



COLLECTION SLENDER SILHOUETTE & TRANSCENDENT GEOMETRIES **ALTO**

More refined, even lighter and more slender, ALTO is not afraid to be the best! Its distinctive silhouette has an ultra-sharp look and stands out because of its hybrid style, not fully flute or Burgundy. But beyond being lighter than a feather (only 560 g), ALTO boasts another advantage thanks to its amazing flat base. This special feature—which sets it apart from bottles with a punt—is a great canvas for precious engravings with "couture" accents.





"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.

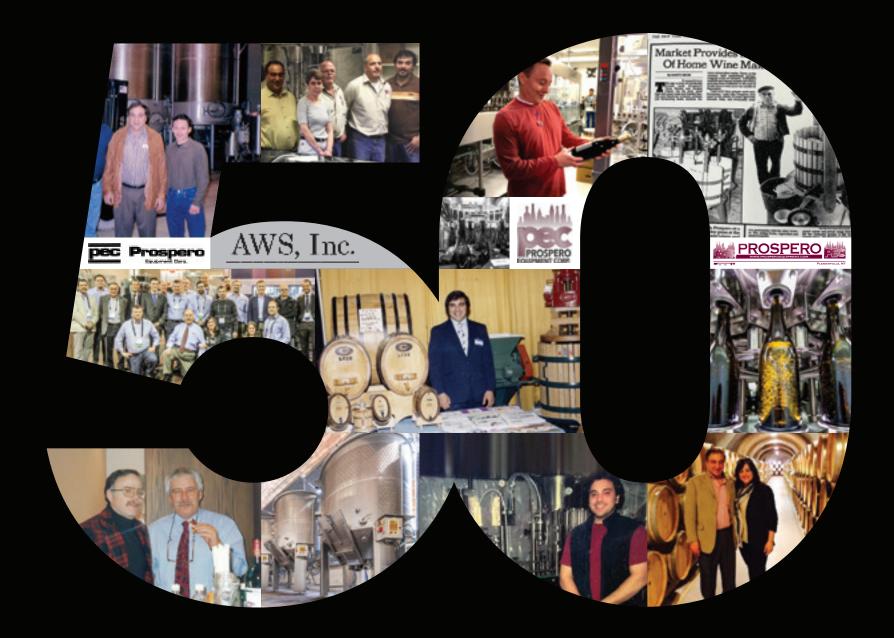
We will be with them forever."

Manfred Krankl

SINE QUA NON

* 22-time recipient of Wine Advocate's perfect 100 points





YEARS OF PROSPERING

Prospero Equipment Corporation is celebrating its 50th anniversary this year. Since our beginnings as a family-owned and operated home winemaking company we have been providing high-quality equipment and expert service to the beverage industry. Our customers have played a key role in our evolution and expansion into an international company that provides processing and packaging solutions to wineries, distilleries, and breweries across North America. As an industry leader, we will continue to utilize the latest technology and innovations, offering the best available solutions for generations to come.

Thank you to our customers, friends, and staff. We couldn't have done it without you.

66 Congratulations to Prospero on 50 great years. It's no surprise to me that you've been so successful for so long. I've worked with your GAI bottling lines my entire career here at Shafer Vineyards, which spans 38 years. The winery has upgraded about every decade and we are now on our 4th generation of GAI, which comes with some amazing bells and whistles. Over the years, not only has the quality of the equipment been crucial to Shafer's success, but just as importantly it's been the people and relationships that make it all work and provide us with great support. Everyone at Shafer thanks you and wishes you great success for the next 50 years! ">>



ELIAS FERNANDEZ Winemaker • Shafer Vineyards

PROSPERO 50 since 1972 5 years

Back to the Nation's Largest Annual Wine and Grape Gathering

THE ANNUAL Unified Wine & Grape Symposium, the largest wine trade show in North America, is set to take place January 25-27, 2022, in Sacramento, Calif. at the newly renovated Sacramento Convention Center.

More than 13,000 people attended Unified when it was last held in downtown Sacramento in 2019. The event drew roughly the same number of visitors when it temporarily moved to Cal Expo in 2020 because of a two-year, \$350 million renovation and expansion of the Sacramento Convention Center. Then in early 2021—which feels like ages ago—Unified was a virtual trade show and event because the entire state of California was under a stay-at-home order.

With stay-at-home orders lifted, the expansion and renovation completed, and international travel resuming, Unified is set to include three full days of in-person educational sessions focused on industry challenges and best practices. The world changed during the past two years, the wine and grape business included. There's so much to keep up with.



It's a big show. The exposition will host more than 760 10 ft. x 10 ft. booths and 24 large vineyard and winery machinery areas, encompassing wide range of products related to wine and grapes. To help attendees navigate and locate the right vendors and products, this issue includes our 2022 Unified Guide. We surveyed exhibitors ahead of time about the products they'll be spotlighting. It's quite useful that the guide includes a look at the newest products and services that haven't been seen at Unified before.

Many of us haven't seen our industry colleagues for a while, making this year's event even more meaningful, even if the symposium experience stands to be a bit more subdued. We're looking forward to seeing you at Unified. *Wine Business Monthly* will be exhibiting at booth #714. If you're attending Unified, please come see us.

Cyril Penn - Editor

WINE BUSINESS MONTHLY

January 2022 • Volume XXIX No. 1

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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.





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UNIFIED GUIDE 2022

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Mabel Ojeda, winemaker, Bravante Vineyards, Napa, CA



CUTTING EDGE PROCESS MEETS EXPERIENCE

Visit us at the **Unified Wine and Grape Symposium** to learn how screen printing and etching can increase the value of your brand.

Find us at **Booth #930**, or just look for the most beautifully decorated bottles in the industry.



Ana Diogo-Draper

head winemaker, Artesa Winery, "The Elephant in the Cellar," page 102

"The production hours are not [conducive] to having children. That's the reality of it. When I'm home, I feel guilty because I'm not doing my work; and when I'm at work, I'm like, 'Oh my God, what a crappy mom, I should be home with my kids."

Adrienne Uboldi

vineyard and sustainability manager, Markham Vineyards, "Using Soil Moisture Data to Save Water, Eliminate Tilling," page 130

"Changing our perspective in how we look at what we're doing has been, and will prove to be, beneficial in many ways—especially when we need to modify what we do when we get non-standard weather events."

Jesús Hernández

owner, Vimandres, "Technical Review: Magnolia Wine Services," page 108

"I've been making wine for 20 years, but now it's my own company. It's like a dream. They do everything here. I just do some additions."

Emily Santanelli

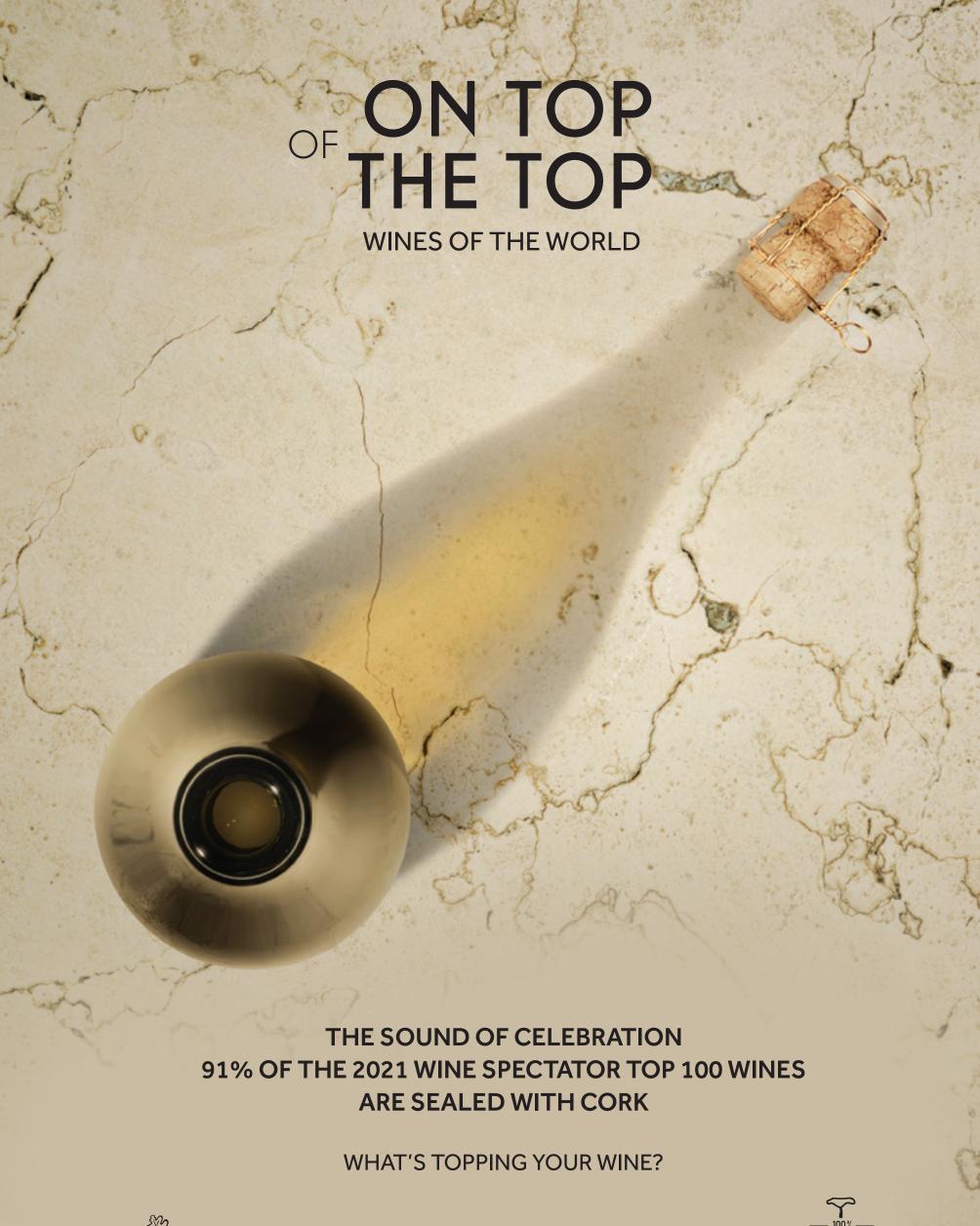
broker, USI Insurance Services, "The Elephant in the Cellar," page 102

"The wine industry being impacted by the labor shortage right now and with calls for diversity, equity and inclusion...it's an opportunity for companies to be more thoughtful about presenting their brand online and supporting employees as parents."

Ed Feuchuk

general manager, Tank Garage Winery, "A One-Finger Salute from Napa's Tank Garage," page 150

"While Middle Finger was one of our fastest-selling wines ever, we aren't going to simply milk the design. Though this strategy may limit short term sales, we like to think it challenges us to be creative and evolve, which ultimately is more valuable to our wine brand."















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



RNDC to Partner with Opici Family Distributing in New York

Republic National Distributing Company, the country's second largest wine and spirits distributor, is creating an equal partnership with Opici Family Distributing in New York State.

The partnership in New York does not extend to Opici's other five markets. Opici Family Distributing, which is based in New Jersey is still owned and operated by members of the family that founded the company in 1934. In January, RNDC announced an agreement to purchase Opici Family Distributing of Florida.

Per Wines Vines Analytics, Opici was the seventh largest wine distributor in the U.S. in 2020. Now fully integrated, RNDC/

Young's Market Co. is a rival to Southern Wine & Spirits in many key markets.



Treasury Wine Estates Acquires Frank Family Vineyards

Treasury Wine Estates, one of the world's largest wine companies, acquired Frank Family Vineyards of Napa Valley, including the winery, brand and vineyard holdings. TWE said Frank Family is complementary, filling a portfolio opportunity for luxury chardonnay.

Rich and Leslie Frank are maintaining the ownership of Winston Hill Vineyard in Rutherford and the Lewis Vineyard in Napa, Carneros. Both vineyards will continue to source grapes for the Frank Family reserve tier after the sales agreement.



Merger of Barrel Producers: Charlois Group Acquires the Doreau Group

The Charlois Group announced the acquisition of the Doreau group by its subsidiary Oak Nation. Moet Hennesy will hold a minority stake in the Doreau group through Maison Hennessy, a client of the Doreau Cooperage, which makes barrels, and large format tanks. A series of significant investments are also planned, including a ultra-modern stave mill and cooperage facility.



West Coast University Scientists Receive \$7.65M Grant to Study Smoke Impact

A team of West Coast university researchers received a \$7.65 million grant to study the impact of smoke on grapes and wine. The project is expected to produce new insights, strategies and tools to help winegrape growers and winemakers prevent or better manage the damage to grape quality and wine that can result when wildfire smoke events occur.

The four-year project is funded through the U.S. Department of Agriculture's National Institute of Food and Agriculture Specialty Crop Research Initiative. The project brings together ongoing state-based research programs into a strong, coordinated effort. Dr. Elizabeth Tomasino of Oregon State University, who serves as project director, is joined by Drs. Tom

Collins of Washington State University and Anita Oberholster of the University of California, Davis. Project objectives were developed after the research team collected industry input during grant planning sessions held in California, Oregon and Washington.

The research team is calling this a "smoke to glass" understanding. With the grant, the research team will focus on:

- New technologies and sensor networks for real-time risk assessment of smoke in the vineyard.
- Smoke exposure impact on the quality and health of grapes and grapevines.
- Grape barriers/coatings to reduce or eliminate uptake of smoke components into grapes.
- Rapid tests to predict what a wine exposed to smoke will taste like when made into wine.
- Sensory quality thresholds of smoke compounds in wine.
- Predictive modeling of smoke risk to grape and wine quality from environmental, chemical and sensory data.
- Outreach and communication program to share findings with industry. WBM



THE WORLD'S BEST WINE STOPPER JUST GOT BETTER

The **NDtech** technology individually checks each wine stopper, allowing Amorim to deliver the world's first natural cork with a non-detectable TCA performance*. Winemakers rely on our dedication to supply the world's best stoppers. **NDtech** is the latest step to complement Amorim's proven preventive, curative and quality control methods, delivering the supreme guardian for wine.

For additional information on this wine packaging breakthrough, please visit amorimcork.com.

AMORIM CORK



UNIFIED GUIDE 2022

Preview Guide

Wine Business Monthly's Unified Guide includes an exclusive look at many of the products that will be featured at this year's Unified Wine & Grape Symposium, the industry's largest trade show.

This year the trade show will host more than 600 exhibitors featuring wine industry products and services.

We Created the Unified Guide For You

Studies show that the average tradeshow attendee visits 25 booths per day. Therefore, over a two-day period, visitors will probably visit about 50 booths out of the more than 600 exhibitors' booths at the Unified Wine & Grape Symposium.

How do you narrow down which 50 booths to visit? *WBM* has created the Unified Guide—a preview of the products and services that will be showcased at Unified—to help our readers determine which booths they'd like to visit at the show.

The products listed in the 2022 Unified Guide below have been compiled through *WBM*'s annual online product survey, submitted only to Unified Wine & Grape Symposium exhibitors. Exhibitors were encouraged to submit information on the products and services they would be presenting at the 2022 show, and about 300 responded, the majority of which were included and edited by our editorial team.

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The true story of the crazy man in der weinberg.

(Or, how Lodi came to grow the largest collection of German varietals outside Deutschland.)

One sip of Riesling in Mainz was all it took to hook Bob Koth into thinking he could grow German varietals back home in Lodi. Of course everyone thought he was nuts. But here it is going on forty years now and what Bob, his wife Mary Lou, and their two adult children have accomplished is nothing short of remarkable: 15 acres of nothing but German and Austrian varieties, many of which experts said could never, would never, flourish anywhere but their Motherlands. Yet here they grow, 51 different varieties, and come harvest you'll find trucks loading up on Kerner and Dornfelder and Gelber Muskateller: trucks from wineries in Napa and Sonoma and Healdsburg—not to mention quite a few from right here in Lodi—all clamoring for what Bob calls his "laughing stock." Funny how a little conviction and a lot of hard work pays off. Then again, Bob's really no different from any other winegrape grower around here. Okay, maybe he can pronounce a few names others can't, but the hard work and conviction part that's pretty much standard operating procedure around here. And has been for over five generations.



Visit: LodiWine.com

UNIFIED GUIDE 2022 Product Listings

Winery > Cooperage > Barrels

Amale Oak Importers LLC

233

Livermore, CA • www.amaleoak.com

Epocure e2 French Oak Barrel

DESCRIPTION: The e2 French oak barrel program is designed with your budget in mind. The 100 percent French oak barrel is the workhorse barrel for your program. The e2 barrel is offered in three toasting profiles (Classic, Intense and Dark) that are created in Amalé Oak Importers' modern cooperage, using the computer-controlled TRH toasting process. This process provides exact replication of the toast from barrel to barrel.



Barrel Builders 1822

Calistoga, CA • www.barrelbuilders.com

NEW Marchive Fusion Barrel

DESCRIPTION: Oak is forested from the foothills of the Appalachian Mountain range, where the majority of the soil profile derives from sandstone and shale. These barrels work very well with both red and white varietals, available in BDX 225L, BDX Thin Stave 225L and BGE EXP 228L.



Barrels Unlimited Inc.

800

Seal Beach, CA • www.barrelsunlimited.com

Barrels

DESCRIPTION: All barrels are made from American oak, which has been air-dried. All staves are 1" thick, and all barrels come with galvanized hoops.

Bouchard Cooperages

1214 & A2500

Napa, CA • www.bouchardcooperages.com

NEW DAMY Imperial and BILLON Chauffe 180 Min

DESCRIPTION: DAMY created the "Imperial" barrel that is a blend of staves with a proprietary 3h light long toast. BILLON created the "Chauffe 180 min," which is a 180 min light long toast on embers applicable to any forest. These "chauffe a coeur" toasts, where



the entirety of the stave is toasted but remains a beautiful noisette color, add subtle notes of grilled bread, spice, chamomile and nuttiness to the wine while respecting varietal and vineyard site.

Canton Cooperage

529

Santa Rosa, CA • www.cantoncooperage.com

NEW 400L Grand Cru Limited Series Barrel

DESCRIPTION: Canton introduces the 400L Grand Cru Barrel Limited Series. Handcrafted from American oak, it is 100 percent certified natural seasoning for 36 months and 48 months (Limited Edition). The 400L offers a perfect option between the 300L and puncheon 500L. The 400L broadens and deepens the fruit expression of the wine and provides elegance and balance. Available in medium, medium plus, heavy and long soft toast.



Cooperages 1912

1028

Napa, CA • www.cooperages1912.com

On-Site Warehouse



DESCRIPTION: Located at the Cooperages 1912 Sales

Office in Napa Valley, the warehouse provides on-site service for customers. Though custom orders ship from a cooperage in Missouri, Cooperages 1912 has a selection of barrels in stock to expedite shipping or allow for local customer pick-up.

Elevage Global

A2418

Napa, CA • www.elevageglobal.com

NEW Low Carbon Barrel

DESCRIPTION: Elevage-Infiniti (barrel outer) plus Elevage-BarriQ (barrel oak) rank alongside traditional barrels in wine quality but have one-fifth the carbon footprint and half the cost. Use new, tight grain, air-seasoned barrel oak, including elite single forest sources (Tronçais, Bertranges, Jupilles) every year. This is a new, practical way to reduce your winery's carbon footprint after light globes and solar panels.

Le Grand USA

238

Walla Walla, WA • www.legrandusa.com

Le Grand 500L Spin Barrel

DESCRIPTION: The Le Grand Spin Barrel is made with 24 month, fine grain French oak. Available with the Immersion process (Lumineuse+) or without (Nocturne), the barrels are toasted long and low for subtle tannin impact and sweet oak flavors. What's really incredible is the smooth, velvety texture that these barrels will give to your wine. The Spin barrel comes with a custom



stainless steel rack, stainless tank top, pressure valve and tasting valve (optional). If you prefer no tasting valve, we will still include it with the barrel, and it can be easily installed at a later date.

L'ESSENCE DE L'ART





Winery > Cooperage > Barrels

Nadalié USA 1824

Calistoga, CA • www.nadalie.com

NEW Perle Blanche Fruity

DESCRIPTION: Nadalié USA introduces its Perle Blanche Fruity barrel to produce complex Rosé wines. Crafted from rigorously selected French oak, the Perle Blanche was specifically created for white varietals. Now, new research conducted on Rosé's shows the barrel's versatility with enhanced fruity aromas and aromatic persistence. Available in 225L to 500L.

Premier Wine Cask Inc.

Napa, CA • www.premierwinecask.com

NEW Montgillard—Burgundian Cooper

DESCRIPTION: In addition to the finely crafted barrels from Tonnellerie Montgillard, our cooper now offers a barrel from the Loches forest of France that features tight grain and is toasted to the client's desire. A limited quantity is available.

NEW Carpathian Oak Barrels / Steam Bent French Oak Barrels from Tonnellerie Giraud

DESCRIPTION: Giraud is now offering a steam bent French oak barrel and a Carpathian oak barrel. Both new products are an extension of the line of French oak barrels offered by Tonnellerie Giraud.



Skolnik Industries Inc. 1311

2038

Chicago, IL • www.skolnikwine.com
Stainless Steel Wine Barrels





DESCRIPTION: Skolnik Industries is a USA manufacturer of stainless steel wine barrels, ranging in capacities from 5 gallons up to 124 gallons. Skolnik offers two body styles: conventional or seamless/crevice-free. All sizes and styles are customizable for fitting locations.

Snyder Industries A2900

Lincoln, NE • www.snydernet.com

Bulk Barrel

DESCRIPTION: While allowing valuable oxygen molecules to permeate the vessel's sidewall, this unique proprietary design is virtually impermeable to water and alcohol vapor, which eliminates the leaking and routine topping requirements associated with oak barrel maturation. Moreover, the seamless one-piece interior is easier to clean and sanitize before reuse, eliminating the routine repair and costs created by aging oak barrels. Bulk Barrel provides superior wine maturation at half the cost with an indefinite useful life.

Squarrel Square Barrels

343

Minnetonka, MN • www.squarrelbarrels.com

Squarrel

DESCRIPTION: Squarrel Square Barrels are available in three sizes: 10-, 30- and 60-gallon. Utilizing leftover stave wood to make a traditional barrel by using a 13.5" stave and incorporating a stainless steel square frame not only saves space but saves trees, shipping costs and provides a half price French oak barrel.







The Bucket[™] press by Coquard

- Low solids, improved wine quality and minimum oxidation
- Fast press cycle, energy efficient and exceptionally quiet
- Continuous operation with two buckets minimal downtime
- Safe and simple to operate, easily cleaned
- Compact, portable, 300° access
- Built like a tank, performs like a champ!

Now offering 2-ton, 3-ton and 5-ton capacities (of pre-fermented grapes)

Visit us at booth 2038 during the Unified Symposium in Sacramento!

Orders placed before March 31st 2022 will deliver by August 2022. Please contact us for more information.

Winery > Cooperage > Barrels

T.W. Boswell 434

Napa, CA • www.twboswell.com

T.W. Boswell Certificate of Quality

DESCRIPTION: T.W. Boswell brands its commitment to excellence on every T.W. Boswell barrel head in its Certificate of Quality. This visual representation of quality ensures the barrels you receive meet T.W. Boswell's rigorous specifications in wood origin, grain selection, seasoning and toasting.



TN Coopers 538

Sonoma, CA • www.tncoopers.com

NEW Environmently Friendly Toast Profile

DESCRIPTION: An eco-friendly patented technology software to toast barrels and oak alternatives, through thermodynamic principles, requires three times less energy than traditional toasting, reducing net carbon emissions by 67 percent, ensuring impeccable consistency and continuity. Using the Aqua system, barrels and premium oak alternatives are subjected to a combination of



water, pressure and time at high temperatures, managing to lower the tannic load by up to 35 percent and the astringency and bitterness by 40 percent, perfect for soft and delicate varieties.

BOUCHARD COOPERAGES A commitment to quality and customer service. DAMY **BILLON MAURY** Bordeaux Beaune Celebrating 40+ years serving the wine EUROPEAN COOPERS CANADELL CHÊNE-oelogie ARTENOVA WWW.BOUCHARDCOOPERAGES.COM (f) (iii) sales@bouchardcooperages.com / (707) 257-3582

TN Coopers

Sonoma, CA • www.tncoopers.com

NEW Aqua System

DESCRIPTION: Using the Aqua system, barrels and premium oak alternatives are subjected to a combination of water, pressure and time at high temperatures, managing to lower the tannic load by up to 35 percent and the astringency and bitterness by 40 percent, perfect for soft and delicate varieties.



NEW Custom Barrels and Oak Alternatives

DESCRIPTION: TN Coopers offers custom products by toast profile, forest designation, Gluten free and Kosher, and are available upon request to add flexibility to fit different winemaking styles.

Tonnellerie Allary

1928

Archiac, France • www.tonnellerieallaryusa.com

NEW French Oak Cooperage

DESCRIPTION: Allary offers the Ovoide French Oak egg-shaped foudre for fermentation and élevage.

Tonnellerie Baron

1841

Les Gonds, France • www.tonnelleriebaron.com

NEW Alma

DESCRIPTION: Tonnellerie Baron introduces Alma, a 400L egg-shaped, French oak and ceramic vinification and aging vessel. With the patented Vinification Integrale hatch in the head and a draining valve in the bottom, filling and emptying Alma is very simple. Utilizing a 74 percent French oak surface area and 24 percent in a Claver ceramic base, there is an ideal ratio to provide both richness and freshness to your fermenting and aging wines. With its integrated tasting tap, it's very easy to monitor progress and make winemaking decisions.

