walnut Grove, CA ☎ (209) 581-5645 equitable-ag.com

Exchange Bank Santa Rosa, CA ☎ (707) 524-3301 exchangebank.com

EB Exchange Bank

Exchange Bank provides full service commercial banking and equipment leasing needs to small and medium sized wineries and growers located in the North Coast region.

F&M Bank - Napa Napa, CA ☎ (707) 757-8500 fmbonline.com

Farm Credit Rocklin, CA ☎ (775) 677-7876 farmcreditalliance.com HTLF Financial Solutions Food & AgriBusiness Dubuque, IA क (563) 589-2100 htlf.com

JPMorgan Chase San Francisco, CA 🕿 (415) 315-3966 chase.com

Live Oak Bank - Wine & Craft Beverage Lending Wilmington, NC = (707) 921-1102 liveoakbank.com/wcb

Mechanics Bank Napa, CA ☎ (707) 227-9300 mechanicsbank.com

MetLife Investment Management's

Agricultural Finance Group Fresno, CA ☎ (559) 435-0206 metlife.com/ag



MetLife Investment Management's Agricultural Finance Group offers custom structured and competitive mortgages to meet your needs.

PGIM Real Estate Finance, Agricultural Finance Roseville, CA = (916) 789-4071 pgimref.com/agloans

Rabobank San Francisco, CA ☎ (415) 782-7800 *rabobank.com*

 Rabo AgriFinance

 Santa Rosa, CA ☎ (855) 887-9274

 raboag.com



Flexible operating credit, real estate based revolving lines of credit, equipment financing, fixed and variable rate real estate financing, international trade services and more.

Silicon Valley Bank, Wine Division Napa, CA 🗢 (707) 967-1367 svb.com

Umpqua Bank Santa Rosa, CA হ (707) 579-2265 umpquabank.com

Union Bank Walnut Creek, CA 🛥 (925) 947-2439 unionbank.com/wine

US Bank Napa, CA 🗢 707-254-1481 usbank.com

Wells Fargo Commercial Banking Office Santa Rosa, CA ☎ (707) 584-3150 wellsfargo.com

Our passion is to **help you** with yours.



At BMO we understand the many factors that can affect your operation. Our Commercial Bank's team of experienced wine industry professionals is dedicated to finding you sound financial solutions from managing through marketplace volatility to planning for growth, we're here to help.

bmoharris.com/wine

The Metaverse Has Arrived

How the Metaverse Impacts Your Wine, Beer and Spirits Brands

Katja Loeffelholz, Attorney, Dickenson, Peatman & Fogarty



Katja Loeffelholz counsels clients on trademark, trade dress, copyright and related legal issues. Katja's experience covers all aspects of these areas of law, including practice before the United States Patent and Trademark Office (USPTO), counseling on protection, licensing and acquisition of intellectual property, and enforcement matters. She advises clients on the adoption and availability of trademarks and service marks, both domestically and internationally, and is a Registered Attorney with the USPTO.

Every Winery and Wine Brand Will Eventually Need a Metaverse Strategy.

During the pandemic, some wineries became adept at conducting online tastings and enhancing customer experience by providing virtual vineyard, winery and cellar tours. Wineries were compelled to connect online with customers as never before. This is just the beginning. Wine businesses will need to adapt to an increasing technological sales process, not only online but in the metaverse.



Artist illustration of wine branding in the metaverse.

What is the Metaverse?

The metaverse is a virtual and immersive digital world that reflects our real lives in many respects. People can work, socialize, shop and live much of their lives in this immersive digital world. The metaverse is inhabited by digital representations of people, places and things (including brands). The metaverse experience can provide experiences on par with the real world while offering adventures beyond those of the real world, for example, the sensation of human flight. Think of the metaverse as a marketing term used by businesses to sell anything related to virtual and augmented reality or immersive digital environments.

Metaverse Importance to Brand Owners

The metaverse is the next evolution of the Internet. Currently, one needs to install a metaverse platform in order to access an augmented reality or immersive digital environment. Once the technology is standardized, we will be able to access different technologies seamlessly, much like our current experience of the Internet.

The metaverse parallels our real lives: where branding is used in the real world, it will have a digital partner in the metaverse. Beverage companies should be interested in the metaverse because retail will be one of the largest sectors in it, with social experiences a close second. In addition, wineries should care about the metaverse because it will have a real-world impact on their marketing and branding. Not only will the metaverse be a new market for products and services, but it will also be a new source of data collected from users that can be leveraged by businesses in the real world. Just as realworld sales drive sales in the metaverse, the metaverse can drive sales in the real world.