Tonnellerie Boutes

1829

Hercules, CA • www.boutes.com

Tonnellerie Boutes and Garonnaise

DESCRIPTION: Tonnellerie Boutes and Garonnaise offer fine French oak barrels and vats for all winemaking needs.



Tonnellerie Mercier

2131

Barbezieux, France • www.tonnellerie-mercier.com/accueil

NEW Mineral Barrel

DESCRIPTION: Mercier cooperage has designed the Mineral barrel for white wines. It is a blend of French oak from a quaternary terroir with mineral character (flint, granite, limestone), which is selected and seasoned for 24 months. The Mineral barrel is toasted by gentle and controlled convection, preserving the fruit and minerality of the wood. Thanks to this perfect combination, the Mineral barrel will give your white wines minerality, tautness and salinity. It is recommended for grape varieties such as Sauvignon Blanc and Chardonnay, for example.

Tonnellerie O

829

Benicia, CA • www.tonnellerieo.com

NEW French Reserve L'Etoile Five Year

DESCRIPTION: Each year Tonnellerie Ô's master cooper travels to France to hand-select the finest grain staves available from the prized forests of Tronçais and Bercé and set them out to season for five years for the production of our Reserve barrel. Tonnellerie Ô offers winemakers the opportunity to experience the combined influence of meticulous forest and grain



selection, extended seasoning and delicate toasting on their finest wines.





In crafting Tonnellerie Ô barrels, we take our inspiration from the winemaker. We gain a clear understanding of your intent, then build your barrels to enhance the essence of the wine. We use premium materials to handcraft our iconic oak barrels to lift the flavor of the fruit and ultimately capture the senses.

For the finest in barrels visit Tonnellerieo.com

Winery > Cooperage > Barrels

Tonnellerie Quintessence

434

Caillau, France • www.tonnelleriequintessence.fr

The Finest Oak

DESCRIPTION: The Quintessence team takes great care in oak selection, searching renowned forests for straight, tight grain oak. Each log must meet our rigorous specifications before it is milled by expert merrandiers at our company-owned stave mills. By carefully tracing each stave through the milling process, including open-air seasoning over several winters, we nurture the oak for your wine and heighten its aromatic potential.

Tonnellerie Tremeaux

434

Beaune, France • www.tonnellerie-tremeaux.fr

L'Ouvrée®

DESCRIPTION: New in 2021, the L'Ouvrée option adds a door to the barrel head so the barrel can be used from the vinification and fermentation process through aging. L'Ouvrée brings aromatic complexity to the wine with finesse and emphasizes the fruit with elegance.



Tonnellerie Vicard

Napa, CA • www.groupe-vicard.com

card A2806

Vinificator

DESCRIPTION: For a harmonious integration between wood and wine, Vicard offers its range of Vinificators. These oak puncheons, offered in volumes from 300L to 600L, are specifically designed for barrel fermentation. Each is equipped with a round hatch on one side, racking and sampling valves, and set on a galvanized steel stand with rollers for improved convenience and ease of use.



Jean Vicard Premium

DESCRIPTION: The Jean Vicard Premium Barrel reflects 50 years of experience and innovation in the cooperage. Characterized by great complexity, finesse and respect for the fruit, it benefits from 48 months' natural drying, extra-fine grain French oak and a specialized long toast. This soft and fruit-forward barrel is equipped with eight galvanized steel hoops (four are painted black) and an oak bar with the "Jean Vicard" signature. Limited edition, available in 225L and 228L.



NEW Exception Bercé/Tronçais

DESCRIPTION: The Exception is a limited edition, 100 percent prestigious forest selection barrel range, using Veritas-certified French wood with two choices of oak origin: Tronçais or Bercé (Jupilles). Its 60-month oak seasoning is matched with a Premium M+ toast that will bring an elegant profile to your wine. The barrel is equipped with eight galvanized black hoops. Only 250 of each barrel are available.



We patiently craft
limited production
barrels to respect the fruit
and reflect each wine's
unique beauty.



21200 Beaune - Côte d'Or - France www.tonnellerie-tremeaux.fr



World Cooperage

434

Napa, CA • www.worldcooperage.com

World Cooperage Barrel Series

DESCRIPTION: The World Cooperage portfolio is separated into four distinct series of barrels. Learn more about each series to find the right fit for your unique cellar or barrel aging program.

Winery > Cooperage > Barrel Racks / Pallets

Snyder Industries

A2900

Lincoln, NE • www.snydernet.com

Rack-Master 2- and 4-Barrel Rack System

DESCRIPTION: Rack-Master is a unique, all-plastic versatile construction that provides complete corrosion resistance and a gentle surface texture to protect expensive oak barrels from unnecessary handling damage. Rack-Master is also built to last with impact strength, which resists the denting and paint chipping associated with steel racks. Designed to be compatible with existing steel barrel rack systems, making the switch seamless for existing operations, this proven durability is backed by the industry's best warranty protection.

Topco Inc.

Grover Beach, CA • www.topcoproducts.com

New and Refurbished Barrel Racks

DESCRIPTION: Topco Inc. manufactures new barrel racks and refurbishes old barrel racks to look like new. They can pick up your old barrel racks and refurbish them to save you money. Topco offers nine different colors: black, beige, brown, blue, red, burgundy, gray, green and purple. They also make barrel racks in stainless steel.



Western Square Industries

839

534

Stockton, CA • www.westernsquare.com

Double Bar Rack

DESCRIPTION: The Double Bar barrel rack is the most versatile rack. It offers both strength and durability, holds two barrels and is available in stainless steel or powder-coated mild steel in a variety of colors.





The #1 barrel rack supplier in the world today, and for the last 30 years.

WESTERN SQUARE

NDUSTRĪES

WesternSquare.com

Lean, Green and Made in America

Winery > Cooperage > Barrel Washers

MOOG Cleaning Systems

1903

Worb, Switzerland • www.moog.swiss

Barrel Washer BRA Reference

DESCRIPTION: Barrel cleaning systems by MOOG for gentle cleaning of your wine barrels. From handheld units to fully automatic cleaning lines available, your barrels deserve it.



Rapidfil Pty Ltd.

1925

Heidelberg West, VIC, Australia • www.rapidfil.com.au

RF7 Barrel Cleaner

DESCRIPTION: The RF7 features cleaning nozzles in the middle of the barrel, regardless of the rack size and type, higher cleaning forces on the dirty side of the barrel, less force to avoid damaging the bunghole, 24V DC motor to rotate the head, stainless steel construction, compact design to fit narrow walkways, no bending to turn unit on and open valve, and easier maneuvering to insert head in bunghole.

Winery > Cooperage > Bungs

The Boswell Company

311

San Rafael, CA • www.boswellcompany.com

NEW Boswell Fermentation Bung

DESCRIPTION: The Boswell Company has designed and fabricated an improved version of the fermentation bung. The improvements on the two-piece part include an easier to pull through tail, sleek design and more durable material. They are available in white, red, orange and yellow.

Protect Your Nectar To order new bungs, call (415) 457-3955 staff@boswellcompany.com www.boswellcompany.com

Winery > Cooperage > Casks (Oak)

Artisan Barrels & Tanks Inc.

915

Oakland, CA • www.artisanbarrels.com

NEW Ove Rousseau Cask

DESCRIPTION: Artisan Barrels & Tanks has introduced the Ove Rousseau, its first egg-shaped cask. It is built specifically by the best coopers from Rousseau, those awarded "meilleur ouvrier de France" (best French craftsman). Just like their concrete counterparts from Nomblot, these French oak eggs from Rousseau have unique fermentation kinetics so that lees stay in suspension much longer than a traditional vessel.



Garbellotto SPA

1404

Sacile, Italy • www.garbellotto.com

Experience 10 HL

DESCRIPTION: The Experience has a capacity of 1,000 liters, which helps those who do not normally use fermentation in wood to approach the method gradually. After fermentation, it can be used as an aging tank as it has an exchange surface similar to a 500 litre tonneau.



La Botticella

DESCRIPTION: This product is the result of research by Garbellotto's collaborators to rationalize the use of normal tonneaux in wine cellars. The barrels combine ease of use, typical of large casks, with the speed of aging in 750 to 1,000 liter barrels because the tonneaux are automatically constructed ready for use and can be fitted with the same accessories as casks.



Group Vicard USA

A2802

Napa, CA • www.vicardg7.com

NEW Ovonum Cask

DESCRIPTION: The Ovonum is hand-coopered to the dimensions of the golden ratio. The true egg shape promotes Brownian Motion, which gives better lees mixing and improves the integration between wine and wood.



Pickering Winery Supply

1331

San Francisco, CA • www.winerystuff.com

NEW Vernou Roll Fermentor

DESCRIPTION: Pickering's cooper, Tonnellerie Vernou, has introduced a new, stronger stand for their 600, 900 and 1,200 liter roll fermentors, which will be displayed at the show, as well as one of the spirits barrels they make for Cognac distillers.

Seguin Moreau Napa Cooperage

1006

Napa, CA • www.seguinmoreaunapa.com

NEW SMART DOOR for Oak Tanks

DESCRIPTION: For large containers, the SMART DOOR is a connected door made of oak and fitted with temperature sensors to monitor and measure temperature increases in tank staves during steam cleaning and sanitization. A temporary replacement for a stainless steel door, it helps



in reaching the ideal temperature/time to reduce microbial contaminants. SMART DOOR comes with a digital screen, giving data, process steps and cycle ending, as well as a memory card for historical analysis.

Winery > Cooperage > Oak Barrel Alternatives

Creative Oak

Benicia, CA • www.creativeoak.com

NEW Forest Collection

DESCRIPTION: These novel oak alternatives, each offered in custom proprietary fire toasts, are sourced from three of France's most prestigious forests whose oak has been used for centuries to build the world's finest wine barrels. The single forest sourcing, combined with a 24-month seasoning regimen, enable winemakers to achieve more elegant and complex flavors from oak alternatives.



These Single Forest Alternatives are available as tank staves, tank bags and barrel inserts.

Elevage Global

A2418

829

Napa, CA • www.elevageglobal.com

NEW Elevage-Grande

DESCRIPTION: Elevage-Grande is a fast-infusing segment and mini-block style oak that is highly aromatic, complex and soft in tannins. Designed for tank-matured red wines, it is pitched in quality above commercial oak and below barrel, and is aimed at premium red wines price between \$15 and 25.

evOak by Oak Solutions Group

www.oaksolutionsgroup.com

evOAK High Caramel Chips and Staves

DESCRIPTION: High Caramel chips are toasted in evOAK's custom-designed small batch roaster—a small rotating drum that develops specific attributes in the oak, according to the unique recipe for that toast. High Caramel tank staves are created using convection technology—a computer-controlled process that creates tank staves with accelerated



extraction of full-bodied oak. These two toasting regimes allow for the large range of time and temperature combinations necessary to bring out caramel flavors in the oak, providing consistency, precision and control during the toasting process.

GOfermentor®

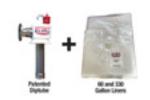
932

434

Far Hills, NJ • www.gofermentor.com

Smart Barrel

DESCRIPTION: The Smart Barrel is wine storage technology that uses patented diptube and singleuse liners, requiring no headspace and no topping, and can store partial volumes as well as dispense, as needed, with no cleaning.



Group Vicard USA

A2802

Napa, CA • www.vicardg7.com

NEW weOAK

DESCRIPTION: weOAK offers a range of stave inserts sorted by tannin potential, using the same technology as the Vicard Generation 7 range (analytical selection and molecular toasting). Combining these processes allows the company to offer reproducible aromatic expressions.

LET'S DO MORE, World Cooperage TOGETHER

You know your fruit - we know our oak.

Together, let's craft a beautiful wine to achieve your cellar goals.



FULLY ENGAGED FOR ANY FLAVOR



The Creative Oak team will work side-by-side with you to conjure up unique, distinctive flavor ideas, or guide your selection from our remarkable range of options. We make oak alternatives that create any flavor you envision, for every drop you craft.



creativeoak.com • creativeoakstore.com

Scott Laboratories Inc.

500, 808

Petaluma, CA • www.scottlab.com

NEW The Oak Lab™

DESCRIPTION: The Oak Lab was founded with the vision of bringing a new perspective to the oak infusion market. The Oak Lab THERMIC range of products undergo a proprietary, innovative heating process, resulting in a level of consistency superior to traditional toasting methods. Working in an oxygen-free environment and under vacuum pull, THERMIC provides a broad spectrum of toast profiles and scales effortlessly, from bench trial to production.

Tru/tan by Oak Solutions Group

434

www.oaksolutionsgroup.com

NEW Fermentation Plus

DESCRIPTION: This fermentation tannin is designed to add subtle aromas and a smooth, round mouthfeel to heavier whites and lighter reds. It can also be used in finishing for delicate oak aromas and to increase structure and smoothness in the finish.



VintAge 118

Friday Harbor, WA

VintAge

DESCRIPTION: VintAge is a wine maturation product that utilizes French and American oak in a process that essentially turns the traditional barrel inside out. The patented process achieves the same oak/air interchange as a barrel but in a substantially more efficient and cost-



effective manner. The process is adaptable to stainless and poly tanks from 5 to 10,000 gallons. Flavors and mouthfeel of resulting wine are notable for their comparability with known fine wines. Tasting by invitation.

Vivelys USA 743

Santa Rosa, CA • www.vivelys.com

Boisé Chips, Staves and Barrel Inserts

DESCRIPTION: For more than two decades Boisé has been producing precision enological oak products, beginning with their comprehensive range of premium quality French oak chips, which in recent years have been extended with a line of French oak staves and barrel inserts that offer the same consistent quality. Boisé inserts, staves and oak chips are distributed by G3 Enterprises in the United States.



XtraChêne 529

Santa Rosa, CA • www.xtrachene.com

NEW Tronçais Oak, Guaranteed by DNA Testing

DESCRIPTION: XtraChenes' new XtraKits made from Tronçais oak, selected by its team of wood buyers, are guaranteed by genetic compliance testing to be from the forest known for its slow growth of very tight grain oak. Sensory profiles feature lengthy natural openair seasoning for 36 months in the cooper's exclusive aging yard, with toasting options of oak fire or convection toasting. Benchtop trial kits are available upon request.



Winery > Cooperage > Oak Tannins

Pickering Winery Supply

1331

San Francisco, CA • www.winerystuff.com

NEW SuberOak Tannin

DESCRIPTION: SuberOak has new dry tannins that will be introduced for 2022, building on the liquid tannin products that have been offered for several years in five different flavor profiles.

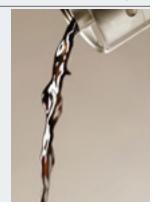
StaVin Inc.

614

Sausalito, CA · www.stavin.com

Express Oak

DESCRIPTION: Express Oak is most effective as a finishing or touch-up tool. However, each winemaker will use their own taste buds to decide exactly how best to employ it. Start small by taste trials with a single drop in a glass of your product. When you've found your perfect measure, scale your ratio proportionately to your volume of wine.



Winery > Packaging > Bottle Decorating

Bergin Screen Printing & Etching

930

Napa, CA • www.berginglass.com

Screen Printing and Etching

DESCRIPTION: Bergin specializes in Applied Color Labeling (ACL), screen printing multi-colors with tight registration, including bottle neck, shoulder and 360° design surface decoration. Bergin also offers complex engraved and artisan quality hand-painted wine label reproductions, as well as custom artwork development and fulfillment services, including waxing and blackening.



Monvera Glass Décor

1814

Napa, CA • www.monvera.com

Screen Printing

DESCRIPTION: Monvera Glass Décor prints screen-printed labels on glass, with UV, ceramic and precious metal ink options available. Screen-printed labels offer a variety of design options that are expensive to achieve with paper labels. Suitable for all segments of the wine market, a screen-printed label supports the price point for ultra-premium wines and can also differentiate value wines by making the bottle stand out on the retail shelf.

Xilong Packaging Co., Ltd.

A2504

Shanghai, China • www.xilong-glass.com

Bottle Decoration

DESCRIPTION: Xilong can print, frost, spray, emboss or paste a coin on the bottles.





Smarter solutions in glass



DobleAlto™ applies innovative thinking and advanced techniques to achieve a distinctive double base and taller, sophisticated form factor for a unique presentation. Both exclusive and economical, there is no increase in the amount of glass required in the production of DobleAlto™, bringing value to your brand.



CALIFORNIA, NORTHWEST & EAST COAST info@globalpackage.net | 707 224-5670

globalpackage.net

Winery > Packaging > Bottles

Ardagh Glass Packaging - North America

105

Indianapolis, IN • ardaghgroup.com

NEW ECO Series® Wine Bottles

DESCRIPTION: Ardagh offers its ECO Series wine bottles, which provide all the eco-friendly advantages of glass while maintaining customer appeal and reducing the overall impact on the environment. Ardagh recently expanded its collection with two new LCBO-compliant, tapered claret bottles: the Apex Light and Apex Light Stelvin.



Gallo Glass

332

Modesto, CA • www.galloglass.com

NEW Lightweight Tapered Claret



DESCRIPTION: In addition to the wide range of wine bottle designs, Gallo Glass has a new offering, the new Lightweight Tapered Claret.

Uncover a breadth of color options, including the premium California Flint color. Glass is the preferred packaging among consumers who value maintaining the purity of the food and beverages they consume.

Global Package LLC

941

Napa, CA • www.globalpackage.net

NEW Prima Glass

DESCRIPTION: For the first time, Global Package will show the Prima Collection of Wine Bottles designed for authenticity, with special asymmetrical lines and a new ring style that separates your bottle on the shelf, without adding heavy weight. The elegant shapes speak for themselves. Available in Wild Glass, 100 percent recycled, in dark and light colors.

NEW Rude Collection

DESCRIPTION: Global Package showcases the new Rude Collection of bottles: rustic looking from antiquity. Designed for dessert wines and spirits, the bottles come in the specialized Wild Glass that is 100 percent recycled and created by Estal.



0-l 810

Perrysburg, OH • www.glass-catalog.com

NEW Bistro Collection

DESCRIPTION: O-I's latest collection is small in size but mighty in timeless and thoughtful design. The Paris design offers romantic minimalism, is elegant yet approachable, and has sweeping curves with a large label panel. This family set is available in 250ml, 375ml and 750ml.

Saverglass Inc.

528

Fairfield, CA • www.saverglass.com

NEW Alto

DESCRIPTION: The Alto is lighter and more slender. Its distinctive silhouette has an ultra-sharp look and stands out because of its hybrid style, not fully hock or burgundy. But beyond being lighter than a feather, (only 560g), ALTO's other big advantage is its flat base. Meet the transcendent geometries: precious mosaic, extreme mosaic, extreme oriental, solar impulse and mystical pyramid.



Collaboration from manufacturing line to bottling line

BOTTLES 100% MADE & SUPPORTED IN THE USA

As the largest producer of glass wine bottles made 100% in the USA, Ardagh Glass Packaging has the resources to meet your unique needs with flexibility, responsiveness and ease.

We're ready to collaborate with you - right from the heart of the major North American wine regions, helping things run efficiently every step of the way. Call us to learn more about our extensive bottle portfolio and the exceptional quality and support you can expect from your local glass partner.



Visit us at Unified! January 26-27, 2022 • Booth #105



317-558-1585 ardaghgroup.com/wine2022

Sustainable Premium Packaging

20% lighter than other similar shapes. The perfect trade-off for high quality range with less overall impact on the environment.





UNIFIED GUIDE 2022

Winery > Packaging > Bottles

Saverglass Inc.

528

Fairfield, CA • www.saverglass.com

NEW Vin Grand Cru Zebra

DESCRIPTION: Vin Grand Cru Zebra bursts onto the scene as an elegant contrast to traditional bottles. The bottle has a sturdy body, with a long, elegant neck, further elongated by its low shoulders, proving its irresistible boldness through fine vertical engravings. These chic, slim stripes adorn the bottle from the shoulders to the lower neck, transforming the classic container into a truly curious piece. The lower section remains smooth, a canvas for all types of customization.



TricorBraun WinePak

601

Fairfield, CA • www.tricorbraunwinepak.com

Glass Wine Bottles

DESCRIPTION: TricorBraun WinePak is a distributor of glass wine bottles from a broad range of manufacturers, both domestic and international. TricorBraun has a robust stocking program, as well as custom design solutions for all of your packaging needs.



Verallia USA

1103

Fairfield, CA • us.verallia.com

NEW Selective Line Stylebook

DESCRIPTION: Selective Line unveils its Stylebook made in collaboration with Carlin Creative, which includes selected excerpts from a focus on 2021, a year marked by insolent creativity and a return to the roots.

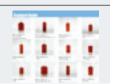
Xilong Packaging Co., Ltd.

A2504

Shanghai, China • www.xilong-glass.com

Glass Bottles

DESCRIPTION: Xilong supplies glass bottles/cartons/corks for distilleries to package liquor.



Winery > Packaging > Boxes

Napa Wooden Box Co.

725

Napa, CA • www.napawoodenbox.com

1x750ml Walnut Wood Box

DESCRIPTION: Napa Wooden Box Co. offers the Anniversary 1x750ml walnut wood box with box joints, flip lid, magnet closure and branded artwork.



West Coast Supplies

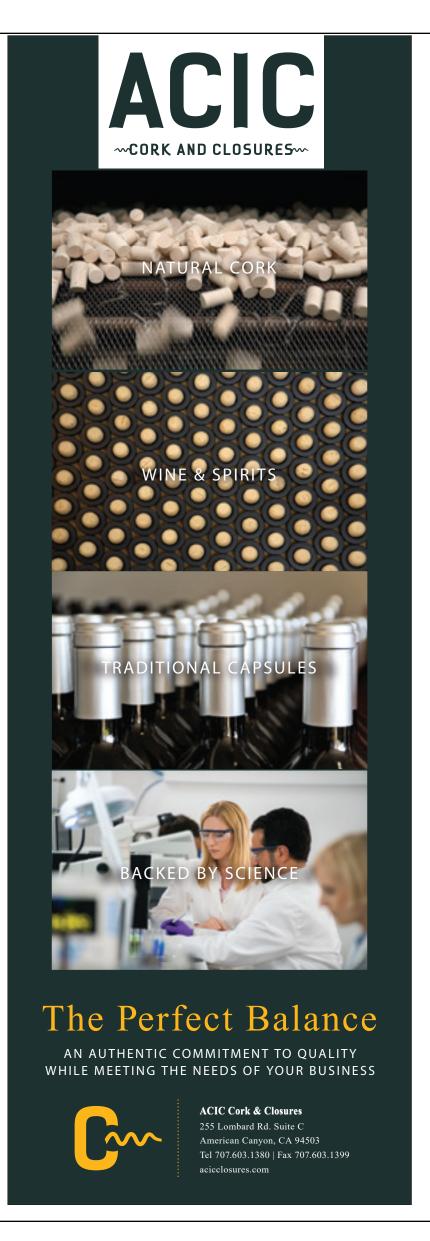
144

Rancho Cordova, CA • www.westcoastsupplies.com

Wine Shippers and Slip Sheets

DESCRIPTION: Secure all sizes of wine by using corrugated, pulp, foam and recycled PET plastic wine shippers. Preventative and interchangeable inserts assist in gentle transportation of bottles and glasses. West Coast Supplies also carries an assortment of plastic, fiber, chipboard and corrugated slip sheets that offer additional load support as well.





Winery > Packaging > Cartons & Containers (Incl. Bar Code-UPC)

Diagraph 131

St. Charles, MO • www.diagraph.com

Linx Laser Coders

DESCRIPTION: Diagraph's line-up of Linx CO2 scribing lasers and Linx fiber lasers provides a range of laser coding solutions to meet every budget, line speed and substrate material needs. Linx laser coders are known for industry-leading tube life and service intervals. Linx laser coders are ideal for high-speed coding applications and for coding onto hard-



to-mark materials. They offer the largest marking field in the industry, allowing wide web applications to be addressed with one laser instead of two.

Xilong Packaging Co., Ltd.

A2504

Shanghai, China • www.xilong-glass.com

Cartons

DESCRIPTION: Xilong produces custom cases with dividers to pack bottles.

Winery > Packaging > Closures

ACIC Cork and Closures

622

Napa, CA • www.acicclosures.com

Natural Corks, Bartop Corks and Tin and Polylam Capsules

DESCRIPTION: ACIC strives to provide customers in the wine, spirits and food industries with the highest quality standard closures and, as such, has established partnerships with producers of natural and technical corks, Vinoseal, bartops, screwcaps and capsules around the world to provide a full range of closure options.



Amcor Flexibles LLC

600

American Canyon, CA • www.amcor.com

NEW Impressions

DESCRIPTION: Amcor, in collaboration with MGJ, has launched Impressions, a technology that enables you to customize and decorate your closures' liners. Impressions allows you to engage with your customers in a new way: via logo or a QR code that redirects consumers to a dedicated webpage or a game. Impressions is only visible once the bottle is opened, making it a real tool for traceability and allowing you to protect your brand from grey-market sales.