Armand de Brignac's Champagne trademark applications were among the very first, if not the first, metaverse-motivated filings for a design for three-dimensional configuration in the U.S. The Champagne brand has filed trademark applications based on use for such items as "fungible and non-fungible token-based goods and downloadable virtual goods, namely,



Armand de Brignac trademark application drawing. U.S. Patent & Trademark Office Case ID 97184470.

computer programs featuring beverages," and "for use online and in online virtual worlds and retail store services featuring virtual goods, namely, computer programs featuring beverages."

There will be opportunities in the metaverse for product placements (branded products in games or experiences), virtual events (like cellar, winery and vineyard tours), virtual tastings, computer-generated retail stores (featuring wine) and virtual online education (featuring branded content or sponsorship).

Of importance to brand owners, the metaverse hosts a growing virtual marketplace that allows users to buy, sell and share digital assets, such as NFTs (non-fungible tokens) linked to virtual real estate, experiences, information and virtual goods.

For those new to the metaverse, NFT stands for "non-fungible token." A "fungible" is a commodity that is identical to others and is, therefore, interchangeable, such as a dollar. "Non-fungible" means something is unique or a commodity that is not identical to others. The "token" part can be any digital (or even real-world) item. That digital item could be an artwork, a song, a wine bottle or a grapevine. It could even be an experience.

NFTs can have a commercial value: they can be re-sold. NFTs are

linked to the blockchain and are as safe from tampering as it is possible to be. An NFT comes with a certificate of ownership and authenticity. The certificate is what gives an NFT its true value.

The metaverse can offer opportunities to beverage brands for sales of NFTs. Anheuser-Busch InBev has launched NFT projects to monetize their intellectual property libraries and build digital communities around their "in real life" (IRL) products. Craft breweries have gotten into the game; for example, Goose Beer Company released their own NFTs with rare experiences included. Sacred Spirits has launched its own NFT project with 5,555 NFTs that have been designed "with inspiration drawn from spirituality and nature."

Wine businesses, such as Yahyn, launched what it termed as "the world's first NFT wine allocation" in April, 2021. Yao Family Wines paired its premium wine THE CHOP with an NFT digital collectible. Chateau Angelus has sold an NFT that guarantees ownership of a barrel of Angelus wine alongside an original 3D digital artwork of the bells depicted on its labels and packaging. NFT Wine Club has more than 3,000 real-life grapevines in Napa, California, which are tied to a digital NFT.

Surry Community College Sustainability: Continuous Improvement November 16, 2022

Southeastern United Grape & Wine

10th Annual

Find more info at: symposium.surry.edu

> SURRY community College

HAMILT®N

The Measure of Excellence

Intelligent Process Sensors

- Dissolved Oxygen, Conductivity, pH, and Oxidation-Reduction Potential
- Built-In Transmitters with 4-20 mA and Digital Outputs
- Monitor and Calibrate Wirelessly with the ArcAir App



Contact Gusmer today for all your winemaking solutions!

OPPORTUNITY RISES IN THE WEST

Innovative solutions. Active collaboration. Forward-looking perspectives. It's how Moss Adams brings West to business to help wineries strategically navigate change and plan for what's next.

Discover how our industry-smart accounting, consulting, and wealth management services can keep you focused on what matters most: making and selling great wine.

RISE WITH THE WEST.



Assurance, Tax, and consulting offered through Moss Adams LLP_JSO/IEQ.27001 services offered through Cadence Assurance LLC, a Moss Adams gompany. Investment advisory offered through Moss Adams // Wealth Advisors LLC, @2021 Moss Adams LLP

The Metaverse Has Arrived

Protecting Your Brands

Alongside the growth of the metaverse, there has been a spike in metaverse-related trademark filings. To date, most brands in North America and Europe have focused primarily on the U.S., Canada and the European Union, filing for a mix of goods and services to cover their metaverse activities, including downloadable virtual goods, retail store services that feature virtual goods, and entertainment services that provide online, non-downloadable products for use in virtual environments, but, in some cases, for non-downloadable computer software and non-fungible tokens, and with the inclusion of "virtual clothing" alongside traditional physical apparel.