Amorim Cork America

1424

Napa, CA • www.amorimca.com

NEW NDtech®, Now With Naturity

DESCRIPTION: NDtech individually tests each wine cork for TCA, using unprecedented fast chromatography technology developed through a partnership between Amorim and a specialist firm based in Cambridge, UK. The new fast chromatography machine can analyze each cork in seconds, thus shattering the previous testing times in existing chromatography machines that typically require up to 14 minutes for each batch of



corks. The high-precision screening technology can detect cork with more than 0.5 nanograms of TCA per litre* (parts per trillion).

Naturity is now added to the NDtech process to maximize the performance of natural cork stoppers by defeating TCA and other sensory-deviation compounds. Thanks to an optimized process that combines pressure, temperature, purified water and time, Naturity separates TCA molecules from a cork's cellular structure, keeping the crucial features of the cork material intact, which is essential to the protection and evolution of the wine.

*releasable TCA content at or below the 0.5 ng/L quantification limit; analysis performed in accordance with ISO 20752.

Vinoseal

DESCRIPTION: Vinoseal is considered one of the most elegant and creative closures for still wines, spirits, water and oils. It's made from pure Bohemian glass that transforms every bottle into







an exceptional package. Vinoseal gives a brand top-class quality, making any product a luxury article never to be forgotten. Vinoseal is fully recyclable.

NEW Neutrocork Premium®, Now with Xpür

DESCRIPTION: All Neutrocork Premium stoppers now feature Xpür, one of the world's most advanced and greenest microagglomerated cork cleaning technologies. After years of R&D, Amorim Cork has brought supercritical fluid technology well into the 21st century. Xpür allows for a robust and even deeper cleansing of cork's cellular structure, eliminating volatile substances that could trigger sensory deviations. Amorim's new, innovative take on the supercritical



CO₂ system uses only 25 percent of the energy and just 10 percent of the CO₂ previously required.

Cork Supply USA

829

Benicia, CA • www.corksupply.com

VINC

DESCRIPTION: VINC is a line of TCA taint-free microagglomerated corks that are produced exclusively from 100 percent Cork Supply-controlled raw material and state-of-the-art individual molding technologies. The VINC product line is also a result of the new, improved VAPEX® disinfection process. VAPEX® is a batch disinfection process that reduces TCA on cork granules through effective mass and heat transfer.











Connect in a **unique way** as soon as the bottle is opened!



Strengthen the **brand identity** by surprising the consumer



Engage with consumers by offering an **interactive experience**.



Brand protection options available



IMPRESSIONS - Custom printed liners

Contact us: **707-257-6481** info.capsules@amcor.com

www.amcor.com

Find us on:









CABERNET SAUVIGNON

Red Wine









Naturally Created, Technically Perfected.







www.corksupply.com

Winery > Packaging > Closures

DIAM Closures

642

Napa, CA • www.G3enterprises.com/Diam-corks

NEW Mytik DIAM 10

DESCRIPTION: After four years of research, DIAM Bouchage introduces its latest innovation for sparkling wines, Mytik DIAM 10, allowing better aging and improved preservation of CO₂ pressure over time, giving the winemaker more control throughout the process. The Mytik DIAM 10 has a very low oxygen transmission rate and was developed to maintain consistent technical properties for 10 years.



Ganau America

1243

Sonoma, CA • www.ganauamerica.com

NEW EPIQ

DESCRIPTION: In 2021, Ganau launched EPIQ, an individually screened natural cork with a threshold of ≤0.5 ng/L TCA. It uses a scientifically verified technology with a sensitivity rate at least five times higher than other methods. The technology



(VOCUS® by Tofwerk) is a cutting-edge chemical ionization process combined with a high resolution time-of-flight (TOF) mass spectrometer. It screens every cork within three seconds and has been verified by *Analytical Chemistry*, a peer-reviewed publication of the American Chemistry Society.

Guala Closures North America Inc.

1300

Fairfield, CA • www.gualaclosures.com

NEW Blossom Sustainable Closures

DESCRIPTION: Guala Closures launched Blossom, a complete range of sustainable closures for the wine, spirits, water and beverage markets, using the most advanced alternative sustainable materials. The Blossom line of closures creates the perfect synergy between sustainability, quality and performance. Guala Closures Group continues its commitment to protecting the environment through reducing our environmental impact in all phases of the production chain and developing eco-innovation.



Herti 219

Capitola, CA • www.hertius.com

NEW Roll-On Aluminum Closure

DESCRIPTION: This spring, Herti launched one more aluminum screwcap: the Pilfer-proof Roll-On closure with a diameter of 28mm for MCA bottle finish. The closure is suitable for mineral waters and complies with the new recycling standards and can also be used for fruit juices, nectars, wine and low alcohol drinks. What distinguishes it from other MCA caps is the lack of temper-evident ring. The cap is completely detachable from the bottle, and recycling is easier for both; there is no danger of someone cutting their fingers while opening/closing the bottle again, either on torn bridges or torn side splits, and there is no danger of anyone cutting their lips while drinking from the bottle.

Lafitte Cork & Capsule Inc.

1124

Napa, CA • www.lafitte-usa.com

NEW Artis by Lafitte

DESCRIPTION: Geared specifically to luxury spirits, high-end oil and vinegar, Lafitte employs the technical expertise and ingenuity to guarantee the perfect bar-top closure.

MALA Closure Systems Inc.

1708

Petaluma, CA • www.mala-usa.com

NEW Digital Image Print on Screwcap Closures

DESCRIPTION: In addition to 28 standard colors, foil and relief embossing, multicolored designs and sprayed caps, MALA now offers digital printing options that allow full color and gradation print without color limitations. This new technique provides the highest level of individualization for small productions, like private events and large projects.



With digital print, your options for unique design are limitless: from personalized bottles for special events, to numbered editions and photo closures.

M.A. Silva USA

1310 & 330

Santa Rosa, CA • www.masilva.com

NEW NEOTECH®

DESCRIPTION: Launched in 2020, NEOTECH is used to sterilize cork granules and remove TCA to non-detectable levels*. This proprietary process uses fluidized bed technology to maximize surface area exposure of the granules through a gaseous suspension to produce a gas-solid reaction. NEOTECH cork closures are preserved without cellular degradation



and offer increased neutrality while supporting M.A. Silva's ongoing commitment to sustainability.

*Releasable TCA content = 0.5 ng/L quantification limit; analysis performed in accordance with ISO 20752

Portocork A2304

Napa, CA • www.portocork.com

Naturity™

DESCRIPTION: All Portocork's natural stoppers are now treated with the Naturity process: an anti-TCA technology and the culmination of five years of research and development. Through this revolutionary process that utilizes a combination of high pressure and vacuum, varied temperatures purified water and time, Naturity separates TCA molecules



from cork's cellular structure, keeping the crucial features of this unique material intact and its remarkable performance, essential to the protection and evolution of wine, unchanged.

Winery > Packaging > Closures

Scott Laboratories Inc.

500,808

Petaluma, CA • www.scottlab.com

NEW ShapeArt® Textured Closures

DESCRIPTION: Scott Labs has announced the newest addition to its cork and packaging portfolio: new ShapeArt textured closures from Amcor Packaging. ShapeArt closures are designed to help you distinguish your brand and stand out from the crowd with customizable shapes



and textures. Whether you are looking for something refined and elegant, or something more artistic and textured, ShapeArt closures allow you to differentiate your bottle from the rest with a unique, premium, high-end look and feel.

Stelvin® Closures

DESCRIPTION: Whether you specialize in producing red, white or Rosé wines, Stelvin closures guarantee consistency and preservation of aroma, flavor and freshness. They are available in a wide range of colors that can be matched with your brand and can be decorated with intricate printing or embossing.



Tapi USA

Blue Bell, PA • www.tapigroup.com

NEW The Mekano

DESCRIPTION: The Mekano is a fully customizable swing closure suitable for a wide array of beverages: still wine, sparkling wine, beer, sodas, cannabis drinks, etc.



TricorBraun WinePak

601

706

Fairfield, CA • www.tricorbraunwinepak.com

Stelvin Closures

DESCRIPTION: Stock and custom Stelvin closures are available through TricorBraun WinePak.



Vinventions USA

Zebulon, NC • www.us.vinventions.com

NEW SÜBR

DESCRIPTION: Meet the Micro-Natural closure that is not only beautiful but provides superior performance. SÜBR is a revolutionary new class of wine closure that combines beauty with superior performance. SÜBR offers the look and feel of a high-end natural cork and the superior performance of the Nomacorc line of closures: consistent, low oxygen ingress that is ideally



841

suited for maintaining both the freshness and fruitiness of wine, bottle to bottle consistency and superior cellar aging performance.

NEW Vinventions National Cork Recycling Program

DESCRIPTION: Vinventions offers the national Cork Recycling Program for consumers, wineries and wine retailers. Wine corks are one of many items that fall through recycling belts and are deposited in landfills. Vinventions is committed to keeping wine corks out of landfills and into the circular economy where they are given a second life. The freestanding Cork Recycling Boxes can be found in major wine retailers, wineries and markets across the U.S.



NEW Nomacorc Green Line and Blue Line

DESCRIPTION: The Nomacorc Green Line, also known as PlantCorc™, is derived from sustainable, renewable sugar cane-based raw materials. Driven by a steadfast commitment to innovation, sustainability and continuous improvement, Nomacorc Green Line offers dramatic improvements in wine closure performance, design and sustainability. The Nomacorc Blue Line, currently in Europe, is a new category of closures where 50 percent of the raw material comes from an ISCC+ certified, recycled plastic and provides all the performance of the Green Line.

Wine Country Closures

1223

Fairfield, CA • www.winecountryclosures.com

Capsules and Closures

DESCRIPTION: Wine Country Closures offers capsules in polylaminate, polytin, tin, and PVC, plus screw caps and wirehoods. The company will help you seal and protect your product with precision and elegance. Wine Country Closures offers a wide range of stock colors and can customize your capsules with embossing, hot foil and rotogravure printing.

Winery > Packaging > Design Services

Berlin Packaging

314

Fairfield, CA • www.berlinpackaging.com

NEW Kindred Spirits

DESCRIPTION: When American Vintners launched their Cask & Barrel brand wine sampler, they partnered with Berlin Packaging and their Studio One Eleven design division. The Studio developed the name "Kindred Spirits," a nod to the brand's bourbon influences, and created simple graphics that borrow cues from the spirits category, including wood barrel details,



earthtones and bold fonts. Berlin Packaging sourced 187mL clear glass bottles with screwtop closures for easy enjoyment at home or on-the-go.

THE M. A. SILVA ADVANTAGE

NATURAL CORK



STANDARDS

M. A. Silva natural cork meets or exceeds the quality levels set by leading European cork standards bodies APCOR, C.E. Liege, and Systecode.



CONTROL

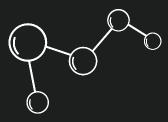
M. A. Silva doesn't buy from suppliers, thus giving us more control over our supply chain. This ensures complete control and certified quality from tree to bottle.



CUSTOMIZATION



Our natural cork is available in three different washes, multiple standard sizes, custom sizes, and revolutionary cork laser printing and shading. Whatever you create, we can execute.



QUALITY

M. A. Silva is able to deliver 100% TCA inspected natural cork through our onebyone $^{\text{TM}}$ technology. Every cork is inspected individually, leaving no margin of human subjectivity.





In 2021, M. A. Silva achieved a carbon negative status* from KPMG International. Our natural cork retains up to 262.7g of CO $_2$.

*according to KPMG Consulting



MASILVA.COM

BOHEMIAN CRYSTAL TOP



Born of sand and flame, glass has always been a natural material. Did you know that glass, traditional material used for manufacturing bottles and uniquely used for the Vinoseal closure, is completely recyclable without any loss in quality? Even the sealing ring is recyclable in the same way as low density polyethylene. The result is 100% recyclable closure. We are committed to a sustainable future of packaging. For more information visit vinoseal.us



Winery > Packaging > Design Services

CF Napa Brand Design

305

Napa, CA • www.cfnapa.com

Brand Strategy and Design

DESCRIPTION: There is so much more to your brand than meets the eye—standing out is simply not enough anymore. CF Napa helps define, position and activate brands, ultimately connecting them more deeply with consumers to forge long term engagement and increased sales. Capabilities include brand strategy, positioning, story development, naming and design for packaging, logos, custom bottles, marketing materials and websites.

MALA Closure Systems Inc.

1708

Petaluma, CA • www.mala-usa.com

NEW Custom Design Services

DESCRIPTION: MALA's design services are now available for all aspects of your packaging needs. The closure of your beverage is an essential part of the overall package and brand presentation. Professionals in closure technology and packaging design work with you, whether



you convert your bottling to screwcaps or need a complete design, including container, label, box and additional features.

Winery > Packaging > Labels

ACTEGA North America Technologies Inc.

A2403

East Providence, RI • www.simplysignite.com

NEW Signite[™] Decorating Technology

DESCRIPTION: Signite is a premium look, glass decorating solution designed to significantly reduce label matrix landfill waste while promoting the refill/reuse of glass container packaging. Depending on label image design, Signite reduces label waste by more than 50 percent compared to a similar footprint for pressuresensitive labeling by eliminating the die-cut matrix, reducing to one-third the thickness of a typical clear pressure sensitive label. In addition, it eliminates label media plastic in non-print areas. Applied to flat-walled, cylindrical glass containers by using ACTEGA's inline decoration transfer hardware, Signite provides a full-process color matte and high-gloss surface images accented with metallic and high-opacity white effects.



Apholos 431

Buenos Aires, Brazil • www.apholos.com

Metal Labels

DESCRIPTION: Apholos is a direct manufacturer of custom solid or flexible metal labels. Apholos offers custom metal closures, such as T-stoppers, sparkling wirehoods and discs for cork decoration, as well as custom self-adhesive metal labels. Labels are die-casted, curved to perfectly match the bottle's curvature and offered in more than 100 different metal finishes.



Avery Dennison

Mentor, OH • www.label.averydennison.com

NEW Hammered Metal Facestocks

DESCRIPTION: Avery Dennison's new Hammered Metal paper features rich copper or silver metallic tones with a distinctive hammered metal look. The facestocks, which are part of the sensorial collection, are available now.



428

NEW Embossable Film

DESCRIPTION: Avery Dennison's new white top-coated BOPP film offers shelf appeal through bold tactile features, as well as the eye-catching print and foiling capability of the paper-like surface. It has a high level of opacity, even when wet, and is suitable for a wide range of inks and foils, as well as textured varnishes. This film is available now.

Columbia Label

A2407

Benton City, WA • www.columbialabel.com

NEW Premium Wine and Spirits Labels

DESCRIPTION: Columbia Label produces premium wine and spirits labels, and provides free tooling, version changes and ground shipping within the continental United States. Columbia Label offers more than 60 label materials. Its digital printing technologies serve clients nationwide, and



Columbia Label is now even closer than you think with fully in-house production and on-site distribution.

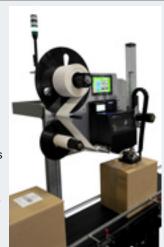
Diagraph

131

St. Charles, MO . www.diagraph.com

All-Electric Print & Apply PA7100

DESCRIPTION: The Diagraph PA7100 all-electric print and apply labeling system is designed using brushless servo-controlled label dispensing technology and smart sensing, auto-adjusting controls to achieve precise label placement. The smart, all-electric design allows for automated real-time adjustments to make applying labels on products with varying heights, distances and speeds easier than ever before. The all-electric servo-driven label printer/applicator enables manufacturers to completely replace conventional pneumatic systems with a fully electric option that controls the label with pinpoint accuracy in side, top, bottom and corner-wrap applications throughout travel.



G3 Enterprises

738

Modesto, CA • www.G3enterprises.com

NEW Sierra White™

DESCRIPTION: G3 has introduced Sierra White, the newest brilliant white premium quality paper stock made with the environment in mind. This bright white paper stock has excellent color reproduction and maintains great embossing depth, consistency and retention to enhance your design visuals.

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.



Winery > Packaging > Labels

Labeltronix 1934

Anaheim, CA • www.labeltronix.com

Dynamic Hybrid Label Solution

DESCRIPTION: Print labels with unrivaled flexibility without sacrificing premium quality with the Dynamic Hybrid Solution. Labeltronix will print the branded labels,



with all the eye-popping finishes, and producers can add variable information (vintage, varietal, description, export information and more) on demand with an Epson printer. You can even personalize labels for special events, like weddings, birthdays and more.

Premium Crafted Wine Labels

DESCRIPTION: Wine producers put endless time, money and heart into each blend. The labels should reflect that. Labeltronix helps wine brands stand out and share their stories with premium crafted labels. Get noticed with foil stamping, embossing, spot varnish and more.

Lean Labeling

DESCRIPTION: Lean Labeling was created with a focus on customers and their labeling needs and challenges. The purpose of Lean Labeling is to provide customers a "better way" to create, procure and manage their labels. Labeltronix can provide premium craft labels on time and on budget, and wine producers get premium label quality without sacrificing cost-effectiveness, sustainability and flexibility.

Saxco International

1106

Concord, CA • www.saxco.com

NEW Cans and Can Sleeving Services

DESCRIPTION: Enabling quick turn-around times, with high quality and custom graphics, Saxco can handle all your needs and manage your sleeving project from start to finish.



Wausau Coated Products Inc.

1109

Wausau, WI • www.wausaucoated.com

NEW Naturis™ Oak Veneer

DESCRIPTION: The Naturis is a real oak wood veneer label face stock with the texture and grain of wood, smooth enough for printing and converting.

NEW Twill Natural Cloth

DESCRIPTION: The Twill Natural Cloth features a traditional woven pattern.

NEW 60# Wild Bagasse

DESCRIPTION: 60# Wild Bagasse is a wine label paper that uses an alternative fiber: bagasse, a byproduct of sugar manufacturing. If not used to transform into a paper, it would otherwise be put into a landfill or burned.

Winery > Packaging > Machinery

CFT Packaging USA

A2309

Vernon Hills, IL • usa.cft-group.com

MicroBrew 10/2

DESCRIPTION: The MicroBrew 10/2 is high performing at 100 cpm, with guaranteed quality at one of the lowest oxygen pick-ups in the market today. It is equipped with a CFT Manufactured Seamer for the last 75 years.



MBF North America, Inc.

1817

Petaluma, CA • www.mbfnorthamerica.com

NEW MBF Remote Maintenance Workshop

DESCRIPTION: No more extended line stops for maintenance of your repetitive parts, like filling valves, pedestals, actuators, grippers, capping heads, etc. MBF NA now proposes a dedicated service with factory-trained specialists that quickly replace your parts and refurbish them in our workshop, following a rotation plan that will always keep your bottling machine in good order and performing with the best quality.

MBF Monoblock

DESCRIPTION: MBF offers performance through simpler design, reliability through know-how, efficiency through experience and flexibility through continuous improvement. MBF Monoblocks integrate rinser/cleaner, filler, corker and capper with modular frames and can be equipped with automatic universal handling parts that



eliminate the need to change parts and drastically reduce change-over times. Automatic settings bring ease-of-use, reducing the chance of mistakes, and minimizing maintenance by design and maximizing oxygen protection during filling/closing.

NEW Makro Labeler

DESCRIPTION: Continuous innovation is a must for Makro Labelling. This year Makro has introduced the new, compact "Slim" PS Labelling Units that maximize operator accessibility around the machine with an optimized and customized tension control of the web through receipt. Rounded shapes allow an easier walk-around without tripping points, and the narrow shape



increases the flexibility of the modular design. Built-in vision system with closed-loop auto-adjust keeps labeling precision under control.

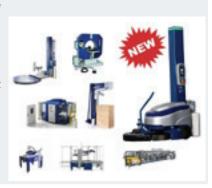
West Coast Supplies

144

Rancho Cordova, CA • www.westcoastsupplies.com

NEW Robot S7 Stretch Film Machine

DESCRIPTION: The Robot S7 is a new range of self-propelled, semi-automatic packaging machines. It includes the latest advanced technologies, the utmost attention to safety systems, a high level of autonomy and great work flexibility. This machine is built to wrap and stabilize palletized loads of any shape, size and weight, using stretch film. They also carry a line of semi and full-automatic equipment, such as the Rotoplat, the Prasmatic Case Packer and others.



Winery > Packaging > Other Packaging

Free Flow Wines

208

Sonoma, CA • www.freeflowwines.com

Aluminum Cans

DESCRIPTION: Free Flow Wines' high-speed canning line fills 187mL, 250mL, 355ml and 375ml aluminum Ball cans with custom pack-off options. Services include wine prep, compliance, filling and pack-off. Aluminum is one of the most recyclable materials and is a great package option for businesses focused on reducing waste.



Petainer Inc.

245

Arnold, MO • www.petainer.com

One-way PET Keg

one-way PET kegs are a lightweight alternative to steel and can be filled with a variety of beverages, such as beer, cider, wine, cold



brew coffee, juice, kombucha and cocktails. They allow you to access domestic and export draught markets and achieve considerable savings on logistics while reducing your carbon footprint.

Choose steel & aluminum THE LEADER IN SUSTAINABLE WINE PACKAGING SERVICES INFO@FREEFLOWWINES.COM | FREEFLOWWINES.COM | 415.626.1215

Winery > Packaging > Overclosures (Capsules, Wax, Foils & More)

Apholos

Buenos Aires, Brazil • www.apholos.com

Metal Wirehoods

DESCRIPTION: Apholos offers custom-stamped metal wirehoods in more than 100 different metal finishes.



Metal Cork Discs

DESCRIPTION: Apholos offers an innovative way to finish a bottle. Metal discs come with prongs that get into the cork and fix the disc to it, and are available in more than 100 different metal finishes.



Janson by Ramondin

1722

431

Napa, CA • www.jansoncapsulesusa.com

Polylam Capsules

DESCRIPTION: The polylaminate capsule is a two-piece capsule composed of two material layers: polyethylene and aluminum. Janson by Ramondin manufactures stock and custom capsules made of heavy premium polylam material to entirely allow its functionality, to optimize the closure application on your bottle and to provide a precise fit. Capsules



can be customized on the top and side, by using various decorative techniques depending on the design, colors and desired finish. Janson's expertise in capsule printing and decoration ensures a high-quality finished wine capsule. The polylaminate capsules are manufactured in California.

Left Coast Wine Packaging, LLC

233

Livermore, CA • www.leftcoastwp.com

Custom Tin Capsules

DESCRIPTION: Left Coast Wine Packaging offers 25 years of expertise in design and manufacturing of custom tin capsules.

Maverick Enterprises Inc.

2034

Ukiah, CA • www.maverickcaps.com

Polylaminate Capsules

DESCRIPTION: Polylaminate capsules are comprised of a three layer aluminum-polyethylene-aluminum seamed skirt and aluminum top disc. They provide a professional and cost-effective packaging solution. Polylaminate and Almost Tin™ capsules can be hot-stamped and have a variety of top artwork options. Both substrates can have a C-Cut tab added for easy removal.

PVC/PETg Capsules

DESCRIPTION: PVC capsules can be an economical alternative to traditional polylaminate or tin capsules. PVC comes in an array of colors, which can provide more options for artwork layout and design possibilities. These capsules are comprised of a PVC skirt and an aluminum or clear top disc. PET(G) capsules can be a more environmentally friendly capsule option. The process for printing both PVC and PET(G) is the same, as well as forming. Tear tape is available for both substrates.

NEW Screwcaps

DESCRIPTION: Maverick and Astro have teamed up to offer screw cap closures to the North American Market. Astro Screwcaps are available for wine, spirits, oils, vinegars, and syrups. Caps feature a range of liners, pour spouts, and other closing solutions to fit any specialty product need.

Ramondin USA Inc.

1724

Napa, CA • www.ramondin.com

NEW Sparkling Foils

DESCRIPTION: In addition to capsules for wine and spirits, Ramondin offers coiffes and muselets dedicated to sparkling wine. Coiffes are made of tin or polylam. E-coiffes are also available (polylaminate coiffes without plastic, 100 percent recyclable).



Tin Capsules

DESCRIPTION: Ramondin offers a selection of one-piece seamless pure tin capsules that fit any type of bottle. Tin capsules are 100 percent recyclable and can be decorated with water-based inks.



NEW e-CAP

DESCRIPTION: e-CAP is the result of Ramondin's firm commitment to sustainability by offering a plastic-free, two-piece polylaminate capsule that is 100 percent recyclable.



Rivercap USA

720

Benicia, CA • www.corksupply.com/us

Rivercap™ Tin

DESCRIPTION: Rivercap tin capsules from Cork Supply are crafted as a nine-stage deep-drawn shell from a single piece of pure high-grade tin to ensure an elegant, flawless finish. Six-color (or two-color registered) side printing, plus high-resolution top printing and/or embossing, complete the finest in customized capsule design.



Scott Laboratories Inc.

500, 808

Petaluma, CA • www.scottlab.com

NEW Amcor Tin in U.S.

DESCRIPTION: Scott Labs is the new exclusive distributor of Amcor Tin Capsules for the U.S. wine market. Introducing custom and stock tin capsules that make it easy to beautifully showcase your brand. With superior quality and detail, outstanding customer service and easy



ordering, tin capsules from Scott Labs are fully customizable and offer an array of design possibilities.

Technologia JSC

1804

Sumi, Ukraine • www.technologia.com.ua

Capsules, Wirehoods and Bag-in-boxes

DESCRIPTION: Technologia JSC offers a wide range of capsule dimensions, for different bottle necks. Different material thicknesses allow a perfect application on each bottle. Technologia's bag-in-boxes and super-pouches are perfect for wine, juice, milk and oil.

TricorBraun WinePak

601

Fairfield, CA • www.tricorbraunwinepak.com

Capsules

DESCRIPTION: Stock and custom tin and polylam capsules are available through TricorBraun WinePak.





MBF FillBlock - 200 bpm

Complete Bottling Line Solutions

On-Site Parts

Factory-Trained Service Technicians

Preventive Maintenance

Upgrades

Remote assistance

Off-site Repairs

MBF North America Inc.

429 First Street - Suite 120/220 - Petaluma, CA 94952 - 2129 Commercial Drive - Suite A - Frankfort, KY 40601 e-mail: sales@mbf-na.com - service@mbf-na.com - phone: (844) 711-8182

www.mbfnorthamerica.com

Winery > Packaging > Packaging & Shipping Material

Otter Products LLC dba Liviri

A2814

Fort Collins, CO • www.livri.com

Liviri Vino6

DESCRIPTION: Safeguard fine wine in transit with reusable Liviri Vino containers that bring together powerful insulation, sustainable circular logistics and user-friendly functionality for a superior DtC shipping experience. Vacuum Insulated Panels (VIPs), along with reusable ice packs, deliver at least 5 days of thermal protection, ensuring cellar-grade wine temperatures upon delivery—no matter the seasonal conditions.



West Coast Supplies

144

Rancho Cordova, CA • www.westcoastsupplies.com

NEW Void Fill System

DESCRIPTION: Assuring all loads will remain undamaged upon arrival to their destination, preventing product returns and eliminating unnecessary claims are a few of the benefits of the new Void Fill System. Features include corrugated drop fillers, dunnage air bags and corrugated bulkhead fillers. You will save time and money.



Western Pulp Products Co.

1745

Corvallis, OR • www.westernpulp.com

Vintner's Choice® Wine Shippers

DESCRIPTION: Vintner's Choice Wine Shippers provide best-in-class protection and meet the high standards required by FedEx and UPS. Versatile, economical and sustainable, they're built tougher so they hold up better. Vintner's Choice Shippers have 99 percent minimum recycled content.

Winery > Packaging > Printing

Diagraph 131

St. Charles, MO • www.diagraph.com

Linx 8900 Series Small Character Continuous Inkjet Coders

DESCRIPTION: The 8900 series of Linx continuous inkiet printers feature a simple user interface that allows for quick message setup and intuitive daily operation. Premium printhead quality, extended service intervals and on-screen output measurement reporting are standard features. Automatic fluid monitoring allows for 12-hour advanced fluid refill warnings, requiring less unplanned downtime and less line-operator monitoring. Simple one-touch fluid cartridge refills, during printing, allow for no mess, no tools and no mistakes. Effortless product changeovers are made simple by storing and easily retrieving multiple production line settings. Extended selfservice intervals provide 13,000 to 18,000 hours or 18 to 24 months of operation between service interventions. Extended shutdowns allow for



printer shutdowns of up to three months without the need to flush or drain the printer. Prints three to five lines of alphanumeric text on virtually any material.

Winery > Packaging > Wine Kegs

Free Flow Wines

208

Sonoma, CA • www.freeflowwines.com

Reusable Steel Kegs

DESCRIPTION: Free Flow Wines' reusable steel kegs are inert vessels that protect wine from temperature and light exposure. Their durability eliminates the risk of wine loss due to accidental package breakage or leaks. The turnkey kegging program includes wine QC, keg filling, storage, fulfillment, deposit management and return logistics. Steel kegs are a great solution for the on-premise focused on quality and zero waste.



Pioneer Packaging

A2700

Kent, WA and Tualatin, OR • www.pioneernorthwest.com

Dolium One-Way Wine Keg

DESCRIPTION: Grow on-premise sales with Dolium One-Way Kegs. The popular 20L Slimline Dolium holds the equivalent of 27 bottles. Kegs are warehoused and distributed by Pioneer Packaging from warehouses in California, Oregon and Washington. Each keg arrives at your facility sterilized, pre-purged with CO₂ or N₂, and ready to fill with hand or automated fillers. Dolium kegs are 100 percent recyclable, with fill speed and shelf life equal to stainless steel.

Winery > Packaging > Wine Pouch

Astrapouch®

A2600

Middlesex, NY • www.astrapouch.com

NEW To-Go Pouch

DESCRIPTION: AstraPouch's To-Go Series of pouches and bag-in-box solutions are the ideal takeout packaging that makes it easy for wineries to sell alcoholic beverages for their customers to enjoy at home. These to-go wine products feature an easy-fill top for quick filling and a tamper-proof cap designed for freshness and safety. They're the perfect solution for contact-free sharing of your wine. Clean and low cost, To-Go products are in stock and ready to ship now.



Winery > Tasting Rooms > Services

Wine Software

334

Napa, CA • www.winesoftware.com

Cash Manager Mobile POS

DESCRIPTION: Streamline your sales process with quick convenient checkout. The Wine Software Cash Manager Mobile POS iPad/Tablet leads the way in excellent customer service. Your customers will be amazed; your staff will love it! Cash Manager requires fewer keystrokes to manage complex transactions. Featuring automatic discounts, club pickups, contactless payments,



member profile updates, shipping and compliance, it's "Mobile" so you can take it with you for use anywhere, anytime.

Wine Software

334

Napa, CA • www.winesoftware.com

NEW Temail (Transactional/Targeted Email)

DESCRIPTION: Automate your email communication. The new Temail (Transactional/Targeted Email) module provides you the ability to design elegant emails for common use to better service your customers. You can now notify club members of shipments, send invoices or receipts, welcome letters, tracking info and more. Select from a targeted customer list to send special offers, customized to



their buying patterns. Temail is your gateway to success!

NEW Back Office

DESCRIPTION: Wine Software offers a complete solution to manage your DTC operation with many new features to assist in needs arising from the pandemic. From point-of-sale to wine club, e-commerce, inventory and accounting, Wine Software has the tools necessary to manage your direct-to-consumer needs. Since the pandemic, we've added reservations, restaurant features, mobile tablets, contactless



payments, email marketing and more. One solution, one database. Wine Software has been servicing the wine industry exclusively since 1994.

Winery > Tasting Rooms > Supplies

Franmara Inc.

1843

Salinas, CA • www.franmara.com

Pulltap's Waiter's Corkscrew

DESCRIPTION: Pulltap's Waiter's Corkscrew is the original two-step corkscrew that is most preferred by waiters. Franmara has more than 18 colors in stock.



RONA A2718

Hanover, MA • www.ronausa.com

NEW Ballet Collection

DESCRIPTION: Inspired by the "ideal" body type of ballerina, the Ballet Collection features a subtle, slim, elegant, graceful and clean silhouette with a long neck, firm long legs, solid smooth base with an emphasis on technical precision, fluidity, strength and persistence in performance. It is machine-made by pulled stem technology, has a "V" profile at the bottom of the goblet bowl, and is dishwasher-safe, lead-free crystalline glassware.







For all of your winery equipment needs



707-431-2000 www.carlsenassociates.com



MOBILE WINE FILTRATION SERVICES

VA Reduction EA Reduction Smoke Taint Reduction (free & bound) **4EP/4EG Reduction** Alcohol Adjustment (on and off site) **Crossflow Filtration Sulfide Reduction Pyrazine Reduction Rose Taint Reduction Gas Control Technology** Wine Concentration pH Adjustment **Lees Filtration Equipment Manufacture Equipment Leasing Membrane Supply High Proof Sales (90%)**



707 552 2616 sales@vafiltration.com www.vafiltration.com

Winery > Winery Equipment > Aerators

Carlsen & Associates

Healdsburg, CA • www.carlsenassociates.com

Fixed Base Pump-Over

DESCRIPTION: Carlsen's Fixed Base Pump-Over System offers pump-overs at the push of a button—just set either a mechanical or cycle timer and walk away. It is a complete set-up with a Waukesha centrifugal pump, VFD, water-tight enclosure and controls. The system features on-door is speed control and automatic cavitation control. The system works with tank management systems, such as TankNet, VinWizard and RTI.



Mazzei Injector Company LLC

224

Bakersfield, CA • www.mazzei.net

Aeration Systems

DESCRIPTION: Mazzei venturi injectors are at the heart of fertigation/chemigation systems on farms, including vineyards—they're the simple, low-cost solution. Mazzei's pumpover injectors are highly efficient for macrooxygenation. They're an easy and efficient way to oxygenate wine during fermentation and can be used to add fining agents and other additives during racking or blending.



Mazzei aeration systems for winery wastewater effluent help to reduce odors and maximize oxygen transfer throughout a lagoon.

Winery > Winery Equipment > Alcohol Adjustment Concentrators

Parsec s.r.l.

1803

Firenze, Italy • www.parsecsrl.net/en

Parsec EVO 1000

DESCRIPTION: The EVO 1000 provides automatic deoxygenation and adjustment of dissolved CO_2 with complete automation of O_2 and CO_2 probes. Gas is measured and injected through a sinter, constantly gauging the flow of gas in real time to ensure constant and accurate dosage.



VA Filtration USA

816

American Canyon, CA • www.vafiltration.com

NEW Labspotter

DESCRIPTION: VA Filtration has completed the development of a small laboratory-scale de-alc system, the Labspotter, to allow accurate de-alc trials on 5- to 10-gallon samples of wine. Final alcohol levels from 0.5 percent to slight reductions are possible. It is an easy-to-use system, single-phase, 110V and completely self-contained.





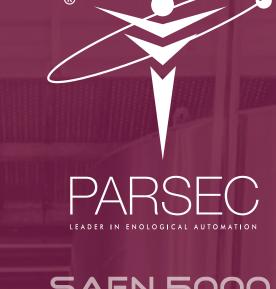
The innovative wave system to break up the cap in red wine vinification



A new & effective method for tank maceration for any volume.

A new patented solution for wine cap management that has been revolutionizing enology since 2014.

The AIR MIXING ™ system is protected by the following patents and patent applications: US patent application no. US 2017/0321175 A1; European patents no. EP 3385364 B1 and EP 3094715 B1; German utility model no. 20 2015 009 605; Austrian utility model no. GM 50088/2018; Spanish utility model application no. 1224169; Italian patent no. 1427181 and Italian utility model no. 202018000003440; Chilean patent no. 58210; Australian patents no. 2015356712 and no. 2018260789; New Zealand patents no. 731402 and no. 748019; South African patent application no.: 2017/02951.



SAEN 5000

The most advanced ARTIFICIAL INTELLIGENCE solution applied to winemaking.



SAEN 5000 PLATFORM IS AT THE HEART OF EVERYTHING

The first bus multifunction, multiprocessor, integrated, modular and expandable system, designed for oenology, for total and automated cellar control.



SAEn5000, the only process oriented platform.

www.parsecsrl.net | sales@parsecsrl.net

Distributed by:



Winery > Winery Equipment > Automatic Control Equipment

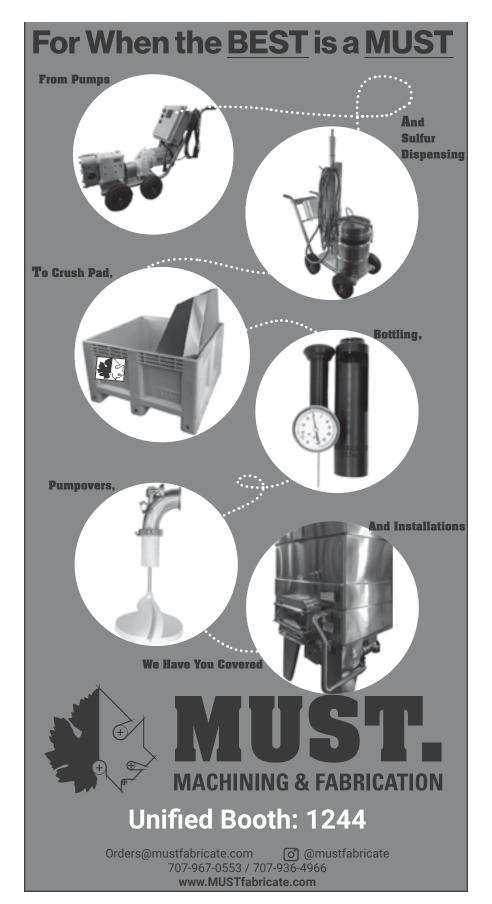
Must Machining & Fabrication

1244

St. Helena, CA • www.mustfabricate.com

NEW MUST Automation Kits

DESCRIPTION: Ready to automate but not located in Napa or Sonoma counties? Must Machining & Fabrication now offers shippable automation kits designed from top to bottom to your specific needs and requirements. These kits work with popular cellar control software or can be programmed to the drives run with simple repeating timers, allowing you to control your system on the fly at the tank with no software required.



Parsec s.r.l.

Firenze, Italy • www.parsecsrl.net/en

Parsec SAEn 5000

modular and expandible BUS multiprocessor that gives winemakers total automated cellar control. It manages the winemaking process, from harvest through fermentation, to bottling and cellaring, including climate control for the winery itself. Its



1803

proprietary Quadr@ software gives you complete control from your computer, tablet or smartphone. Distributed in the U.S. exclusively by ATPGroup.

Parsec AirMixing™ M.I.

DESCRIPTION: The Parsec AirMixing M.I. is an awardwinning innovative wave technique that breaks up the cap in the vinification of red wine. The Modulated Injection (M.I.) air injection method creates waves in the liquid that completely break up the cap, integrating it with the juice to obtain an effective and selective extraction from the entire cap. Waves are customizable to tank size and desired extractive action.



TM Process & Controls, Inc.

A2408

Elk Grove, CA • www.tmprocesscontrols.com

CIP Automation and Controls

DESCRIPTION: TM Process & Controls, Inc. creates custom liquid process and controls solutions based upon your needs and desired levels of automation and monitoring. Its team of licensed and certified experts in multiple disciplines provide a turnkey, customized solution within your budget. The controls, network and cybersecurity specialists provide systems to ensure your manufacturing is safe and trouble-free.

Winery > Winery Equipment > Bottling Line

FPS Global Partners

141

Miami, FL • www.fpsglobalpartners.com

FPS Global Partners Bottling Equipment

DESCRIPTION: FPS Global Partners provides high-quality, Italian-made bottle and can fillers for still, sparkling and other food products. The Tarvisia bottle filler for still wine is used by some of the biggest names in beverage filling due to its unique ability to be run with virtually zero valve maintenance and low O₂ pickup, thus being an ideal filler for high cost/quality wines. Machines are available from 2,200bph to 30,000bph.



Krones Inc. 400

Franklin WI • www.kronesusa.com

NEW Kosme Barifill Canto

DESCRIPTION: Krones introduced a new flexible combi filler called Barifill Canto that accommodates both glass bottles and aluminum cans, using the same valve. No changeover is needed. If your CapEx plans have a new filler budgeted, consider a combi filler for future flexibility.

Prospero Equipment Corp.

Pleasantville, NY • www.prosperoequipment.com

GAI MLE 661

DESCRIPTION: Prospero's GAI MLE 661 linear monoblocks have a patented electropneumatic filler valve that can fill both carbonated and non-carbonated products on the same valve. Still and sparkling wines can be bottled on the same machine to save cost and space.



Winery > Winery Equipment > Canning Line

Wild Goose Filling

231

Louisville, CO • www.wildgoosefilling.com

NEW Wild Goose Fusion Counter Pressure and Atmospheric Canning Line

that provides counter pressure and atmospheric filling, the Wild Goose Fusion delivers professional, fully automated packaging across a wide range of product types and conditions, including high carbonation levels. Offering multiple can sizes and an upgradeable design that expands with you, the Wild Goose Fusion incorporates the latest in digital controls for precise command over every machine



operation. Protect your still and sparkling canned wine quality with Wild Goose's patent-pending dual filling technology.

Winery > Winery Equipment > Cellars

Humes Process Technology

438

Santa Rosa, CA

Sanitary Electromagnetic Flow Meters

DESCRIPTION: Humes Process Technology offers sanitary electromagnetic flow meters, including cart-mounted portable versions, for accurate flow and volume measurement of juice and wine in production, transfer and blending applications.

Must Machining & Fabrication

1244

St. Helena, CA • www.mustfabricate.com

NEW MUST Rack

DESCRIPTION: MUST Rack is a newly designed pressure racking wand. It features the top adjusting racking wand with integrated MUST See LED-lit sight glass and the new MUST Under Pressure bung that gives you tool free adjustability on the fly. This new set-up allows you to have your hands free of extra tools and offers precision adjustments so you can confidently rack every last drop without pulling any lees.

Winery > Winery Equipment > Centrifuges

FPS Global Partners

141

Miami, FL • www.fpsglobalpartners.com

FPS Global Partners/Frautech Separators

DESCRIPTION: FPS Global Partners is the North American distributor for Frautech Separators, providing sales, service and parts for existing and new machines. Multiple models are available to meet all needs in the process, as well as a full North American support team located in California, Hawaii and the Fast Coast.



Winery > Winery Equipment > Cleaning / Sterilization Equipment

ARS/SWASH™ Sanitizing Equipment

1430

Paramount, CA • www.swashequipment.com

NEW MOOG FR-2

DESCRIPTION: The MOOG FR-2 automated two barrel washing system has been upgraded with new controls and other improvements. The system allows a forklift driver to load a two-barrel rack onto the FR-2 and initiate a fully automated cleaning cycle from a remote controller on the forklift, without getting off the forklift truck. Throughput with this system is highly efficient.

Astro Pak Corporation

129

Fairfield, CA • www.astropak.com

Chemical Cleaning, Passivation, Derouging, Sanitization, Electropolishing

DESCRIPTION: Astro Pak provides chemical cleaning, passivation, derouging, bioburden remediation and other surface treatments (including electropolishing) for installed high-purity water and product piping systems, tanks and equipment. Astro Pak crews mobilize to customer facilities for pre-operational and maintenance system cleaning. For out-of-place cleaning of parts, customers can also send items to shop locations.

Butterworth Inc.

146

Houston, TX • www.butterworth.com

Portable LT Tank Cleaning Machine

DESCRIPTION: The Butterworth portable Type LT tank cleaning machine is designed to save time, water and energy in the tank cleaning process. Available for both sale and rental, the Type LT can meet your particular tank cleaning needs.



Trolley/Cart

DESCRIPTION: The Butterworth Trolley/Cart is designed for use with the stainless steel tank cleaning machines. Complete disconnect couplings provide easy connection to spray nozzles and also connection in a series if needed.



Humes Process Technology

438

Santa Rosa, CA

Rotary Jet and Rotary Spray Tank Cleaning Devices

DESCRIPTION: Humes Process Technology sells a broad range of efficient rotary jet and rotary spray tank cleaning equipment for any size tank and for barrel cleaning.

Winery > Winery Equipment > CO₂ Removal

3M Separation & Purification Sciences

408

St. Paul, MN • www.3m.com/3M/en_US/food-beverage-us/applications/wine

3M™ Liqui-Cel™ Membrane Contactor

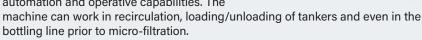
DESCRIPTION: The 3M Liqui-Cel Membrane Contactor is capable of both adding and removing gases to liquids, and provides a versatile, compact, in-line solution to deliver rapid deoxygenation, decarbonation, carbonation and nitrogenation of liquids to precise concentration levels. Applying this advanced membrane-based science in your production processes can help increase operating efficiency and reduce guesswork while maintaining or improving product quality, consistency and stability.

Juclas USA 1203

Napa, CA • www.juclasusa.com

MasterMind Remove Plus

Plus is the machine for the management of dissolved gases. Thanks to the hydrophobic membrane, it can to perform multiple operations: O₂ and CO₂ removal, CO₂ addition, O₂ removal and CO₂ addition in one pass, as well as alcohol removal. The highly customizable frame allows for personalization of the machine in size, automation and operative capabilities. The





Scheduled

Winery > Winery Equipment > Compressors

Kaeser Compressors Inc.

1619

Sacramento, CA · us.kaeser.com

AIRCENTER Complete Compressed Air System

DESCRIPTION: Kaeser's AIRCENTER unit combines essential system components in one easy-to-install package. AIRCENTERs come completely assembled and include a refrigerated dryer with automatic condensate drain, receiver tank, and optional filtration and condensate treatment package. These quiet and energy-efficient units are compact and perfect for installation where space is limited.



Sigma Air Manager 4.0

DESCRIPTION: Kaeser's Sigma Air Manager (SAM) 4.0 system controller offers complete compressed air system management by tying your compressors together into a secure network. SAM 4.0 can also balance load hours for more effective maintenance scheduling. Its 3D advanced control improves pressure stability and system reliability while the built-in Kaeser Connect web server provides remote monitoring and ongoing energy audit information, according to ISO 50001 energy management.



COMPLETE CONTROL

Easy, Affordable, Accessible



Cloud Access

www.acrolon.com

Notifications

Winery > Winery Equipment > Control Systems

TankNET by Acrolon Technologies Inc.

32

Sonoma, CA • www.acrolon.com

NEW TankNET® Fermentation Management

DESCRIPTION: TankNET is an affordable and intuitive control solution that gives winemaking teams complete and precise control over fermentations, cellar

environments and critical winery equipment—from anywhere. Seamless integration with popular wine tracking applications, like Vintrace and others, provides a comprehensive view of the entire winemaking process. TankNET is available in two flavors—an ultra-affordable secure cloud edition for small-to mid-sized wineries and an on-premises edition for larger wineries or those needing next-level automation.



TankNET® Wire-less Temperature Controls

DESCRIPTION: Renowned for their accuracy, reliability and ease of use, the TankNET PL-1 thermostat and its more capable older brother, the TC-1, are virtually ubiquitous in U.S wineries. These cellar-hardened workmates offer precise temperature control, Brix and pump-over tracking and wire-less networking to TankNET fermentation management software. Additionally, the



TC-1 offers pump-over and venturi control to enable winemakers to schedule and monitor pump-overs from anywhere.

Temperature

Brix/Temp

Tracking



Winery > Winery Equipment > Control Systems

TankNET by Acrolon Technologies Inc.

325

Sonoma, CA • www.acrolon.com

NEW TankNET® Advanced Fermentation Controller

DESCRIPTION: The TankNET PM-4 is a highly capable and intuitive touch-screen controller that provides comprehensive management and insight into each fermentation. It can monitor up to four temperature points and precisely control ferment temperatures, automate pumpovers with variable spray patterns, initiate venturi to help maintain minimum desired REDOX levels and integrate a densitometer for real-time Brix measurements during fermentation. The PM-4 is easily customizable and, of course, is accessible from anywhere via TankNET software.



Winery > Winery Equipment > Crushers/Destemmers

ColloPack Solutions

738

Napa, CA • www.ColloPack.com

NEW Diemme Vibro-Select Wave Motion Destemmer

DESCRIPTION: The new Vibro-Select was developed for the gentle destemming of grapes. Grape destemming is performed by wave motion in a sturdy plastic material cage. The process is gentle, allowing separation of berries from the stems without damaging them, even with challenging varieties or ripeness. By adjusting the frequency of motion (by electronic variation) for the Vibro-Select,



you can modify the performance to suit the grape variety being processed to maintain whole berries and avoid crushed stems.

Napa Fermentation Supplies

2028

Napa, CA • www.napafermentation.com

Gamma 25

DESCRIPTION: The Gamma 25 is a 2.5-ton per hour, 220VAC, single-phase destemmer.

Scott Laboratories Inc.

500, 808 **Flex**

Petaluma, CA • www.scottlab.com

Armbruster ROTOVIB with Double Roller Sorter

DESCRIPTION: With its patented vibrating technology, the ROTOVIB Destemmer provides the gentlest handling of fruit, yielding the maximum number of whole berries with a minimum number of stems, to ensure the fruit is processed under the best conditions. Now with the option of two roller sorters, this eliminates even more MOG than the



standard ROTOVIB with single roller sorters. The functionality of the second roller sorter is to eliminate the small MOG (seeds, shot berries, rot, etc.) by utilizing a tighter array of rollers that will allow the very small waste to pass through and the good berries to discharge.

Winery > Winery Equipment > Crushpad Equipment

P & L Specialties, Tom Beard Company

C4

Santa Rosa, CA • www.pnlspecialties.com, www.tombeard.com

NEW E Service

DESCRIPTION: E Service offers comprehensive preventative maintenance and ongoing maintenance products, as well as repair.

Power Dynamics Inc.

2147

Whippany, NJ • www.powerdynamics.com

N F W Power Stanchions

DESCRIPTION: Power Dynamics Inc. offers standard and custom durable stainless steel power stanchions to meet all power needs in the cellar, crushpad, bottling line or warehouse. Free delivery to the job site is available.



NEW Mechanical Interlocks

DESCRIPTION: Power Dynamics Inc. offers durable glass reinforced polyester (GRP) dual mechanical interlocks to meet all power needs in the cellar, crushpad, bottling line or warehouse. On/Off LED shows if unit is powered. Free delivery to the job site is available.



Pin and Sleeve Connectors

DESCRIPTION: Power Dynamics, Inc. offers U.S-. and International-rated IEC60309 pin and sleeve connectors for proper and watertight connection to all power outlets. Snapon body to save assembly time, with no screws required.