The metaverse is likely to become an important source of revenue and an integral part of marketing and sales for businesses in the future. Even in the metaverse's early days, a consideration of its strategies and trademark filings makes sense as companies rush to hedge their bets when it comes to the metaverse and their valuable marks.

In addition to your real-world trademark applications, make sure your trademarks are registered for virtual goods, goods for use in online environments, virtual online environments and extended reality virtual environments, in addition to retail store services that feature virtual goods, etc.

A trademark for a real-world brand may not protect you in the metaverse. Ensure that your trademarks are registered for digital and virtual reality products. This is the key to protecting a brand in the metaverse. **WBM**

*The firm of Dickenson, Peatman & Fogarty does not endorse any brand mentioned in this article in either the real world or metaverse.



FINDUSTRY FINDUSTRY SYMPOSIUM

The wine industry's leading conference covering financial, business and strategic issues.

November 16-17, 2022

CIA@Copia, Napa

Registration Now Open!

wineindustryfinancial.com

Presented by WINE BUSINESS MONTHLY

For Sponsorship Opportunities, contact Waunice Orchid at 707-307-3020 or send an email to waunice@winebusiness.com

Thank you to all of our advertisers!

Company w	reb address	page	Company	veb address	page
APCOR - Portugese Cork Association	realcork.org	7	Moss Adams, LLP	mossadams.com	82
Acrolon Technologies	acrolon.com	27	MUST Machining & Fabrication	mustfabricate.com	55
Ager Tank & Equipment Co.	agertank.com	16	Portocork America	portocork.com	3
Agfast Corp.	agfast.com	49	Prospero Equipment	prosperoequipment.com	29
Amcor	amcor.com	61	Rabo AgriFinance	raboag.com	75
Amorim Cork America	amorimcorkamerica.com	5	Santa Rosa Stainless Steel	srss.com	56
Avalara	avalara.com/us/en/products/ beverage-alcohol.html	44	Saverglass, Inc.	saverglass.com	2
BMO Harris Bank	bmoharris.com/wine	79	Saxco International	saxco.com	69
BSG Wine	bsgwine.com	26	Scott Laboratories	scottlab.com	9
Bank of Marin	bankofmarin.com/wine	76	Shelco Filters	shelco.com	34
Berlin Packaging	berlinpackaging.com	71	Spec Trellising	spectrellising.com	59
Bin to Bottle Winery	bintobottle.com	23	Specialty Treatment Solutions	stswatertreatment.com	53
California Department of Food and Agriculture (CDFA)	cdfa.ca.gov	43	Spokane Stainless Technologies	spokanestainless.com	29
Carlsen & Associates	carlsenassociates.com	19	StaVin	www.stavin.com	13
Criveller Group	criveller.com	20	Surry Community College	surry.edu	81
Deloitte	deloitte.com	51	TricorBraun WinePak	tricorbraunwinepak.com	31
Duarte Nursery	duartenursery.com	39	Verallia USA	us.verallia.com	11
ETS Laboratories	etslabs.com	OBC, 88	Vicard USA	groupe-vicard.com	55
Eastern Winery Exposition	easternwineryexposition.com	37	Vintners Advantage	miscorp.com	41
Exchange Bank	exchangebank.com	40	Vintuitive Winemaking Tools, LLC	vintuitivewmt.com	43
Free Flow Wines	freeflowwines.com	19	VinWizard	vinwizard.com	49
Fres-co System USA	fresco.com	IBC, 87	Waterloo Container Co.	waterloocontainer.com	24
G-M-I	gmigaskets.com	51	Western Square Industries	westernsquare.com	25
Gallo Glass Co.	galloglass.com	65	Wine Industry Financial Symposium (WIFS)	wineindustryfinancial.com	83
Gomberg, Fredrikson & Associates	gfawine.com	36	Wine-Searcher, Ltd.	wine-searcher.com	82
Guala Closures North America	gualaclosures.com	67	Winejobs.com	winejobs.com	57
Gusmer Enterprises	gusmerwine.com	41, 81	Winejobs.com Summit	winejobshrsummit.com	26
Hinman & Carmichael, LLP	beveragelaw.com	77	Wines Vines Analytics	winesvinesanalytics.com	45
IntelliCulture	intelliculture.com	15	Wonderful Nurseries	wonderfulnurseries.com	59
MA Silva USA	masilva.com	33	World Cooperage	worldcooperage.com	27
Maverick Enterprises	maverickcaps.com	17	Zenport Industries	zenportindustries.com	56
MetLife Investment Management's Agricultural Finance Group	metlife.com/ag	27			

JAKE LORENZO

Playoffs

Jake Lorenzo



Having finished the delightful 2019 Hermann J. Weimer Dry Riesling, Jake Lorenzo, Jakelyn's mom, and Chuy Palacios rose from our outside table and made our way into the house. The task facing us was formidable, but we were prepared and confident. Years of experience, months of preparation, and hours of daily practice had brought us to this moment. We had worked too hard and come too far to let this night get away from us.

Game 6 of the NBA Finals was about to start, so we took our places at the dining room table facing the television. I laid out plates of Serrano jamon, pulled the cork on 2017 Las Estelas Malbec, and we got ready to do battle. We had started the series clumsily. Chuy and Iggy Calamari watched the game in a bar with this detective preferring to watch alone, in the quiet of my own home. The home team got drubbed by the younger, more energetic Celtics.

All I heard from Chuy the next day were complaints about Calamari's non-stop analysis of missed shots, defensive mix-ups and poor coaching. Hard to take from anyone, but especially from the inventor of the wine-powered pacemaker, who wouldn't know a basketball from a football and still refers to slam dunks as homeruns. So, out of sympathy for my friend, I invited Chuy over to the house for Game 2. We sipped a bottle out on the porch before moving inside for the game. Jakelyn's mom has no interest in basketball, but she was more than happy to help us drink wine and eat the threecourse meal I had prepared. The Warriors won by close to 30 points. We had a fine meal and, counting the celebratory bottle after the game, finished five bottles of good wine.

I have too much respect for what they do and what it takes for them to succeed.

For Game 3, Chuy went to Oakland to take delivery of a special order of products that had finally arrived from Mexico after weeks of delay in transit. By the time he filled out paperwork, loaded his car and fought traffic home, the game was over with another horrible loss for Golden State. Naysayers were doubting the home team, saying we were too old and no match for the athletic, talented Celtics.

Time to put up or shut up. Chuy arrived at my house early for our bottle on the porch. We marched inside for the game with steely determination. Jakelyn's mom joined us, and three courses later we emerged victorious in Game 4. Curry had been spectacular. Once again, the celebratory bottle brought the total to five for the evening. We realized we had developed a winning strategy.

By the time the Game 5 victory was in the bag, we had the routine down. "Why do you think it is five bottles of wine each night," Chuy asked.

"Five players on the court, five bottles down the pipes," I explained. "The Warriors have Klay, Draymond and Steph, but we have our own three-star core with you, me, and Jakelyn's mom." Game 6 went well, and this detective added a fourth course to our dinner. I figured my changing up on

dinner was akin to Coach Kerr changing his rotation with starters and people coming off the bench. We stuck to the five bottles of wine, because you don't want to take too many risks. We were thrilled the Warriors won in six—Five bottles of wine amongst three people every other day is no small task. By the end of Game 6, a little wear and tear showed on us. Jake Lorenzo isn't sure how we would have held up for a Game 7.

Now don't misconstrue this story as Jake Lorenzo taking credit for the Warrior's championship. I am not superstitious. I don't believe in curses. This detective is pretty sure none of our game day rituals mattered at all in the outcomes of the games. The Warriors won this championship thanks to teamwork, countless hours of practice, lifting weights, watching film and planning strategies. They used their experience to work as a team with grit and determination. They simply would not be denied.

Long after the game, Jake Lorenzo pondered the similarities between winemaking and basketball. Continually sterilizing hoses and clamps, diligently pulling tank door gaskets and valves for regular cleaning, and racking barrels is equivalent to long hours of basketball practice. Shoveling pomace, carrying buckets of additions, and dragging equipment and hoses provide weight training. The dull, never-ending monotony of a clanging bottling line is most like the heavy depression of rehabbing a major injury.

It's only when you put in all the work, meticulously clean every surface and conscientiously service each piece of equipment, that you can prepare yourself for crush. Crush is the winemaker's equivalent of the playoffs: day after day pressure, relentless stress, physical demands, and never-ending work, day after day. It's only when the crew comes together as a team using their experience and dedication to deal with the heat waves, broken equipment, stuck fermentations, and clogged filters that success can be achieved.