Winery > Winery Equipment > Environmental Control

ClearBlu Environmental

1241

Monterey, CA • www.clrblu.com

Package Aerobic Digester

DESCRIPTION: Wastewater is an essential part of winery operations. This package system can reduce BOD by up to 99 percent in a space-saving footprint.

Winery > Winery Equipment > Fermentors

Flextank

530

Vancouver, WA • www.flextank.com

Flextanks

DESCRIPTION: Flextanks are polyethylene tanks precisely engineered for winemaking. Flextank wine vessels are configured for convenient use; built for enhanced durability, with a product life expectancy more than double the life of oak barrels; engineered for easy sanitizing; and are scientifically designed to assist with oxygen management in wine production and storage.



The new 528-gallon Orion MAX and Orion MAX PLUS egg-shaped tanks for fermenting and storing wine are now available and come with a 2" or 4" bottom drain and extra clearance from a galvanized base frame with four adjustable feet to effectively drain your liquids and solids more easily. These tanks come with outward opening manway, base, VF2 (MAX) VF4 (MAX PLUS) Flange Kit, SV1T Sample Valve and FL1 Fermentation Lock.



The **most trusted supplier** in the North American wine industry with an **80+ year** record of **best-in-class products**, **technical expertise**, and **dedication to customer success**.

Education, honesty, and doing the right thing – since 1933.



Winery > Winery Equipment > Fermentors

GOfermentor®

932

Far Hills, NJ • www.gofermentor.com

GOfermentor®

DESCRIPTION: The GOfermentor is an automated fermentor that features a built-in press, unattended punch, remote monitoring app, single-use liner, no cleaning, no waste water and no installation. It fits in a 4'x4' space and is 110VAC.



Sonoma Cast Stone

702

Sonoma, CA • www.sonomastone.com

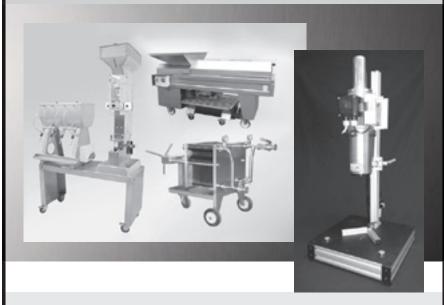
NEW SuperEgg Concrete Wine Tank

DESCRIPTION: The largest concrete egg fermentation tank in the world holds more than 1,000 gallons and is fully customizable for reds or whites, fermentation or aging. The SuperEgg comes in any color you like; and as with all Sonoma Cast Stone concrete wine tanks, it is guaranteed not to crack or leak.



NAPA FERMENTATION SUPPLIES

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575 Third St. Bldg. A Napa CA 94559 707-255-6372 | napafermentation@aol.com www.napafermentation.com

Sonoma Cast Stone

702

Sonoma, CA • www.sonomastone.com

NEW Pivotal ManwayCover

DESCRIPTION: A simple choice: you can screw down 10 handles several times a day, you can reach out and lift a 45-pound stainless lid or, and here comes the fun part, you can turn a yacht wheel a few times and, with one finger, Pivot the large lid in either direction. Designed for concrete tanks, it works equally well on oak and stainless tanks. Next time you order something other than



concrete, order it with a pivotal top and Sonoma Cast Stone will ship directly to your tank supplier.

Winery > Winery Equipment > Filters / Filtration Systems

ATPGroup

Δ1

Windsor, CA • www.atpgroup.com

TMCI Padovan Dynamos Cross-Flow Filter System

DESCRIPTION: The Padovan Dynamos Cross-Flow is a patented, rotating, high-solid filter with an innovative calibrated back-pulse system. Its patented system allows filtering of both lees and wines even better than with tubular filters and eliminates the need to use filter aids, such as DE, for lees filtration. Unlike other high-solid cross-flow systems, the Dynamos can run for at least 24 hours before needing to be cleaned. Sizes



available for small wineries up to large production facilities.

Donaldson Company, Inc.

A2709

Minneapolis, MN • www.donaldsonprocessfilters.com

NEW Lifetec™ PES-BN A Liquid Cartridge Filter Element

DESCRIPTION: The LifeTec™ PES-BN A filter element provides high filtration performance, stability and service life for final filtration and microbial stabilization of beer, wine and hard seltzers. The performance of the PES-BN A filter element is based on its filtration media. The hydrophilic polyethersulfone membrane distinguishes itself by having a highly asymmetrically designed pore structure. This design maintains consistent porosity and impurity retention throughout its service life without shedding or unloading contaminants.



Gusmer Enterprises Inc.

1332

Fresno, CA • www.gusmerwine.com

NEW Bucher Vaslin X-Wine Cross Flow Systems

DESCRIPTION: The X-Wine Bucher Cross Flow features an organic hollow fiber membrane that allows for brilliantly filtered wine or juice while limiting the retention of desirable polyphenols and polysaccharides. The unit comes turn-key with easy-to-use onboard controls and features full automation, including backflushing, cleaning and sanitation. It also includes a built-in turbidimeter, water prefiltration module, onboard CIP pumps and all required accessories. The system automatically maintains very low pressure (0.7 bar maximum) to preserve wine quality.





The Largest Concrete Egg Tank in The World



At 1,000 gallons, this new SuperEgg yields the same Super-Premium Wines as the smaller model for almost 30% less per gallon.

And your winery guests will never forget seeing it. Available in any color. Guaranteed not to crack or leak.

Winery > Winery Equipment > Filters / Filtration Systems

Koch Separation Solutions

1420

Wilmington, MA • www.kochseparation.com

Wine-COR™ System

DESCRIPTION: Koch Separation Solutions offers the Wine-COR cross-flow membrane filtration system for wine clarification in small to large winery operations. Built with hollow fiber membranes, these systems are fully automated and increase wine yield by up to 99 percent.

Napa Fermentation Supplies

2028

Napa, CA • www.napafermentation.com

FZ Series Plate Filters, 20x20cm

DESCRIPTION: FZ 10/20/30 and 40 filters offer double filtration. Each filter has a 1.5'' TC fitting, is 110VAC, and is 20x20cm.

Parker Bioscience Filtration

524

Oxnard, CA • www.parker.com/wine-filtration

Clarification and Stabilization Filters

DESCRIPTION: The perfect wine should be visually clear, flavorful and maintain its stability over long periods of time. Traditional methods for clarification, such as settling and racking, often don't remove all the particulate and spoilage organisms, producing a cloudy, unstable wine. Clarification and stabilization using microfiltration, ensure the removal of particulate and organisms down to 0.45µm, creating a beautifully clear and stable wine without altering the delicate flavor. Turn to Parker for your filtration solutions.



Depth Clear Lenticular Filters and Housings

DESCRIPTION: Parker's lenticular depth filters, sheets and housings provide reliable particle retention by utilizing mechanical and electrokinetic capture with enhanced throughput for superior performance in critical applications. Available in a comprehensive range of media grades and size formats, Parker can work to design a solution to meet your process needs.



Scott Laboratories Inc.

500,808

Petaluma, CA • www.scottlab.com

High-Solids Cross-Flow Filtration

DESCRIPTION: High-solids cross-flow filtration is the wave of the future in high-solids filtration. Scott Laboratories offers solutions from the top names in the market. These new cross-flow systems for lees filtration overcome many of the obstacles associated with traditional DE-based technologies. Filtration is achieved



with microporous membranes without the need for filter aids. With no powder handling, the operation is more hygienic, doesn't create DE waste for landfills and saves on labor.

Scott Laboratories Inc.

500,808

Petaluma, CA • www.scottlab.com

Pall Oenoflow™ PRO XL System

DESCRIPTION: Now winemakers can have Pall's expertise at their fingertips with the all-new PRO system: state-of-the-art software that connects directly to your Pall Cross-flow Filter for quick, easy, automated filtration. The Oenoflow PRO XL System introduces Pall's Optimizer algorithm and Human Machine Interface (HMI), which gives winemakers full control and automation over their filtration process. System settings adjust automatically in real-time based on the wine's individual and chemical characteristics for simplified operation and next-gen cross-flow filtration.



Scott Laboratories Inc.

500,808

Petaluma, CA • www.scottlab.com

Lenticular Filtration

DESCRIPTION: Lenticular filtration is an economical option for small- to medium-sized producers because it provides up to 50 percent more throughput than sheet filtration, greatly reducing wine loss. The media can be backflushed, stored and reused multiple times, saving the winery time and money. Lenticular filters offer a smaller footprint, easy set-up, low-cost scalability and better, more efficient bottling line compatibility.



TMCI Padovan S.p.A.

A2706

Veneto, Italy • www.tmcigroup.com

NEW Nitor+ and Dynamos HP

DESCRIPTION: The Nitor+ is a real polyvalent solution for the cross-flow filtration of preand post-fermentation sediments and wines for medium- and large-sized wineries, by using a pre-concentration of sediments with static cross-flow and a final concentration with



dynamic cross-flow for the recovery of very high-quality filtrate. Distinctive features include an exclusive system of membranes that clean with extremely low water and detergent consumption, no significant thermal variation between inlet and outlet, filters that do not require any chilled water and requires very low energy consumption.

Winery > Winery Equipment > Gauges, Tank

VEGA Americas, Inc.

2109

Cincinnati, OH • www.vega.com

VEGAPULS 64

DESCRIPTION: The VEGAPULS 64 is a sensor for continuous level measurement of liquids. With small tanks or in tight spaces the small process fittings offer special advantages. Signal focusing enables its use in vessels with many installations, such as e.g. stirrers and heating spirals.





VISIT US! BOOTH 524 January 25-27, 2022

THIS IS PARKER





Filtration Solutions 1 877 784 2234 parker.com/wine-filtration



Nitrogen Generators 1 800 343 4048 parkern2.com/wine

Parker enables its wine industry partners to eliminate costs associated with the dependence on supplied nitrogen and ensure process efficiency and preservation of product quality through customized filtration solutions. This reflects Parker's commitment to the profitability of our customers and to helping solve the world's greatest engineering challenges.









Other KIESEL cellar products:

*M Series In-Line Progressive Cavity Pumps *IP Flexible Impeller Pumps

*RG Tank Mixers *Tube in Tube Heat Exchangers



Factory Direct Sales, Service, & Pricing

All Spares in Stock USA Technical Service & Support Contact info:

KIESEL Americas, Inc 609-445-5070 (telephone) bob@kieselamericas.com (email) www.kieselamericas.com

Winery > Winery Equipment > Heat Exchangers & Cold Stabilization Equipment

G&D Chillers

Eugene, OR • www.gdchillers.com

Portable Fire & Ice

DESCRIPTION: The Fire & Ice is your solution when portability is a requirement. It comes standard with a 3 HP compressor, powder-coated steel frame, 316 stainless steel skin, the ability to service five vessels at a time and heavy-duty rubber casters for easy portability.

KIESEL Americas Inc.

916

1623

Egg Harbor City, NJ • www.kieselamericas.com

KIESEL Corrugated Tube-in-tube Heat Exchangers



DESCRIPTION: KIESEL's corrugated tube-in-tube (singleand multi-tube) heat exchangers with their unique tube design offer highly efficient and effective energy

transfer. The design makes it a great option for extending the capacities of existing temperature control systems, running a separate system for precise pump-over temperatures, from cooling to heating, and it even is a great option for the bottling line to eliminate bottle sweat at filling. The single tube exchanger is also completely piggable for cleaning.

TMCI Padovan S.p.A.

A2706

Veneto, Italy • www.tmcigroup.com

NEW Thermovinification Red Hunter and Sonitus



DESCRIPTION: Thermovin allows the production of ready-to-drink wines with bright, deep violet red colors, a fragrant aroma, smooth and velvety taste and is high energy saving with a limited footprint and full automatic handling and CIP. The Sonitus—ultrasound technology applied to red and white grapes in order to increase color and aromas extraction from skins—requires just a few minutes of treatment and features low operating

costs, minimum environmental impact and is 100 percent chemical-free.

Winery > Winery Equipment > Hoses & Fittings

Continental

1704

Fairlawn, OH • www.continental-industrial.com

NEW Vintner Reserve

DESCRIPTION: Continental's New Vintner Reserve EPDM Beverage Transfer Hose is ideal for applications that use high caustic cleaning solutions. The new EPDM tube is perfect in these situations and available in 1" to 3" IDs.

Motion

1014

Tracy, CA • www.Motion.com

MRO Parts



DESCRIPTION: Motion is a leading distributor of MRO parts and a provider of industrial technology solutions for winery production and maintenance systems. With more than 500 locations and 16 distribution centers, Motion offers access to more than 10 million parts, including custom hoses, pumps, motors and drives, valves and fittings, screw conveyors, tabletop and mat top conveyor chains, power transmission components, bearings and gearboxes, fluid power components, washdown duty components, and more.

Winery > Winery Equipment > Humidity Control / Foggers / Readers

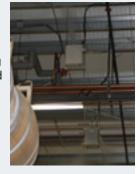
Smart Fog

1710

Reno, NV • www.smartfog.com

ES100 Direct Space Humidification System

DESCRIPTION: The Smart Fog ES100 Direct Space Humidification System offers non-wetting, non-fluctuating humidity control to maintain the relative humidity required 24/7. Save on wine and topping costs—Smart Fog offers fast return on investment by minimizing wine loss. Utilizing the patented technology, Smart Fog humidifiers distribute the water into the environment, providing even coverage throughout the space. The system is easy to install and requires very little maintenance.



Winery > Winery Equipment > Laboratory Equipment/Analyzers/Instruments

Alpine Scientific Inc.

1344

Davis, CA • www.alpinescientific.com

Steroglass Flash Titration System

DESCRIPTION: The Steroglass Flash Titration system measures pH/TA and/or Free or Total SO_2 . It is provided with a single stand or a sample changer with 16 or 35 positions. It also can de-gas the sample.

Check Stab Automated Cold Stability Instruments

DESCRIPTION: The Check Stab Automated Cold Stability instrument measures the cold stability of wine by using conductivity. It utilizes a 100ml sample, automatically dispenses KHT when the desired temperature is reached and presents the results numerically and graphically.

NEW Beta 2018 iProtein Heat Stability Instrument

DESCRIPTION: The Beta 2018 iProtein is an instrument to measure the heat stability of wine. It is a complete system with a heating and cooling bath and a built-in turbidity meter.

Beta 2016 WLF+ Automatic Lab Filtration System

DESCRIPTION: The Beta 2016 WLF Automatic Lab Filtration system measures the filterability of wine in a laboratory setting by utilizing a multi-filter system and a built-in balance.

BarrelWise 717

Vancouver, BC • www.barrelwise.ca

NEW BarrelWise Sulfur Sensor

DESCRIPTION: BarrelWise has developed a sensor capable of measuring free SO_2 in wine in under 40 seconds, right in the cellar. The sensor automatically tracks measurements for each individual barrel (or alternative vessels). The data provides early identification of barrels at higher risk of spoilage, and generates valuable insights into oak selection and cellar operations.

FT System North America

807

Pembroke, MA • www.ftsystem.com

EVO Series Gas Analyzer

DESCRIPTION: The EVO Series gas analyzer is a non-destructive and non-invasive analyzer used to measure gas content in closed containers. The system uses a tunable diode laser absorption spectroscopy technique to detect oxygen and carbon dioxide in the headspace.



GOfermentor®

Far Hills, NJ • www.gofermentor.com

NEW GOblend

DESCRIPTION: GOblend is an electronic wine sample blender. This laboratory instrument can automatically make and record blend samples for tasting.



932

1203

Juclas USA

Napa, CA • www.juclasusa.com

NEW Smartcheck

DESCRIPTION: Smartcheck is the new tabletop equipment designed by Juclas. Used for the determination of tartaric stability in wines through the mini-contact test, it measures the conductivity drop in wines, allowing for a smart and more punctual intervention during cold stabilization. The unit features the option to perform the test at five different temperatures and for the desired length.



Mettler-Toledo LLC

410

Columbus, OH • www.mt.com

Titration Excellence

DESCRIPTION: For every application, Titration Excellence provides an efficient and modular solution. The modern platform provides automatic recognition of sensors, stirrers, printers and other accessories. The intuitive One Click® titration interface simplifies laboratory work by allowing users to customize their screen and start analyses quickly and easily. For a lab with high throughput demands, Titration Excellence is compatible with InMotion™ Autosamplers capable of handling up to 303 samples.

Densito

DESCRIPTION: The Densito is a simple and user-friendly handheld density meter made for measurements on the go. The Densito is not only valuable for testing the ripeness of grapes or fermentation of must, but also the quality of incoming goods or final products. Measure density, specific gravity, Brix and much more by using built-in calculations on the instrument. Its unique design allows for one-handed operation, leaving your second hand free to aid you in the sampling process.

SevenExcellence

DESCRIPTION: The SevenExcellence is a multi-channel, modular pH meter. This multi-channel instrument allows measurements of one, two or three parameters simultaneously, either in the same or in different samples. The SevenExcellence can support pH, ORP, ion, conductivity and dissolved oxygen measurements. It also supports sample-specific sensors to provide best measurement accuracy in wine and juice samples.

Neogen - Megazyme Products

801

Lansing, MI • www.megazyme.com

MegaQuant™ Wave Starter Pack (Chemistry Analyzer)

DESCRIPTION: The MegaQuant Wave Starter Pack provides all equipment and accessories needed for immediate sample analysis and includes the MegaQuant Wave Spectrophotometer, pipettes, sample tubes, volumetric flasks, timer, PVPP tablets and filtration apparatus.



Winery > Winery Equipment > Laboratory Equipment/Analyzers/Instruments

optek-Danulat Inc.

225

Germantown, WI • www.optek.com

NEW Control 800 Series of Multi-range Conductivity and pH Analyzers

DESCRIPTION: oA new offering from optek-Danulat, is its new Control 800 Series of multi-range conductivity and pH analyzers. It features dynamic conductivity ranges of 0-10 μS/cm to 0-850 mS/cm from a single six-electrode sensor. This system offers single point calibration, a bright LED screen, user-friendly interface, USB software/data interface, in a compact, heavy-duty, winery-friendly package. Gain control of your process from vine to wine with optek's complete range of inline photometric and electrochemical analyzers.



Universal Biosensors

2002

Rowville, Australia • www.mysentia.com

Sentia - Handheld Wine Analyzer

DESCRIPTION: Sentia offers significant advantages over other analysis products on the market: speed, portability (e.g., test at the barrel), ease of use, automatic calibration and no use of reagents. It is less expensive, faster and more accurate than traditional testing methods used in the wine industry.



Winery > Winery Equipment > Must Pumps / Wine Pumps

FPS Global Partners

141

Miami, FL • www.fpsglobalpartners.com

NEW FPS Global Partners/Ampco Pumps

DESCRIPTION: FPS Global Partners is an OEM distributor for AMPCO pumps and can supply your operation with a variety of solutions for any point in the process.



KIESEL Americas Inc.

916

Egg Harbor City, NJ • www.kieselamericas.com

NEW KIESEL FTF Progressive Cavity Hopper Pump

DESCRIPTION: KIESEL's FTF hopper series progressive cavity pump is designed to easily move whole cluster or berry, crushed or fermented fruit with a gentle pumping action. It will readily pump a very dry must (drained, fermented red or whole cluster) with no cavitation or sluicing, all while preserving the integrity of the fruit—berries, seeds and stems. Updated controls allow for precise operation, from effective hi/low controls to the new wireless remote.



McFinn Technologies

202

Kenosha, WI • www.americanwinepump.com

Bowpeller[®]

pumps, Bowpeller, is the ideal pump-over pump for the wine industry. The design allows gentle handling to optimize de-gassing. Bowpeller pumps are in applications ranging from micro algae production in geothermal production facilities in Iceland, to cannabinoid processing, to reducing dissolved oxygen levels in micro breweries and in winery pump-over applications. Bowpeller pumps provide the optimum design for gentle product handling, with less g-force, higher efficiency and smoother flow vectors.



Napa Fermentation Supplies

2028

Napa, CA • www.napafermentation.com

Zambelli T Series Pumps

DESCRIPTION: Napa Fermentation Supplies offers Zambelli flexible impeller pumps: T180/T250 220VAC.

Pulsair Systems Inc.

1720

Kirkland, WA • www.pulsair.com

Pulsair Mixing Equipment

DESCRIPTION: Since 1986, Pulsair's air-mixing cap management technique and tank mixing process have helped winemakers enhance wine quality and improve efficiency during fermentation. Compressed air pulses are sequentially injected through nozzles near the tank bottom. The large bubbles push the fermenting wine juice up into the cap. This powerful, gentle wave movement completely floods, submerges and disintegrates the cap into individual berries. Pulsair can be used in any size tank or winery.

Rapidfil Pty Ltd

1925

Heidelberg West, VIC, Australia • www.rapidfil.com.au

Rapidfil Cellar Mate

DESCRIPTION: The Cellar Mate can automate cellar operations from crush pad to bottling line and is a great fit for wineries of all sizes. It improves quality and reduces the need for seasonal labor during harvest. Features include, but are not limited to, transfers with no DO pickup, automatic tank topping, automatic barrel filling or emptying, automatic high pressure and vacuum shut-off and batch control. The modular system can also be fitted to existing pumps.

T&T Valve and Instrument Inc.

A2727

Pleasanton, CA • www.tt-valve.com

Top-Flo® Pumps

DESCRIPTION: Steel & O'Brien carries a broad assortment of stainless steel sanitary pumps and accessories. The Top-Flo name represents the finest in sanitary process equipment. Top-Flo pumps have been designed to offer efficient transfer of product over a wide range of head and viscosity conditions. Top-Flo pumps are easy to install, clean and operate.

The centrifugal pump is ideal for use in small- and medium-sized process applications in the dairy, food, beverage, pharmaceutical and other sanitary process industries. Top-Flo pumps are suitable for use in CIP (clean-in-place) installations. This feature enables easy self-cleaning with no dismantling or takedown. Sanitizing of all product contact areas is automatic. All Top-Flo pumps are available in standard inlet and outlet sizes. In addition, enlarged inlet sizes are available for special applications. T&T has a large inventory of Top-Flo pump parts on hand ready to ship; and because we are always looking for ways to simplify things for our customers, we do not require minimum order quantities or annual commitments.



Four tests, one hand-held device, measured in minutes.





As world leaders in biosensor technology, our reputation is built on precision.

That's why you can trust the Sentia[™] hand-held wine analyzer to reliably measure:

- free SO²
- · malic acid
- glucose and fructose in your wine.

Test results in minutes, wherever and whenever you need them.

Sales enquiries: Todd Whiteford +1-512-636-6647 twhiteford@universalbiosensors.com www.mysentia.com

THE POWER OF A LAB IN THE PALM OF YOUR HAND.



Winery > Winery Equipment > Presses

Bartlett

A1

Windsor, CA • www.atpgroup.com

Pneumatic Wine Press Membranes

DESCRIPTION: An increasing number of U.S. wineries rely on custom-made Bartlett Wine Press Membranes for all makes of pneumatic presses. Bartlett membranes are manufactured with a high-quality, purpose-made membrane fabric with greater flex and abrasion properties—meaning your Bartlett membrane will withstand many vintages. Backed with a three-year warranty, all membranes are computer-cut, ensuring accurate sizing for all models.

Carlsen & Associates

D4

Healdsburg, CA • www.carlsenassociates.com

Basket Press

DESCRIPTION: The Carlsen Basket Press is an 8 hectoliter basket press with a capacity of 2-1/4 tons of pomace from field fruit. It offers gentle juice extraction, an all stainless-steel frame and gantry. An essential piece to any winemaking operation, these presses work to extract juice from grapes before further processing into wine.



Defrancheschi, a SACMI company

1705

Urbandale, IA • www.defranceschiusa.com

JP30

DESCRIPTION: The JP30 30 HI open drum press features a mirror polish interior, large opening double doors, self-rinsing bar on the drum exterior, touchscreen HMI, standard and customizable pressing cycles, axial feed valve, chainless direct drive and has custom options available.

Euro-Machines Inc.

12

Fairfield, CA • www.euromachinesusa.com

NEW EP and EQ Europress Models

DESCRIPTION: Introducing the new EP and EQ Model of Europress and a redesigned Roller Sorter from Scharfenberger. The EP is fully customizable, with advanced technology to accommodate any style of winemaking. The EQ provides the standard needs of any cellar while maintaining tried and true dependability and ease of use that the Europress has always been known for. The redesigned Roller Sorter



is easy to clean, adjustable and can now be used with crusher rollers.



Quality Equipment For Quality Production



- Ceramic membranes
 with titanium oxide
- Able to process filtration aids including bentonite and carbon
- Membranes guaranteed for 10 years
- Fully automated machine and program
- No water or air in contact with product – uses inert gas for product discharges
- Membranes can be stored dry
- Automatic permeability test after each wash
- Able to filter sparkling products, up to 6 bar of pressure. PED certified.
- Ability to monitor and control remotely via smart phone or tablet.

Crushing • Pressing • Flotation • Filtration • Bottling • Packaging



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AT BOOTH #C3

Convention Center, Sacramento JANUARY 25TH-27TH. 2022

Over 60 years of design and manufacturing experience to deliver innovative machinery for every step of the wine making process!

dellatoffola.us Santa Rosa CA | (707) 544-5300 DELLA TOFFOLA
USA

Winery > Winery Equipment > Presses

Scott Laboratories Inc.

500,808

Petaluma, CA • www.scottlab.com

Willmes Sigma Press

DESCRIPTION: Since inventing the pneumatic grape press in 1951, Willmes' engineers have mastered the art and science of grape pressing with double-sided membrane technology and vertical juice drains—patented technologies that now serve as the backbone of all new presses on the market today.



Willmes has developed the world's most efficient wine press that's safe and easy to clean, offers customizable pressing programs, and can meet any and all winemaking needs.

Vintner's Vault

C1

Paso Robles, CA • www.thevintnervault.com

NEW Athena Horizontal Wine Press

DESCRIPTION: The new Athena Horizontal Wine Press features a tubular elastic membrane, wholly pierced stainless tank, compressor inlet/outlet, 230V-3 phase, 60Hz, loading by door or axial feed, must-collecting hopper, inside conveyor discharge, wheels for easy movement, washing pipe with nozzles, electromechanical commands on a push-button control board and automatic pressing



cycles controlled by a color touchscreen operation panel. Standard sizes are 14 HL, 18 HL and 25 HL. It is built of first-grade AISI 304 stainless steel and requires 90 to 120 days' lead time.

Winery > Winery Equipment > Receiving Equipment

Della Toffola USA

C3

Santa Rosa, CA • www.dellatoffola.us

Della Toffola Maceration Accelerator (DTMA)

DESCRIPTION: The Della Toffola Maceration Accelerator (DTMA) delivers a cutting-edge process that reduces the dimensions of the crushed grape skins, thereby increasing the surface area of the film in contact with the must, greatly improving the extraction of polyphenols and anthocyanins from the grapes and strengthening the overall sensory characteristics in the wine. Flow rates, during the process, are aligned precisely with the speed of the client pumps to maximize efficiency.

Munckhof Mfg.

2001

Oliver, B.C., Canada • www.orchardvineyardequipment.com

NEW Bin Rotator

DESCRIPTION: The Munckhof bin rotator differentiates itself from other bin rotators with its simple rack-and-pinion turning mechanism coupled with a heavy duty slewing bearing and T1 1" bullboard. It is available with single input automated clamping or side arm support and is designed and manufactured in Canada.





Rapidfil Pty Ltd

1925

Heidelberg West, VIC, Australia • www.rapidfil.com.au

Preventive Maintenance and Service

DESCRIPTION: Our extensive experience in the industry has identified a need for a quality service for presses, grape receiving equipment and Rapidfil equipment. We offer a one stop service for all makes and models of presses. Rapidfil is staffed with mechanical professionals, who are also skilled and qualified in electrical fault finding and component replacement. All technicians come on-site prepared with a fully stocked work bench to ensure the job gets done correctly. 24/7 vintage support.

Winery > Winery Equipment > Sorting Tables

WECO, The Science of Optical Sorting

1700

Woodland, CA • www.wecotek.com

WineGrape Tek

DESCRIPTION: The WineGrape Tek grape sorter removes MOG (material other than grapes), stems, jacks, shot berries and other types of foreign material, including raisins. Automated MOG sorting with WECO's optical sorting system results in a higher throughput and lower labor requirements.



Winery > Winery Equipment > Tanks

Artisan Barrels & Tanks Inc.

915

Oakland, CA • www.artisanbarrels.com

NEW Nomblot 20hL Dolia

DESCRIPTION: Nomblot added another larger size Dolia, an amphora-shaped tank of 530 gallons, to their existing and popular 350 gallon (13hL) Dolia. With a larger opening and increased juice to skin ratio, this new concrete vessel is especially suited for reds or more structured whites.

NEW Lejeune Conical Tank with Unique Shape

DESCRIPTION: Lejeune has been building innovative, almost artistic, tanks for the last 50 years. The original aesthetics of this tank were developed with the winemaker of a prestigious estate in St-Emilion.



NEW InOak

DESCRIPTION: Artisan Barrels & Tanks has introduced a truncated oak tank and a variable-capacity stainless steel tank combined in one versatile tank. The floating top adds greater flexibility while the truncated shape and oak material enhance the fermentation kinetics and authenticity. This multi-functional tank addresses crop variability issues and therefore brings more wine vessel options to the cellar. Rousseau's French oak sourcing, craftsmanship and innovative fittings are ensured by their timeless expertise with large format vessels.







Winery > Winery Equipment > Tanks

Bouchard Cooperages

1214 & A2500

Napa, CA • www.bouchardcooperages.com

NEW Egginox Stainless Steel Eggs

DESCRIPTION: Egginox eggs from Slovenia are produced with AISI 304 stainless steel, with a polished bright annealed inner surface that has minimum roughness to facilitate tartrate removal. The eggs maintain the natural suspension of the lees, preserve the juice's fruit quality during fermentation with no variability between tanks. The eggs are lightweight, easy to move, clean and sanitize.



Criveller Group

Healdsburg, CA • www.criveller.com

Self-Emptying Fermenters

DESCRIPTION: Criveller fermenters are the perfect solution for winemakers at facilities who struggle with unloading large fermenters. By a simple turn of a switch, you can drastically reduce the emptying time of an entire fermenter with minimal physical labor. The unloading of pomace is even and gradual throughout the entire operation. Sizes from 3,963 gallons to 26,420 gallons are available.



MINOX MINOXSRLIT

Defrancheschi, a SACMI Company

Urbandale, IA • www.defranceschiusa.com

Design Tanks

DESCRIPTION: Defrancheschi offers a range of designer tanks that feature colored stainless steel, and are customizable in color, shape, style and size to suit the architecture and aesthetic vision of the customer.

Flextank 530

Vancouver, WA • www.flextank.com

Flextanks

DESCRIPTION: Flextanks are polyethylene tanks precisely engineered for winemaking. Flextank wine vessels are configured for convenient use and built for enhanced durability, with a product life expectancy more than double the life of oak barrels; they are engineered for easy sanitizing and are scientifically designed to assist with oxygen management in wine production and storage.





with a 2" or 4" bottom drain and extra clearance from a galvanized base frame with four adjustable feet to effectively drain your liquids and solids more easily. These tanks come with outward opening manway, base, VF2 (MAX) VF4 (MAX PLUS) Flange Kit, SV1T Sample Valve and FL1 Fermentation Lock.

ICC Northwest (formerly JV Northwest)

A2409

Canby, OR • www.icc-nw.net

NEW Portable Open Top Fermentor

DESCRIPTION: The Portable Open Top Fermentor is now available in three standard sizes. ICC NW's classic, stainless steel wine fermentors are designed to ensure you are in control of the fermentation process. Strategically placed, dimpled heating and cooling jackets allow precise temperature adjustments. Other features include: unlimited access to cap, dimpled cooling/heating jacket, gusseted 12" temperature well, sample port, a sump-style drain, drain screen, sloping bottom, pomace door, racking door, anchor pads for concrete pedestal and optional stainless legs with adjustable foot pads. It is available in 2 ton (Econo Tote), 3 ton, and 4 ton sizing. All standard wine fermentors are made in the USA and predesigned, thus allowing for shorter lead times and faster delivery to vour winery.

KIESEL Americas Inc.

916

Egg Harbor City, NJ • www.kieselamericas.com

KIESEL RG Retractable Shaft Tank Mixers

DESCRIPTION: KIESEL's RG tank mixers have offered years of reliable service for the gentle mixing of tanks. Its retractable shaft design makes it easy to mount and remove from your tanks to operate from tank to tank. The mixers are available in a variety of sizes to accommodate various tank configurations, as well as frequency speed controls.



La Garde 1017

Quebec, Canada • www.lagardeinox.com

NEW Cubic Stainless Steel Fermentation Tanks

DESCRIPTION: La Garde offers a wide variety of cubic stainless steel fermentation tanks, allowing you to use your entire floor space. La Garde recently added a new cubic-shaped, variable-capacity tank to the family, which is now available.

STAINLESS STEEL ITALIAN TANKS

Minox Srl

1219

Italy • www.minoxsrl.it

Stainless Steel Tanks

DESCRIPTION: Stainless steel wine containers feature a sloped bottom. The sloped bottom wine container has a vertical structure with fixed capacity. The sloped bottom makes it suitable for traditional winemaking with high-quality standards. The nitrogen system preserves the quality of liquids inside, avoiding exposure to oxygen.

Onguard Seismic Systems Inc.

1204

Santa Rosa, CA • www.onguardgroup.com

Onguard Seismic Anchoring System

DESCRIPTION: Onguard offers seismic anchoring systems for liquid storage tanks, using proven ductility that will withstand a significant earthquake and aftershocks. The system can be installed on new builds or retrofitted to fit existing tanks.

Quality Stainless Tanks

1220

Windsor, CA • www.qualitystainless.com

Stainless Steel Wine Tanks

DESCRIPTION: Quality Stainless Tanks offers a variety of stainless steel wine tanks.



Santa Rosa Stainless Steel

910

Santa Rosa, CA • www.srss.com

Stainless Steel Fermentation Tanks

DESCRIPTION: Santa Rosa Stainless Steel fabricates stainless steel fermentation tanks, including portable tanks.

Seguin Moreau Napa Cooperage

1006

Napa, CA • www.seguinmoreaunapa.com

NEW Galileo G8R Tank

DESCRIPTION: Seguin Moreau Napa Cooperage will showcase Galileo's first G8R in the United States. The spherical nature of Galileo's lightweight concrete vats keeps natural convection motion and offers increased thermal inertia. The G8R holds 800L/211 gallons, giving more flexibility with small lots. This rotating model helps control maceration. Due to shape, material composition and manual rotation, Galileo tanks reduce energy consumption during vinification, allowing for gentle preservation of wine and easy lees stirring.



Snyder Industries

A2900

Lincoln, NE • www.snydernet.com

Winetainer for Wine, Spirits or Brewing

DESCRIPTION: The Winetainer is a 304 stainless steel tank with a 22" removable lid, sloped bottom for optimal drainage, sanitary elbow, 2" tri clamp connections with multiple custom features and sanitary finish levels available. Snyder Industries can design to your exact needs, up to 1,150 gallons. Standard sizes are 120, 165, 180, 250, 300, 350, 400, 450, 550 and 793 gallons, and the tanks are portable and stackable.

Spokane Industries

814

Spokane, WA • www.spokaneindustries.com

NEW New Capabilities and Services

DESCRIPTION: At Spokane Industries, we have been busy adding capability to our production and engineering processes. We can now build fermentors sized to 60,000 gallons in our facility. And, we now offer insulation and stainless cladding on our larger tanks. Our engineering staff completes an FEA (Finite Element Analysis) study of all tank legs and stands, ensuring the support structure of each tank will endure throughout the life of the vessel.



Winery > Winery Equipment > Tanks

Woodinsteel Winery Equipment

A2305

Woodinville, WA • www.woodinsteel.com

NEW Zottel Wine Tanks

DESCRIPTION: WoodinSteel Winery Equipment is an authorized distributor of Zottel Products. Zottel Trade is a family-owned company that has been engaged in the development and production of equipment for wineries, distilleries, oil mills and other sectors for more than 30 years.

Winery > Winery Equipment > Tartrate Stabilization

ATPGroup

A1

Windsor, CA • www.atpgroup.com

TMCI Padovan Ambra Ion Exchange Unit

DESCRIPTION: Padovan's Ambra is an ion exchange unit that performs tartaric stabilization at room temperature. The Ambra can also be used to lower pH in finished wines and clarified juice (pre-fermentation), drastically reducing acid additions needed to achieve target pH levels. the Ambra features a user-friendly control panel and compact design, with models from 100 to 1,500 liters of resin.



OENODIA

1816

Napa, CA • www.oenodia.us

NEW STARS 200

DESCRIPTION: STARS 200 is the new equipment from OENODIA's portfolio. It allows you to stabilize lots of wine as small as a barrel at a flow rate of 200 gallons per hour. Contrary to the bigger sisters, STARS 200 processes in batch mode and not from tank to tank.

TMCI Padovan S.p.A

A2706

Veneto, Italy • www.tmcigroup.com

K-Stop and Ambra

DESCRIPTION: The K-Stop and Ambra are continuous tartaric stabilization systems. Ambra features a cationic resin exchange capable of acidifying grape juice and stabilizing wine without affecting quality; the operator selects the desired pH or cationization ratio and eveything is automatically managed by the unit itself. the K-Stop can shorten treatment time to 90 minutes, by wine flash cooling and crystal seeding. A glycol cooler brings the wine close to freezing point for flash crystal activation. Then a final cartridge filtration makes wine ready for bottling.



Winery > Winery Equipment > Used and Other Winery Equipment

winetankbroker.com

A2707

Napa Valley, CA • www.winetankbroker.com

NEW Asset Liquidation Services

DESCRIPTION: We recently added asset liquidation services for wineries that are no longer in operation due to retirement, facility closure, consolidation or other reasons. We also work with new property owners who will not continue to operate the facility as a winery. Our turnkey service provides in-person



inspections, handles all product marketing and price negotiations, and assists with shipping logistics.

Winery > Winery Equipment > Valves / Pipes / Fittings

Jflow Controls

A2302

Cincinnati, OH • www.jflowcontrols.com

NEW Jflow Vino Temperature Control Valve Assembly

DESCRIPTION: The Jflow Vino Temperature Control Valve Assembly is an electric Dual 3-Way valve assembly to control the temperature in wine fermentation tanks. The Jflow Vino valve assembly is mechanically interlocked to eliminate cross-contamination between the supply and return of the chilled and heated glycol. This assembly is microprocessor-controlled with position feedback.

NEW Jflow Controls Vino Dual 316 SST 3-way Ball Valve Assembly

DESCRIPTION: Jflow Vino Series Controls offers the Vino Dual 316 SST 3-way ball valve assembly. This 180-degree, three-position control valve assembly mechanically interlocks the supply and the return side of a glycol temperature control system. This eliminates the risk of sending hot glycol to the chiller or chilled glycol to the heater. The actuator housing is electroless nickel plated and sealed for washdown applications. The assembly is microprocessor-controlled with position feedback.



Kaeser Compressors Inc.

1619

Sacramento, CA · us.kaeser.com

SmartPipe Compressed Air Piping

DESCRIPTION: Kaeser's SmartPipe+ is a modular compressed air distribution system. It's ideal for winery installations that require the highest quality air. It's easily adaptable to existing systems, with no threading, welding or soldering required. Fast to install and easy to modify, the combination of lightweight materials and connectors reduces labor and installation time. Aluminum piping and connector fittings feature smooth walls to minimize pressure drop and won't rust or corrode.



MUST Machining & Fabrication

St. Helena, CA • www.mustfabricate.com

NEW MUST^2 Valve

DESCRIPTION: MUST^2 Valve by MUST is a direct drop-in replacement for your old Healdsburg bronze must valve, with no modifications to your must lines needed. Simply swap out the old valve and you are ready to go. MUST Machining & Fabrication has three-way and four-way 5" MUST^2 Valves with full stainless steel body construction with acetyl gates to offer smooth and reliable action. The handle features a spring-loaded locking pin so you know when you are in the correct position.

T&T Valve and Instrument Inc.

A2727

Pleasanton, CA • www.tt-valve.com

Bray Butterfly Valves and Actuators

DESCRIPTION: The Bray Series 30 Wafer and Series 31 Lug style resilient seated butterfly valves feature a one-piece body with a high-strength through stem design that utilizes an internal disc-to-stem connection. The Series 30/31 is engineered to provide bidirectional bubble-tight shutoff and isolation of the line media from the stem or valve body. Available with a wide selection of high-quality resilient seat and disc materials for a variety of applications, our Series 30/31 butterfly valves are easily automated for on/off or modulating service. Bray butterfly valves are now NSF 61 approved. Bray also presents the Flow-Tek Micro Pure Series ball valve, which has been specifically designed to meet the requirements of high purity applications in accordance with ASME BPE specifications. All valve bodies are investment cast CF3M (316L) Stainless Steel with an internal surface finish of 15 Ra with 20 Ra maximum per SFV-1. Other grades of surface finishes, including electropolishing, are available. Cavity fillers and purge ports are also available upon request.

The Series 740 bidirectional knife gate valve provides repeatable bidirectional shutoff in a rugged, single piece cast body. Featuring a replaceable steel-reinforced elastomer seat for enhanced sealing, the Bray Series 740 gate valve is easily automated for on/off applications.

Steele & O'Brien

DESCRIPTION: Sanitary valves control process flow during production and heat transfer. Steel & O'Brien carries a vast assortment of stainless steel valve and actuator types to meet sanitary and high purity applications. They can be built from 304 or 316L stainless steel in sizes from 1/2" up to 6". The actuators, valves and accessories feature quality surface finishes. Ball valves utilize a ball to restrict flow by sealing around matching seats; they are ideal for use in situations where complete shut-off is required. Butterfly valves, ideal for food and beverage applications, reliably handle high-viscous products, high temperatures and corrosive environments. Check valves are fully automatic and allow product flow in one direction while preventing flow in the other. Vacuum breaker vent valves prevent the formation of a vacuum in the process line. Sample valves allow a sample of product to be taken directly from process lines.

Pressure relief valves permit manual pressure control with a metal-to-metal seat. Top-Flo plug valves are excellent sanitary devices with minimal pressure drops. The valve features a tapered core assembly, which allows easy cleaning while eliminating crevices that can lead to contamination. Flow control valves are normally fitted with actuators and are used to regulate the flow rate and pressure of liquids or gases through a pipeline. Flow control valves are essential for optimizing system performance, relying on a flow passage or port with a variable-flow area.

Winery > Winery Equipment > Warehouse Equipment

Accurate Forklift Inc.

108

Santa Rosa, CA • www.accurateforklift.com

UniCarriers Forklifts

DESCRIPTION: UniCarriers Forklifts has introduced four-wheel, pneumatic tire, electric forklifts to its product line. This will allow the use of electric forklifts in off-road environments and will assist the wine industry in complying with the new CARB, off-road vehicle requirements.

Winery > Winery Equipment > Welding & Supplies

MacFab Welding

103

Loomis, CA • www.macfabwelding.com

NEW Sanitary Welding and Fabrication

DESCRIPTION: MacFab Welding is a 3-A sanitary process and utility systems/piping expert that can solve your toughest winery challenges. Whether starting from the ground up, expanding or modernizing, we can design/build any



system you could need. We work closely with our team of engineers, controls/automation division and our PMs to help plan, fabricate, install and support your systems. With our 10,000+ sq. ft. shop and office, we are capable of building anything you could ever need, including CIP systems, clean out of place systems, hot/cold water sets, process skids, valve manifolds/transfer jumper panels, steam and condensate, fermentation and storage tanks, equipment install and tie ins, catwalks and platforms. We support systems including nitrogen, CO₂, compressed air, glycol and hot water.

Winery > Winery Services > Canning Services

Owl Ridge Wine Services

A2510

Sebastopol, CA • www.owlridgews.com

NEW Canning Line

DESCRIPTION: Owl Ridge Wine Services is now offering canning services, including multiple packaging options (187ml, 250ml, 355ml and 375ml), sparkling wine capabilities, minimal dissolved oxygen pickup, the ability to label in line, counter pressure filler and single head seamer systems, can seam inspection systems, and materials procurement.





Introducing



The **Technology** that is changing the QC of wine production

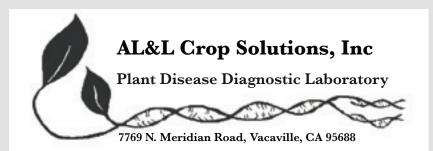


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- CIE-Lab Colorspace
- Simple automatic calibration through QR code.



www.admeo.us



Providing Testing and Diagnosis for Grapevine Diseases

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Winery > Winery Services > Lab / Analytical Services

Admeo Inc. 906

Angwin, CA • www.admeo.us

NEW SPICA

DESCRIPTION: SPICA is a multiparameter analytical platform designed for the wine industry. The improved automation and efficiency of the platform, together with a very simple user interface, make it intuitive, optimal and easy-to-use. It is able to configure and adapt to different



analytical needs and is designed with the newest technology, offering robustness, repeatability and accuracy. It offers connectivity through any device—PC, tablet or mobile phone—and data management is available through the cloud.

Smart Analysis

DESCRIPTION: Smart Analysis allows anyone working in the cellar to perform fast and reliable analysis during the main stages of winemaking: grape ripening, fermentation and aging. It is a patented enzymatic analyzer, piloted by a tablet via a dedicated app. The platform is particularly suitable for all small- to medium-sized wineries



that need to speed up quality control without large investments and dedicated technical staff.

AL&L Crop Solutions Inc.

318

Vacaville, CA • www.allcropsolutions.com

NEW Grapevine Disease Testing

DESCRIPTION: Grapevine disease testing season is ongoing, and new services are available. Try out the vitivirus assay this year. It detects all known grapevine vitiviruses, some of which are known to be associated with Sudden Vine Death syndrome.



ETS Laboratories

1200

St. Helena, CA • www.etslabs.com

NEW Non-Saccharomyces Yeast Diagnostics

DESCRIPTION: In response to the increased use of commercial non-Saccharomyces yeast by our clients, ETS has developed a series of PCR-based diagnostics to detect the presence of the individual species; Metschnikowia pulcherrima, Lachancea (Kluyveromyces) thermotolerans, Torulaspora delbrueckii, and Pichia kluyveri. The



new diagnostic, combined with the ETS Juice Yeast Scorpion Panel, can provide insight into the efficacy of these strains to reduce levels of commonly observed *Hanseniaspora uvarum* and *Pichia membranifaciens* yeasts.

Winery > Winery Services > Mobile Bottling/Canning

The Can Van LLC

A2724

Sacramento, CA • www.thecanvan.com

Mobile Canning and Co-packing Services for Wine and Other Alcoholic Beverages

DESCRIPTION: With more than 10 years of experience in the mobile canning industry, The Can Van is equipped to help your wine or alcohol brand break into the canned market. We have a wide range of can sizes



available to choose from, as well as flexibility, from very small to large packaging runs. We also have a co-packing facility if you would prefer we handle the hosting, carbonating and more. Also available for beer, RTD cocktails and seltzers.

Hurd Mobile Bottling

A2524

Napa, CA • www.hurdmobilebottling.com

NEW Mobile Wine Bottling

DESCRIPTION: HMB is a premier mobile bottling company that serves all of California. HMB offers flexible scheduling with experienced operators. No client is too big or too small. Hurd Mobile Bottling can bottle 375mL to 1.5L, offering cork, Stelvin and LUX finishes.



The Bottle Meister

522

San Luis Obispo, CA • www.thebottlemeister.com

Mobile Wine Bottling and Mobile Velcorin Dosing

DESCRIPTION: The Bottle Meister services California wineries with four state-of-theart bottling trailers and five Velcorin dosing machines.

Winery > Winery Supplies > Chemicals

DeLaval Cleaning Solutions

133

Turlock, CA • www.cleaningsolutions.delaval.com

One Step Alkali™

DESCRIPTION: DeLaval's One Step Alkali product is formulated specifically to remove the need for an acid wash during CIP. Running this product followed directly by a rinse and sanitizer offers a CIP recipe that allows for more time spent in production.



NEW Acidishine™

DESCRIPTION: Acidishine is a product created by DeLaval's R&D department specifically to gain a higher log reduction during sanitization. This product, when used in conjunction with our One Step Alkali, alleviates the need for a separate acid wash as Acidishine acts as both an acid step and sanitizer in one.



Scott Laboratories Inc.

500,808

Petaluma, CA • www.scottlab.com

Velcorin® DT Touch Cold Sterilization Dosing Technology

DESCRIPTION: With Velcorin, Scott Labs offers not only a highly effective solution for the cold sterilization of your wine but also state-of-the-art dosing technology with the Velcorin DT Touch Dosing Unit. Velcorin technology is very effective against a broad range of micro-organisms to prevent spoilage and does not affect wine taste, bouquet or color. The Velcorin DT Touch Dosing Unit can be installed with new or existing filling lines and allows you full control and visibility of the



dosing process, helping to eliminate contamination from sources, such as bottles, closures and filling equipment.

Winery > Winery Supplies > Enzymes

Gusmer Enterprises Inc.

1332

Fresno, CA • www.gusmerwine.com

IFF Danisco Pektozyme Clarification and Maceration Enzymes

DESCRIPTION: Pektozyme Clear is a concentrated pectinase that contains arabanase, designed to boost clarification speed and yield. Improve flotation while reducing lees. Also available as Pektozyme Clear KPO for use in Kosher for Passover products. Pektozyme Mash is a robust pectinase for fruit maceration. More efficient processing at the press yields higher quality, free run juice volumes with increased color extraction and tannins, resulting in more varietal intensity.

Winery > Winery Supplies > Filters / Filtration Supplies

3M Separation & Purification Sciences

408

St. Paul, MN • www.3m.com/3M/en_US/food-beverage-us/applications/wine

3M Filter Housings and Cartridges

DESCRIPTION: 3M Separation & Purification Science Division offers complete, integrated filtration solutions to the wine industry, including bottling membranes, pre-filters, particle control filters and clarification filters, as well as filter housings and automated integrity test devices. All are designed from the ground up to ensure seamless and economical operation.