This detective appreciates the dedication of athletes. I comprehend the many hours they practice shots, the complexities of working out a switching defense, or the stress of a final shot that determines the outcome of a game. This amount of basic understanding of basketball doesn't mean I can compete with professionals. I have too much respect for what they do and what it takes for them to succeed.

I wish basketball players and other celebrities would give us winemakers and cellar rats the same respect when they come out with their private labels. That they value the hard work we put in or the years of experience we have accrued and try to understand basic things in our winemaking DNA, like how differently pump-overs or punch-downs can affect a red wine fermentation or the nuances of different barrels, concrete eggs or qvevri fermentors.

There is no way this detective would sink a few free throws and try convincing people I was a professional basketball player. A celebrity who thinks he can make wine because he can afford to drink expensive bottles is simply showing disrespect to those of us in the trenches. A way to show respect would be showing up during crush to watch us work. When they come, I hope they have the good sense to bring cold beer for the crew. **WBM**

Erica Stancliff, winemaker, Trombetta Family Wines, eStCru, Sonoma County, CA

NAME & TITLE: Erica Stancliff, winemaker, Trombetta Family Wines, eStCru, Sonoma County, CA

WINERY NAME AND LOCATION: I'm part of a mother-daughter team at Trombetta Family Wines and also serve as winemaker for Pfendler, which uses all estate vineyards located on the southwest slopes of Sonoma Mountain in the Petaluma Gap, O'Connell Estate Vineyards in Sebastopol, Stressed Vines in Santa Rosa and eStCru, a new wine company that allows for a lot of creative freedom, and focuses on fruit from several California regions including Mendocino, Sonoma County, Clarksburg, Santa Ynez, and Lodi.

ANNUAL CASE (OR GRAPE/TONNAGE) PRODUCTION: 1,000 cases for Trombetta, 500 cases for Pfendler, 600 cases for O'Connell, 1,200 cases for Stressed Vines and 1,500 cases for eStCru

CAREER BACKGROUND: After graduating with my degree in enology from Fresno State, I worked harvests in both Mendoza, Argentina and Oakville, Calif. I then decided to step out of production for a few years and learn the "other" side of winemaking by working for Enartis Vinquiry as their technical enologist for 2 years before heading back to production. I came on board with Trombetta in 2014 to take over winemaking from my mentor, Paul Hobbs, who was our consultant at the time. In 2016, I converted a two-car garage winery in Sebastopol into a functioning facility where I was able to make 5,000 cases of wine a year for another wine brand. Today, I make wine for five brands, am consulting on small startup projects, and was president of the Petaluma Gap Wine Growers Alliance from 2019-2021, though I continue to serve on the board.

WHAT HAS BEEN YOUR BIGGEST PROFESSIONAL CHALLENGE? Honestly, it's been about being taken seriously for my own work and merit without people questioning my ability based on my age or gender. Overall, our industry has come such a long way in realizing ANYONE has a place in this industry—but it's a shocking day if I don't get the "Are you old enough to be a winemaker?" or "So who consults for you?" when I'm out working the market or at an event. Some may think that, because I'm a younger woman in the industry, I'm not going to have the same knowledge or experience as my male counterparts. This has played out in numerous ways, from industry members as well as from consumers and buyers. It may not sound like a professional challenge, but the biggest one I face is getting people to take me seriously for the merit of my wines, and not look at me with a jaded opinion because of my age and gender.

VARIETALS THAT YOUR WINERY IS KNOWN FOR: Trombetta, Pfendler and Oconnell all focus on Chardonnay and Pinot Noir from Sonoma County. Stressed Vines is Chardonnay, Pinot Noir and Cabernet Sauvignon from Sonoma County and Napa County. eStCru has a fun mix, but mostly we are known for our Lodi and Clarksburg wines!



Wine Business Monthly, as a whole, is a massive tool for winemakers, and the magazine has great information. I love that there are always winemaking focused articles and trials from the industry, like discussion in the July issue that detailed actual oak regimens and how those play into each winemaker's/ winery's style to craft their wines. I am constantly tweaking my approach with barrels, so to be able to see articles where other winemakers discuss the same philosophies is amazing.

Stand Out from the Wall of Same.



Reduced Environmental Footprint vs. Glass and Cans Eye-Catching Shelf Appeal Minimized Oxygen Ingress via Pierce Tap® Pierce-at-First-Use Technology Versatile Packaging – Ideal for E-commerce



ENHANCING RAFFUSION SINCE 1978



LABORATORIES

etslabs.com