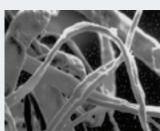
EP Minerals LLC

142

Reno, NV • www.epminerals.com

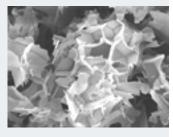
Pre-co-Floc®

PESCRIPTION: The Pre-co-Floc filter aid is an environmentally friendly filtration alternative made from cellulose fibers. The cellulose fibers are produced from natural, organic, renewable raw materials. Pre-co-Floc cellulose fibers can be used independently where silica cannot be tolerated in the system, or together with Celatom® DE or Celatom perlite filter aids. EP Minerals offers a wide range of cellulose fiber grades to meet all your needs.



Celatom® Perlite

DESCRIPTION: Celatom Perlite is a hydrated, naturally-occurring volcanic rock. The distinguishing feature that sets perlite apart from other volcanic siliceous rocks is that when heated above 1,600°F, it expands up to 20 times its original size. Perlite filter aids are available in a full range of grades with specific permeabilities which produce varying degrees of clarification. Perlite is used to filter juices, waste water, beverages and industrial chemicals.



Winery > Winery Supplies > Filters / Filtration Supplies

EP Minerals LLC

142

Reno, NV • www.epminerals.com

Celatom® Diatomaceous Earth Filter Pink (FP) and Filter White (FW) Grades



DESCRIPTION: Celatom Filter Pink (FP) grades of diatomaceous earth (DE) are calcined and light pink. These grades make for an excellent filter aid, especially as a polish filter aid. Permeability is between 60 to 1,300 millidarcy. Celatom Filter White (FW) flux-calcined DE ranges in color from bright white to pinkish. These filter aid grades have a wide range of filtration capabilities and particle size removal properties. The permeability range is between 420 to 20,000 millidarcies.

Parker Bioscience Filtration

524

Oxnard, CA • www.parker.com/wine-filtration

Liquid Filter Integrity Testing

DESCRIPTION: Monitor the performance of your membrane filters to ensure they are undamaged, fit for purpose and capable of providing the necessary degree of microbial control. Effective final stabilization of wine is assured only when filters have been selected properly, used inside the recommended limits and haven't suffered damage during use. It is essential that filter performance is monitored and results recorded. This is achieved through routine integrity testing using the BEVCHECK range of instruments.



Scott Laboratories Inc.

500,808

Petaluma, CA • www.scottlab.com

NEW ScottCart Aqua Water Filtration System

DESCRIPTION: Gain control over your water quality with ScottCart Aqua, an easy-to-use, three-step water filtration kit to take your beverage production to the next level. This first-of-its-kind system is a simple yet effective way to ensure taint, particle and microbefree water for many applications in the production facility. The kit comes complete with stainless steel cartridge housings and three double open-ended



cartridges that clarify, purify and polish your water to produce a microorganism-reduced, suspended solids-free finish.

Winery > Winery Supplies > Fining Agents / Isinglass

Scott Laboratories Inc.

500, 808

Petaluma, CA • www.scottlab.com

NEW Qi'UP XC

DESCRIPTION: This innovative floccing agent from the IOC can be used during traditional juice settling or flotation. Qi'UP XC is a specialized preparation of



chitosan that has a high surface charge, allowing it to bind to solid particles in the juice. When used during flotation, these larger particles are carried to the top of the flotation vessel on micro-bubbles of nitrogen gas or air, resulting in clean juice.

NEW No[OX]

DESCRIPTION: No[OX] is an innovative, highly specialized chitosan-bentonite fining aid. This animal-free, non-allergenic fining aid is superior to SO₂ and other casein alternatives at removing



oxidized characteristics, including color, aromas and flavors. Additionally, No[OX] can remove herbaceous and bitter notes and increase freshness, resulting in significant quality improvements.

Winery > Winery Supplies > Gases / Ozone

Airgas, an Air Liquide Company

329

Radnor, PA • www.airgas.com

Food-grade Gases

DESCRIPTION: Airgas provides food-grade quality bulk and cylinder gases, as well as dry ice, to keep you FSMA- and HACCP-compliant in your winemaking process. The cylinders are noted food-grade on the neck label to ensure you are receiving the quality and purity you expect. Airgas also offers a broad selection of high-quality safety products for your cellar and vineyard teams, as well as safety gas detection monitors for CO_2 , O_2 and SO_2 .

Matheson Tri-Gas Inc.

1338

Santa Rosa, CA • www.mathesongas.com

NEW Gentle Giant

DESCRIPTION: Matheson's new Gentle Giant uses inert gas pressure (nitrogen or argon) to transfer wine, allowing an easily controlled, gentle flow without agitation or oxidation. It features an adjustable foot and bung for use with various barrel sizes and kegs, as well as stainless steel construction with a built-in 15 psi safety relief valve to prevent over-pressurization. Custom lengths are available.





Gusmer is the 'Go to Provider' in the Wine industry for your

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LIQUID AND GRANULAR ENOLOGICAL ENZYMES



GUSMER MICROESSENTIALS YEAST NUTRIENTS



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LAB SERVICES



BUCHER vaslin



















VIEW DIGITAL CATALOG



Contact Gusmer today for all your winemaking solutions!





Winery > Winery Supplies > Winemaking Supplies

Enartis USA 815

Windsor, CA • www.enartis.com/en-us

Zenith®

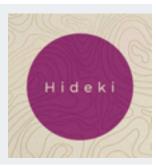
DESCRIPTION: Now approved for use throughout North America, the Zenith range, developed by Enartis, solves all challenges associated with wine tartrate stabilization. Potassium polyaspartatebased Zenith inhibits formation and

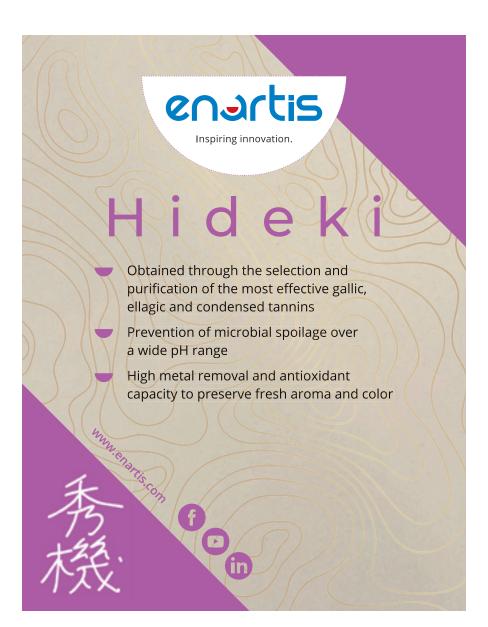


growth of potassium bitartrate crystals, thus preventing their precipitation in bottle. Zenith has a long-lasting stabilizing effect, no negative impact on color, is respectful of wine sensory characteristics and environmentally sustainable. Filterable and suitable for all wines, Zenith is the easy and fast solution for wine tartrate stability.

NEW Hideki

DESCRIPTION: Hideki is a new tannin made of molecular fractions obtained through the selection and purification of gallic, ellagic and condensed tannins that are the most effective in terms of antioxidant and antimicrobial activity. It is meant to be used during wine preparation for bottling, as a natural and allergen-free replacement for SO₂, to protect wine from oxidation and to prevent spoilage by unwanted microorganisms.





Juclas USA

Napa, CA • www.juclasusa.com

NEW X-PRO

DESCRIPTION: The X-PRO range of products are selected inactivated yeast extracted with a proprietary and patented system to preserve the entire yeast cell content; it's 100 percent organic and does not use exogen chemical agents. Research has demonstrated that different varieties have different results in wine, ranging from a boost in anti-ox properties, to the reduction of vegetal and bitter flavors and aromas, a stabilization in redox, color and tartrates, an increase of foam and perlage persistency.



1203

Winery > Winery Supplies > Yeast Cultures & Nutrients (incl Malolactic)

AB Biotek 304

St. Louis, MO • www.abbiotek.com

NEW AWRI Obsession

DESCRIPTION: While

Saccharomyces cerevisiae yeast strains—including those within the Pinnacle and Maurivin portfolios—are popular for making wine today, the production of Merlot, Shiraz and



Cabernet Sauvignon produced with novel active dry yeast is gaining acceptance. The new AWRI Obsession dry yeast—featuring the *Metschnikowia pulcherrima* strain—can have a positive effect on wine composition, color, aroma and flavor.

Enartis USA 815

Windsor, CA • www.enartis.com/en-us

NEW Easytech

DESCRIPTION: Enartis has launched a new selection of products—Easytech—that offers simpler preparation methods to make winery operations easier, as well as reduce resources needed to adequately prepare products, including equipment, energy, water and, most importantly, staff. Easytech includes two yeasts and two inoculation nutrients: EnartisFerm WS, EnartisFerm Q ET (new), Nutriferm Arom Plus and Nutriferm Ultra (new).



Fermentis 1039

Milwaukee, WI • www.fermentis.com

NEW SafŒno™SH 12

DESCRIPTION: This yeast reveals thoils in white and Rosé wines. This active dry yeast has been specifically selected to reveal the aromatic potential of thiol varieties at their best by promoting the release of fruity and green thiol compounds. Its complexity is strengthened by a predominant production of ethyl esters, and its crispness brings a nice balance and aromatic persistence in mouth. Use SafŒno SH 12 for fresh fruity white and Rosé wines, rich and complex in thiols.

Dosage for still white and Rosé wines is 20 g/hl. Ingredients are yeast (Saccharomyces cerevisiae), emulsifier: (sorbitan monost).



BY WINEMAKERS
AROUND THE WORLD



AB Biotek is a leading worldwide yeast technology development and custom fermentation solutions company.

Our extensive yeast strain databank, combined with our global R&D and applications capabilities, allows us to work closely with our customers in meeting key challenges to production improvement and optimization.

Learn more about AB Biotek today.

abbiotek.com



$\overline{\text{ViniLiquid}}^{\scriptscriptstyle{\text{TM}}}$

An innovative liquid fermentation aid; efficient and safe.

SafŒno

13 yeasts to ferment efficiently and reveal specific flavors.

A complete range for Wine

SpringFerm[™]

Fermentation aids range of products.

SpringCell[™] Color G2

A great functional product to pilot color stability and intensity.

Achieve your fermentation goals with Fermentis. Choose from our exceptional range of 13 active dry yeasts, 5 functional products and 6 fermentation aids. With Fermentis yeasts and fermentation solutions you will secure your fermentation, increase yield, and enhance the quality and aromas of your wine.

SEE HOW WE CAN HELP ON OUR APP AND AT FERMENTIS.COM

TYX THE OBVIOUS CHOICE FOR BEVERAGE FERMENTATION





Winery > Winery Supplies > Yeast Cultures & Nutrients (incl Malolactic)

Fermentis 1039

Milwaukee, WI • www.fermentis.com

SpringCell™ Color G2

DESCRIPTION: SpringCell Color G2 is an optimization of the SpringCell Color. Based on pure inactivated yeast from *Saccharomyces cerevisiae* particularly rich in polysaccharides, it improves the action of the SpringCell Color in the intensity and stability of the polyphenolic profile of red wines. SpringCell Color G2 brings a better quality to the wine structure (especially tannins), consequently improving the organoleptic profile of full-bodied medium to long-aging premium reds.

ViniLiquid™

DESCRIPTION: Combining efficiency, ease and security, ViniLiquid is an efficient liquid fermentation activator that optimizes the synergy between both the soluble and insoluble parts of highly degraded autolyzed yeasts. Its innovative liquid form makes winemakers' work easier. It is particularly adapted for wineries that face operational time reduction issues and/or difficult fermentable musts, i.e. with low available nitrogen, poor vitamin composition, and rich in fermentable sugars (high potential alcohol).

Gusmer Enterprises Inc.

Fresno, CA • www.gusmerwine.com

NEW Chr. Hansen Viniflora® Octave

DESCRIPTION: Viniflora Octave is a pure strain of *Lachancea thermotolerans* (formerly *Kluyveromyces thermotolerans*) selected for its capacity to increase the acidity in white and Rosé wines while adding to the flavor complexity with stone fruit notes. As a consequence of the production of lactic acid from sugar, the final alcohol content in these wines can be reduced. Octave can be used at several stages of the process as a pre-fermentation product (on harvested grapes, crushed grapes, in the must).



1332

Lallemand 510

Petaluma, CA • www.lallemandwine.com

NEW Lalvin ICV Sunrose

DESCRIPTION: Lalvin ICV Sunrose is a pure strain of *Saccharomyces cerevisiae* from the Institut Coopératif du Vin (ICV) that is used in Rosé production. Resulting wines are described as elegant with complex red fruit aromas. This strain is especially suitable for Rosé winemaking with grapes from warm climates.

Vineyard > Vineyard Equipment > Animal, Bird and Pest Control

Avian Enterprises LLC

A2607

Sylvan Lake, MI • www.aviancontrol.com

Avian Control Bird Repellent

DESCRIPTION: Avian Control Bird Repellent is an effective tool for repelling birds from grapes. It's not harmful to the birds or people and does not affect the taste or color of the fermented wine. Most winery and vineyard customers report tremendous results.

Sutton Agricultural Enterprises

125

Salinas, CA • www.suttonag.com

Zon Propane Cannon

DESCRIPTION: Zon Propane Cannons deliver sonic blasts to frighten and disorient pest birds/wildlife. Powered by economical propane, Zons are one of the most efficient means of bird control. A standard tank provides about 17,000 detonations of approximately 125 decibels. Ideal in practically

any large, open area with pest birds/wildlife, one cannon will protect up to 5 acres. The mechanical Mark 4 is the most popular model. The electronic EL08 offers advanced programming, multiple blasts and a built-in on/off timer.

Bird Control Pyrotechnics

DESCRIPTION: Bird scaring pyrotechnics are safe, effective, easy-to-use and remain the most effective available means of scaring pest birds without harming them. Pyrotechnics are ideal in practically any large, open field with pest birds/wildlife. Fired from a hand-held



launcher. Bird Bombs® and Bird Bangers produce a very loud "bang" explosion at the end of their trajectory, and Bird Whistlers® "screech" very loudly for up to 300.' Shell Crackers also "bang" but are fired from a 12ga shotgun.

Bird Control Netting

DESCRIPTION: Bird Netting is a highly effective means of bird control. By excluding pest birds from your crop, you can significantly reduce crop losses. Netting is made of black polypropylene with a ³/₄" inch mesh. Applied by tractor, full rolls are 14' wide by 5,000' long. Full rolls can be cut into shorter lengths for hand application, wrapped onto spools for machine application or cross-cut into "fruitzone" rolls to cover only fruit bearing areas.



Vineyard > Vineyard Equipment > Grape Harvest

Flextank

Titan Tough and Versa Picking Bins

Vancouver, WA • www.flextank.com

DESCRIPTION: Multiple bin styles and food prints for picking and transporting fruit. All bins are made from FDA-approved resins, are extremely durable, nestable for storage, stackable for transportation, easy to clean, and contain no cracks or voids to harbor harmful bacteria.



530

Vineyard > Vineyard Equipment > Harvesting Equipment

Oxbo International Corp.

|1

Lynden, WA • www.oxbocorp.com

NEW Oxbo 620 Tow Behind Grape Harvester

DESCRIPTION: The new Oxbo 620 is available for 2022. With wheel assist, this tow-behind harvester is capable of climbing hills and can be configured with PremiumDestem for high-quality fruit. The 620 features easy-to-use controls, autosteer, as well as Oxbo YieldTracker and FleetCommand technologies. Oxbo high-capacity buckets ensure fruit quality. The 620 delivers the same



benefits as the self-propelled Oxbo 6030 in a lower cost, tow-behind package.

Vineyard > Vineyard Equipment > Irrigation

Advanced Viticulture Inc.

2024

Windsor, CA • www.advancedvit.com

FloraPulse

DESCRIPTION: Based on technology from Cornell University, the FloraPulse system provides the most accurate measurement of tree and vine water status. We give you science-based advice to optimize irrigation and increase profits. The FloraPulse system involves a microchip tensiometer that is embedded inside the vine's woody tissue and directly measures the water



status, known as water potential. Because the measurement is taken directly inside the water-carrying tissue, readings are very accurate and reliable. No other sensor can provide real-time, 24/7 accurate water potential measurement.

Advanced Viticulture Consulting is a reseller for FloraPulse in the North and Central Coasts.

The Well Bubbler

DESCRIPTION: The Well Bubbler is an automated monitoring system for municipal and agricultural wells, tanks and reservoirs. Compressed air is forced through an air line to accurately measure liquid level. The level is then recorded and displayed in feet or sent to your smartphone. Flow rate, discharge pressure and pump power are measured simultaneously to calculate specific



capacity and overall pumping efficiency (OPE). The Well Bubbler is designed and built in the United States. Advanced Viticulture Consulting is a reseller for The Well Bubbler in the North and Central Coasts.

Farm(x) A2314

Mountain View, CA • www.farmx.co

NEW Osmo

DESCRIPTION: FarmX introduces Osmo, a soil moisture probe that monitors the largest root zone volume of any probe today. While most soil moisture probes measure only a 3" diameter, Osmo's sensing technology can monitor up to and beyond a 4' diameter. Osmo is designed for all soil types, including clay,



giving growers the insight they need regardless of soil conditions. Osmo ships in lengths ranging from 24" to 48" and can also be customized.

Ranch Systems Inc.

Novato, CA • www.ranchsystems.com

NEW RS10[™] Long Range Bluetooth Transmitter

DESCRIPTION: Wireless precision agriculture solutions are continuously evolving. The RS10 brings a brand new mode of connectivity to the industry. The RS10 is a solar-powered, long-range Bluetooth transmitter capable of reading data from traditional wired soil moisture sensors. The RS10 overcomes the limitations of sensor cable length, enabling deployment of more sensors in fields over a wider area. Utilizing Bluetooth® 5.0, the RS10 is capable of 4x the range of legacy Bluetooth devices. The RS10 is agnostic to soil moisture probe brands, supporting most existing probe installations and future sensor options. The RS10 transmits data via Bluetooth to a Ranch Systems cellular telemetry unit that uploads real-time soil moisture data to the Ranch Cloud™ field monitoring and control platform. The data is viewed via traditional time graph, color code soil water profile or custom views via the myRanch™ app or the Ranch Cloud™ Portal.

NEW RM400 Monitoring and Control Unit

DESCRIPTION: The RM400 is the backbone for a monitoring and control system, featuring ease of use with a built-in display and keypad interface for in-field configuration, valve control and data readout. Control up to 48 valves with multiple sensor input options. Create multiple, fully automated irrigation programs easily which are optimized for shortest run times and dynamically adjusted based on real-time environmental conditions. WiFi and cellular connectivity, wired sensors and wireless sensor connectivity are supported. Bluetooth® long range wireless technology is built in. Used with the RS10™ Long Range Bluetooth Transmitter, it allows multiple SDI-12 soil probes up to 1,000 feet away.

VinSense LLC 191

West Lafayette, IN • www.vinsense.net

Vines

DESCRIPTION: Vines gives producers, field managers and winemakers the tools to manage soil moisture, pruning, irrigation, canopy management and water conservation to increase production



efficiency, quantity and crop sustainability while reducing variability in production within a field and across seasons. VinSense provides real-time information and management tools that use innovative visual analytics to integrate high volume data flows into actionable decision tools that have been collaboratively developed with end-user growers and vintners.

Vineyard > Vineyard Equipment > Machinery

Rinieri North America

F

Lehi, UT • www.orchardANDvineyard.com

Turbo Evo

DESCRIPTION: The Turbo Evo is one machine base with up to eight power tools. It features a 20-gallon tank reservoir, independent hydraulic tank, flail mower/shredder, mower, turbo blade, French plow and sucker remover.



Twister Sprayers USA LLC

A2626

Manteca, CA • www.twistersprayers.com

NEW Twister Sprayers

DESCRIPTION: The Twister Sprayer vineyard and trellis fan were designed to effectively cover four half rows per pass. This is accomplished by creating turbulence in the air flow, which allows large leaf mass movement during spray application. These designs have been tested and proven to increase coverage by the University of Valencia agricultural department, and have shown to improve application speeds and reduce tractor RPMs.



A GRAPE HARVESTER FOR EVERY VINEYARD





Vineyard > Vineyard Equipment > Other Vineyard Equipment

Clemens Vineyard Equipment Inc.

G2

Woodland, CA • www.clemens-america.com

Trimmer

DESCRIPTION: The Clemens Trimmer line offers one-sided and two-sided L-shape and over-the-row units. The specially formed high-speed knives provide a clean cut at a travel speed up to 6 mph. Up to six vertical knives, plus skirting knife and two or three blade horizontal cutting bars are available. All cutting bars are secured with a break-away system. Our patented system to change the belts cuts down maintenance hours drastically.

Radius Plus

DESCRIPTION: Clemens Vineyard Equipment offers different models of the well-known Radius under-vine weeder. The Radius Plus is the most universal solution that allows multiple tools to work from the same basic unit, like blade only, rotary harrow, driven disks or mower head.

Garton Tractor Inc.

G1

Santa Rosa, CA • www.gartontractor.com

NEW VitiBot - Bakus

DESCRIPTION: VitiBot manufactures the Bakus, an automated electric weeding robot.

Steam Cleaners Inc.

A2620

Concord, CA • www.steamcleanersinc.com

NEW Steam Weed Abatement

DESCRIPTION: Steam Cleaners Inc. has partnered with Australia's Weed Technics to produce a new method of weed abatement with Satusteam, a perfect blend of boiling water and wet steam that kills weeds without the need of herbicides or mechanical tillage.

UV Boosting

A2422

Saint-Nom-la-Breteche, France • www.uvboosting.com

NEW Helios Vigne 2022

DESCRIPTION: Helios Vigne is physical preventive equipment for vineyard protection against fungus disease (powdery mildew, downy mildew, black rot, etc.) through the vines' natural defense stimulated by UV-C. It is a physical solution to lower chemical inputs while maintaining an optimal level of protection. Helios Vigne is a tool directly attached to the tractor.





VintAge

Friday Harbor, WA

NEW Gladiator

DESCRIPTION: Gladiator is a patented new utility vehicle suitable for a variety of tasks in the vineyard. It features a platform at the back of the vehicle where the operator can step-on/step-off, as necessary, to perform various tasks. An auto brake engages when one steps off the platform. Payload is 400 pounds, and the vehicle can accommodate a range of tools and

3-6

fittings. It can be 4WD or 2WD with gas, diesel or electric power.

Vineyard > Vineyard Equipment > Storage Tanks (Water or Chemical)

National Storage Tank Inc.

A2301

Santa Rosa, CA • www.nationalstoragetank.com

NEW FiberCore Fiberglass Bolted Tank

DESCRIPTION: FiberCore fiberglass bolted tanks are uniquely designed, contoured and pressed at an extremely high temperature. These panels are smooth and designed for long life. They're uniquely bolted together from the outside to avoid any water contact with steel. The innovative design of the gasketing



system reduces the need for sealant. Each floor panel is convex, bolting together to create a water way to completely drain the tank to its concave drain in the floor. No annual maintenance is required. A cubical and modular design allows this product to be used outdoors and indoors. It is ideal for rooftops, basements, parking garages, tight spaces, salt air, high wind, high heat and freezing conditions.

Vineyard > Vineyard Equipment > Tools

Zenport Industries Inc.

443

Sherwood, OR • www.zenportindustries.com

NEW Zenport Cordless EP26 Battery-Powered Electric Pruner, 1-Inch Cut

DESCRIPTION: Introducing the Zenport cordless EP26 ePruner, a battery-powered electric pruner with a progressive 1-inch cut. It features three modes of pruning operation, progressive, adaptive and simple cut. An all-new LCD digital readout provides valuable information about your cordless pruner. A full battery charge will complete three to four hours of runtime. The razor-sharp cutting blade is made of high-quality SK5 Japanese steel. A portable maintenance toolbox helps keep this electric pruner operating. It weighs 2 pounds.



Vineyard > Vineyard Equipment > Tractors

Monarch Tractor

A2719

Livermore CA • www.monarchtractor.com

NEW Monarch Tractor MK-V

DESCRIPTION: Monarch is a fully electric tractor platform built to empower farmers profitably implement sustainable and organic practices. The tractor platform combines mechanization, automation and data analysis to enhance farmers' existing operations, increase labor productivity and maximize yields.



Vineyard > Vineyard Equipment > Trellises

Orchard & Vineyard Supply

709

Paso Robles, CA • www.ovs.com

NEW SmartNotch Vertical Line Post and Cross-Arm

DESCRIPTION: The SmartNotch Vertical Line Post (VLP) is the first KLIMA-compatible vineyard stake without external hooks or clips. The ultra-strong, patent-pending profile shape and asymmetrical notches hold the wire securely during the growing season then release the wires when lifted by a mechanical pruning machine, like the KLIMA. If you are looking to convert an existing vineyard with T-post trellis



to mechanical pruning, SmartNotch Cross-Arms are the easy retrofit solution at a low per-acre cost.

PA Trellising Systems

2018

Charlottesville, VA • www.patrellising.com

Click Lock Cross-arm

DESCRIPTION: Cross-arm installations can be done in a matter of seconds with a click lock system. These systems are maintenance-free and require no u-bolts. They can be installed on P3, P5M and P5L posts.



NEW R-Hook

DESCRIPTION: The new R-hook is used for movable catch wires. The unique design of the R-hook offers several advantages. It speeds up manual labor, is ideal for cane pruning technology and harvest machines. The catch wires can be easily removed, both manually and mechanically. The harvesting machinery cannot push the hook into the post because it is bent upwards away from the punched hole. A small nub on the inside of the hook keeps the catch wires in place and is ideal for undulating terrain.



Wire Spreader

DESCRIPTION: The wire spreader is used with the catch wires. They are opened during winter pruning, which ensures that the shoots will grow between the wires that are now wider apart. After the shoots have reached the desired height, the wire spreader should be closed. Depending on the variety and the growth of the vines, this can then be repeated in the upper



areas. This substantially reduces manual labor during the growing season.

VintAge

118

Friday Harbor, WA • NA

NEW PostMortem

DESCRIPTION: PostMortem is a vineyard post made from recycled, CCA-treated posts that have been removed from the vineyard. The old posts are chipped and then used as aggregate in a light-weight cement mix, which is then encased in a plastic (recycled) tubular sleeve. CCA is captive and unable to leach into the surrounding ground. The new post can accept nails and fittings, just as a wood post and has been awarded a New Zealand patent.

Vineyard > Vineyard Equipment > Weather Monitoring Systems

Arable

San Francisco, CA • www.arable.com

Arable Mark 2

DESCRIPTION: The Mark 2 is an all-in-one weather station and crop monitor that powers Arable's data and analytics platform, providing real-time intelligence on weather, soil, irrigation and plant conditions. The Mark2 installs in minutes and deploys at the touch of a button. It transmits data continuously via cellular technology and is solar-powered with no moving parts. Data and crop analytics can be accessed in Arable's web and mobile apps or via API.



2113

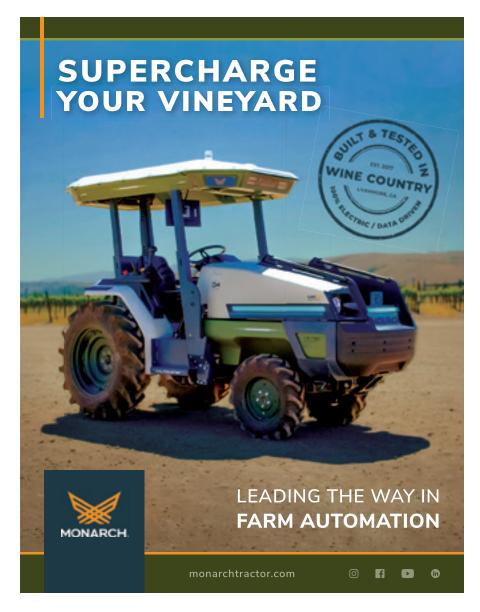
Coastal Viticultural Consultants Inc.

1340

Angwin, CA • www.coastalvit.com

NEW CVC Ag App

The first release of CVC Ag brings the CVC Spore Trap Network data and maps to your mobile devices. The CVC Spore Trap Network allows members to view their own spore trap data, trap locations and data graphs on mobile devices. Utilizing CVC Ag also provides users the ability to view regional powdery mildew spore populations throughout their county or region. Regional powdery mildew spore data extend the reach of each user's spore traps and improve powdery mildew control program decisions. CVC Ag can shrink your carbon footprint, reduce pesticide use, lower your spray costs, conserve resources and decrease soil compaction while increasing the effectiveness of your spray program. Future releases of CVC Ag will incorporate soil, plant water stress and plant data into mapped formats.



Vineyard > Vineyard Equipment > Weather Monitoring Systems

Onset - HOBO Data Loggers

606

Bourne, MA • www.onsetcomp.com

Onset HOBOnet Field Monitoring System

System provides web-enabled monitoring System provides web-enabled monitoring of conditions at multiple points throughout your vineyard. Wireless HOBOnet sensors—including the HOBOnet Multi-Depth Soil Moisture Sensor, which measures soil moisture at multiple depths with a single probe—are easily deployed, connect to the network with the push of a button and communicate back to a central weather station. Users access



data through cloud-based HOBOlink software and receive automatic alarm notifications if conditions exceed user-set thresholds.

Ranch Systems Inc.

621

Novato, CA • www.ranchsystems.com

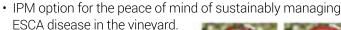
NEW Ranch Systems Air Quality Sensor

DESCRIPTION: Air quality has become front and center in many areas. Based on customer requests, we have a new option for air quality monitoring. This new sensor will provide the microclimate information needed regarding air quality AQI levels specific to production areas. The charting is the same as Purple Air. However, by having sensors installed locally, users will be able to receive alerts based on the thresholds set. Users can manage employees' activities and adhere to OSHA requirements. Particulate data for specific time periods will be stored and available for analysis and documentation.



Bio-Tam[®] 2.0 is a highly effective biofungicide for **conventional and organic production**. Bio-Tam 2.0 is a proven combination of two species of beneficial *Trichoderma fungi* used in the

management of grapevine trunk and/or pruning diseases under a wide range of environmental conditions for maximum flexibility and efficacy.



• Delivers stable performance in a wide range of environmental conditions.



How Bio-Tam 2.0 works

By colonizing the pruning wounds,

Trichoderma forms a shield that



omri



prevents pathogenic fungi from spreading within the plant.

11550 North Meridian Street, Suite 600, Carmel, IN 46032 **1-800-419-7779**

Always read and follow all label directions. Bio-Tam is a registered trademark of Isagro USA. Copyright ©2021 SePRO Corporation.

Wildeye

Fresno, CA • www.mywildeye.com

NEW Wildeye 4G Data Loggers

DESCRIPTION: Wildeye is now certified as a Verizon network partner and now uses only 4G loggers on all sites so connectivity is better than ever. Custom weather stations provide reliable frost alerts and vineyard-specific measurements, like ETO, growing degree days, mildew risk and more.



2103

Vineyard > Vineyard Services

Deep Planet

A2725

Didcot, UK • www.deepplanet.ai

VineSignal

DESCRIPTION: Deep Planet's VineSignal uses satellite imagery, ground data and AI to accurately predict yield, maturity and harvest dates, to detect disease, to monitor soil nutrients and sub-terrain soil moisture, to determine baseline soil carbon, as well as to geotag individual vines. These tools are developed with the grower in mind to make vineyard management more efficient. Free trial and demo of the platform are available for sign-up. Signing up is quick and easy.



Eco-Management Inc.

1941

Petaluma, CA • eco-management.com

NEW Environmental Consulting

DESCRIPTION: Eco-Management consults with wineries and vineyards for establishing and managing native plants. Native grass groundcovers in the vineyards help with regenerative agriculture, erosion control and soil carbon. We show you how to manage native vegetation to reduce pests as well as wildfire hazard, while enhancing natural beauty and habitat.

Vineyard Investigations Inc.

1224

St. Helena, CA • www.terraspase.com

Vineyard Consulting Services

DESCRIPTION: Vineyard Investigations Inc. provides evaluation services for vineyard development, site selection, varietal and rootstocks, soil analysis, vine nutrition, trouble shooting, problem resolution, fire and smoke taint issues, irrigation, disease, yield and fruit quality management. The company has more than 30 years of experience, from coast to coast and internationally.

Vinomatos, LDA

2137

Seiça, Portugal • www.vinomatos.com

NEW GPS-Guided Planting Machine

DESCRIPTION: Vinomato's GPS-guided planting machine with sub-inch precision is specially designed for the vineyard. The machine aligns and places the stake, the plant, localized irrigation and the central metal post (T-POST) while unrolling the drip line and trellis metal wires. Liquid or solid fertilizer can be used with the irrigation lines. The machine is now available in the U.S.

Duarte Nursery

Clean Plants

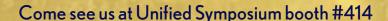
Tons and tons of reasons

- Ultra clean rootstocks
- 100% containerized
- Certified virus free clones
- 2010 protocol selections

MagnumVine

Magnum Vine® LT

12" Standard



John Arellano San Joaquin Valley 559-804-6949

Ed Needham San Joaquin Valley 559-977-7282

Steve Scheuber San Joaquin Valley 209-531-5065 415-309-3930

Tia Russell North Coast Southern Oregon 209-815-2399

Stefan Daniels North Coast Central Coast

Joel Myers Oregon 503-435-8932

sales@duartenursery.com

Aaron Salsedo San Joaquin Valley 559-892-6028



Clean, Clonal, Containerized

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



Clean Plants



35'

UberVine⁶









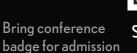
The Duarte Unified Wine & Grape Symposium After Party at Cafeteria 15L

Featuring live music with "Hip Service

WHAT: Unified Wine & Grape Symposium After Party

WHERE: Cafeteria 15L | 1116 15th St., Sacramento, CA 95814

WHEN: Wednesday, January 26th, 2021 | 7:30 - 11:00 p.m.







One family. Forty plus years. Premium. Quality. Grapevines.



qualitygrapevines.com

Vineyard > Vineyard Supplies > Fertilizer and Chemicals

A&P Inphatec, LLC

1641

Palo Alto, CA • www.inphatec.com

N E W XylPhi-PD™

DESCRIPTION: XylPhi-PD is a biologically-based bactericide for the reduction of Pierce's Disease (PD) in grapevines. XylPhi-PD is OMRI-listed and approved for use in organic production. Consistent XylPhi-PD use reduced PD incidence by 57 percent year-to-year in a



four-site California field study. For the 2021 crop season, an enhanced version of Xyleject, the powered injection system used to propel XylPhi-PD directly into the xylem, was released.

PureCrop1

A2421

Ukiah, CA • www.purecrop1.com

PureCrop1 Concentrate

DESCRIPTION: The PureCrop1 formula is an all-in-one insecticide, fungicide, surfactant and biostimulant made from organic, plant-based materials and is safe to use with beneficial insects. It is OMRI listed, Zero REI and Zero PHI. Bulk orders are available.



SePRO Ag

A2723

Carmel, IN • www.sepro.com/agriculture

Bio-Tam® 2.0

DESCRIPTION: Bio-Tam 2.0 is a unique blend of two highly active Trichoderma strains, delivering preventative activity against several key soil-borne diseases. Ideal for grapevine pruning disease control. Key features include broad-spectrum disease control, consistent performance across a wide range of soil temperatures and pH conditions; dormant spores allow for a best in class shelf life of 15 months, and has a formulation with high wetability and dispersibility, a four-hour REI and Zero-day PHI.



Vineyard > Vineyard Supplies > Grapevines / Rootstock / Nurseries

Duarte Nursery

414

Hughson, CA • www.duartenursery.com

UberVine®

DESCRIPTION: Duarte Nursery's UberVine is a 35-inch vine designed to increase production and uniformity while saving labor and improving your ROI. The UberVine is available now.

Grey Creek

1040

Geyserville, CA • www.greycreek.com

Dormant Vines

DESCRIPTION: Grey Creek offers dormant bench-grafted vines that are virus-tested and sorted for top quality.

Budwood for Field Grafting

DESCRIPTION: Grey Creek offers a huge selection of budwood for spring field grafting. The company cuts budwood to be used in the field rather than the nursery, and this results in a larger diameter cutting that is much easier for grafters to work with.

Cold Storage

DESCRIPTION: Grey Creek offers cold storage services for customers to store their own selections of budwood or dormant vines. Its cold storage facility stays at a cool 37°F, ensuring your product stays dormant and fresh until you are ready to use it.

Herrick Grapevines

710

Red Bluff, CA • www.herrickgrapevines.com

Grapevines/Rootstock

DESCRIPTION: Herrick Grapevines is a licensed propagator of ENTAV-INRA® and offers more than 20 varieties of rootstock, including 100 winegrape varieties with nearly 300 clonal selections (All Protocol 2010). Current vine availability can be found on the website. Custom orders are accepted for dormant bench grafts, potted bench grafts, rootings and budwood.



Sunridge Nurseries

822

Bakersfield, CA • www.sunridgenurseries.com

Dormant Benchgrafts

DESCRIPTION: These one-year-old benchgrafts are planted in an outdoor nursery row in the spring, grown through summer and fall, and are harvested after becoming dormant in the winter. Before delivery, roots are trimmed, packed in pine wood shavings and held in cold storage.

Green Benchgrafts

DESCRIPTION: Grown in a custom blend soil mix, these pots promote proper root orientation to allow vines to excel after field planting. This benchgraft allows for year-round planting and development.

Wonderful Nurseries LLC

72

Wasco, CA • www.wonderfulnurseries.com

NEW Trade Show Booth

DESCRIPTION: Wonderful Nurseries has built a new, sleek, interactive trade show booth for 2022. Come visit, in-person, at the Unified Symposium booth #722, to see all the solutions Wonderful Nurseries has to offer grower partners.



Vineyard > Vineyard Supplies > Netting

Coverplas Nets

1742

Melbourne, Australia • www.coverplas.com

Crystaloch Permanent Bird Netting

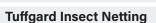
DESCRIPTION: Crystaloch is a transluscent permanent side panel net made from colorless yarns. Crystaloch lets more light through than conventional nets while providing exceptional protection against birds, smaller insects (e.g. yellow jackets) and wildlife, including deer, with its .08" x .4" rectangle mesh. Reduced handling minimizes application and retrieval costs and eliminates storage. Crystaloch comes in widths up to 48" and 1,650' lengths with an industry leading 10 year pro rata U.V. warranty when installed on the vines.



Duragard Permanent Bird Netting

provides a valuable return on investment.

DESCRIPTION: Duragard is a heavyweight side panel netting designed to be permanently installed on the vines. Duragard provides good fruit quality by with its resistance to hail, birds, larger insects (e.g. bees and wasps) and wildlife. Reinforced eyelets on both selvedges provide strong anchoring points to the wires. Labor costs and application logistics hassles are greatly reduced, and storage is eliminated. A 10 year pro rata U.V. warranty



DESCRIPTION: Tuffgard is an over-row heavy drape netting designed specifically to provide complete protection against sunburn, birds, fine insects (bugs, bees and wasps) and hail damage. It effectively reduces insect damage to vines. Solid reinforced selvedges provide strong anchoring to fasten nets



under the canopy. One-fifth-inch mesh provides durability, prevents unraveling and provides high tear resistance. Nets are available up to 16.5' wide and 990' in length with industry leading 10 seasons pro rata U.V. warranty.



Vineyard > Vineyard Supplies > Other Vineyard Supplies

Turrentine Brokerage

900

Novato, CA • www.turrentinebrokerage.com

Wine Grape and Bulk Wine Brokerage, Strategic Planning

DESCRIPTION: Over the last 45 years, Turrentine Brokerage has assisted grower and winery clients with grape, bulk wine and case goods supply challenges and opportunities, providing the best data-driven information and analyses to help clients make the most profitable choices in a constantly changing business atmosphere.

Vineyard > Vineyard Supplies > Stakes / Anchors / Vine Ties / Clamps

Gripple Inc.

942

Aurora, IL • www.gripple.com/us

NEW GP Fix

DESCRIPTION: Gripple's new GP Fix offers a simple, fast and safe solution for the quick repair of trellising wires. The two-piece GP Fix design pushes onto both ends of the



broken wire, providing extra grip and reach to re-attach wires with an easy "snap" fit. It features corrosion-resistant zinc alloy and ceramic rollers for long lasting repairs, and is suitable for 15-10 SWG wire with an 882 lb. load rating.

DESCRIPTION: Gripple's GP90 joins and tensions wires in a perpendicular join to a boundary cable or bar. It quickly and easily helps create overhead structures for cloth/net support, crop/down wires or fruit canopies. GP90 also eliminates tying and knotting of T-joins and other complex joining methods. It has a strong 1,320 lb. line load in case of wind or heavy crop weight.



DESCRIPTION: Gripple's VIT-S is a fast and easy way to manage fruiting wires, by working directly with metal and wooden end posts, to replace difficult and unreliable chains. It allows wires to be moved independently during the growing season, allowing the ability to easily drop the wires to the ground for pruning.



L.E. Cooke Supply Co.

Visalia, CA • www.lecooke.com

NEW MAX Tapeners

DESCRIPTION: MAX Company's new "Strong Bind" Tapeners combine the high labor efficiency of the Tapener line with a strong binding tie tape and a stronger staple to hold heavy crop loads.



SEASON AFTER SEASON, NORTH AMERICA'S LEADING GRAPEVINE NURSERY

Quality grapevines don't grow overnight. In fact, the knowledge and skills behind the process take years to cultivate. That's why smart growers place real value in the experience and leadership of Wonderful Nurseries. Year after year, season after season, we have been innovators in growing technology and in delivering the industry's most tested vines.

We believe in the philosophy of "Growers First", and that has enabled us to remain first choice for many of the nation's most respected growers. As North America's largest grapevine nursery, we are proud to be recognized as a driving force of loyalty and stability for our grower partners.

WonderfulNurseries.com 661.758.4777

27920 McCombs Road, Wasco, California 93280



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Unified Strike 122

WONDERFUL NURSERIES, SETTING THE STANDARD FOR OVER 30 YEARS

SERVING YOUR VINE, ALMOND AND PISTACHIO TREE NEEDS

General > Associations & Education > Associations

Allied Grape Growers

417

Fresno, CA • www.alliedgrapegrowers.org

Winegrape Marketing

DESCRIPTION: Allied Grape Growers (AGG) is a grower-owned winegrape marketing association. We sell winegrapes to winegrape buyers throughout California. We represent roughly 500 independent grape growers in the marketplace, negotiating grape purchase agreements on their behalf. AGG understands supplyside dynamics in the California winegrape sector and uses that expertise to maximize results for our member-



growers, as well as work with our buyers to plan for their changing supply needs.

Lodi Winegrape Commission

1410

Lodi, CA • www.lodigrowers.com

DESCRIPTION: Established in 1991, the Lodi Winegrape Commission represents the common interests of Lodi winegrowers with programs in marketing, education, research and sustainable viticulture. The Commission collectively and effectively promotes Lodi's vibrant, multi-generational farming community



and California's most dynamic wine region. For more information about the Lodi winegrowing region, visit *lodiwine.com*. For more information about LODI RULES for Sustainable Winegrowing, visit *lodirules.org*.

The Xerces Society/Bee Better Certified™

A2604

Portland, OR • www.beebettercertified.org

Bee Better Certified™

DESCRIPTION: The Bee Better
Certified seal clearly
communicates your brand's
commitment to pollinator
conservation and regenerative
agricultural practices. Our team



can help familiarize your operation with the Bee Better Production Standards and walk you through the application requirements. Certified grower operations are up for renewal every three years, and brands that source certified grapes can license the use of the Bee Better Certified seal to use on labels.

General > Associations & Education > Education

California Polytechnic State University, SLO

309

San Luis Obispo, CA • www.wvit.calpoly.edu

California Polytechnic State University, SLO

DESCRIPTION: Cal Poly's Wine and Viticulture
Department offers a unique major with a threepronged curriculum that combines viticulture,
enology and wine business. The vineyard and new
Justin and J. Lohr Center for Wine and Viticulture
give students hands-on experience that the
industry has come to expect from our graduates.
The Center includes a bonded winery, bottling



room, barrel rooms and a research lab, as well as labs for viticulture, enology and sensory analysis.

California State University, Fresno

934

Fresno, CA • www.fresnostate.edu/jcast/ve

Education and Research

DESCRIPTION: The Fresno State Department of Viticulture and Enology and Viticulture and Enology Research Center work together to serve the grape and wine industry by training future leaders through higher education and conducting research that addresses the needs of our industry. We offer undergraduate degrees in viticulture or enology, graduate degrees in viticulture and enology, and new minors in viticulture or enology. Research results and knowledge are published and disseminated through meetings and events for the industry, community and students.

California Sustainable Winegrowing Alliance

A2501

San Francisco, CA • www.sustainablewinegrowing.org

NEW 2021 Certification Report

DESCRIPTION: The California Sustainable Winegrowing Alliance (CSWA) has released its fifth annual Certification Report, highlighting the accomplishments of the wineries and vineyards in California that are Certified California Sustainable Winegrowing (CCSW).



NEW Certified California Sustainable Winegrowing Website

DESCRIPTION: A website dedicated to the Certified California Sustainable Winegrowing program has been developed and features a searchable database of certified wines, a map for visitors to explore certified wineries with tasting rooms and a section offering educational insights on certification requirements, as well as what it means to be certified.



NEW Integrated Winery Water Quality Management Tool

DESCRIPTION: This interactive tool is used to evaluate and implement sustainable practices for winery water quality. The tool provides a user-friendly, three-step process to review water management practices inside the winery, as well as treatment, reuse and disposal of process water. Tool results provide recommendations for best practices or modifications that may improve water quality outcomes.



2020 California Wine Community Sustainability Report

DESCRIPTION: This report produced by the California Sustainable Winegrowing Alliance (CSWA) shows broad participation in our educational and certification programs, and wide implementation of sustainable practices in vineyards and wineries around the state.



University of California Davis, Department of Viticulture and Enology

92

Davis, CA • wineserver.ucdavis.edu

Viticulture and Enology Degrees

DESCRIPTION: The Department of Viticulture and Enology at UC Davis is training the next generation of wine and grape industry leaders. We are achieving our mission



through teaching, research and extension. We offer B.S. and M.S. degrees in Viticulture and Enology. We have 15 faculty members that perform research related to grapes and wine, and we provide both on-campus and off-campus educational programs to keep industry professionals up-to-date and informed regarding current issues and research results.

Wine Business Institute at Sonoma State & VESTA

Rohnert Park, CA • wbi25.sonoma.edu

Wine Business Degree and Certificate Programs



WINE BUSINESS INSTITUTE



319

619

DESCRIPTION: Professional MBA (starts in August), Application Deadline - April 30 Professional Wine MBA (starts in August), Application Deadline - April 30

Global Executive Wine MBA (starts in October), Application Deadline - June 30

Certificate in Wine Business Management (spring 2022),

Application Deadline - January 14

Wine Entrepreneurship Certificate (spring 2022)

Online Certificate in Wine Industry Finance & Accounting (summer 2022) Application Deadline - April 15

Wine Business Master Classes (Ongoing)

Professional Wine Sales Certificate (Ongoing)

WISE Academy

Napa, CA • www.wineindustrysaleseducation.com

Classes

DESCRIPTION: WISE classes are educational opportunities for wine industry employees to further their career and self-improvement. With more than 30 classes, content covers a variety of topics in the DTC channel and executive education, including but not limited to: tasting room, management, metrics, outbound phone sales, marketing, accounting, virtual sales and corporate gifting. All WISE classes are currently being taught over Zoom and are interactive. Classes are offered throughout the year, depending on customer interest.

Mystery Shopping

DESCRIPTION: WISE offers mystery shopping services for an effective, unbiased evaluation of your DTC channels for winery clients to use for individual and team coaching. Shopping feedback is collected and presented in a report along with a detailed description of suggested areas of focus and recommendations to improve sales and service in those areas. More details on Mystery Shopping are on the website.

Custom Coaching

DESCRIPTION: With more than 150, eight-hour days of content, we can tailor a training session that fits perfectly to your winery team, wherever you are. WISE offers custom coaching programs to support wineries that are looking to train on sales, customer service, other DTC skills and executive coaching. We offer tried and true coaching packages, as well as customized coaching packages. More details about Custom Coaching are on the website.

General > Facilities & Construction > **Architects**

BAR Architects

938

San Francisco and Los Angeles, CA • www.bararch.com

Architecture, Planning and Interior Design

DESCRIPTION: BAR Architects is an 80-person. architectural, interior design and planning firm known for designing a diverse array of award-winning wineries, estate homes and hospitality projects throughout the United States and internationally. We have designed over 30 wineries, ranging from 2,500 to 500,000 cases, that include wine production and storage facilities, visitor centers, tasting



rooms, reception areas, art galleries, conference facilities and retail operations, as well as the design of vineyards, caves and winery tour sequence.

Hall & Bartley

402

Santa Rosa, CA • www.hallandbartley.com

NEW St. Francis Vineyard & Winery Vineyard Portico Exterior Dining **Terrace**

DESCRIPTION: Hall & Bartley recently completed the new expanded Reserve Tasting Room and Vineyard Portico dining area at St. Francis Vineyard & Winery.

Taylor Lombardo Architects LLP

802

San Francisco, CA • www.taylorlombardo.com

Architectural Services

DESCRIPTION: Our firm pays special attention to scale, proportion, detailing and material selection when it comes to delivering on architectural services. This assures every design will be true to the style desired by each respective client. Integrating sustainable materials with new technology allows us to create both traditional and modern designs that meet all of the challenges of today's green, energy-efficient requirements.



Offering a full

professional

design services

range of

Planning

General > Facilities & Construction > Alternative Energy

SolarTub LLC

A2317

Laguna Beach, CA • www.solartub.com

NEW SolarTub

DESCRIPTION: SolarTub is a rapid deployment solar power solution that is quick and simple to setup and energize. SolarTub can be installed practically anywhere on open land, saving time and reducing project risks; no digging or concrete is needed. It is widely tunnel-tested to withstand most wind exposures. SolarTub is a robust ground-



mount solar solution for powering irrigation pumps, both off-grid and on-grid.





including Master

55 E STREET, SANTA ROSA, CA 95404 707-544-1642 www.hallandbartley.com

General > Facilities & Construction > Caves

Magorian Mine Services

1038

Auburn, CA • www.magmineserv.com

Wine Caves, Underground Water Tunnels and Underground Garages

DESCRIPTION: Magorian Mine Services builds distinctive caves for discerning clients. We perform initial site assessments, and draw and build unique project-specific cave plans to enhance site-effectiveness, bringing owners' visions to reality. We build caves for wine storage, winemaking, water storage and more.



General > Facilities & Construction > Contractors

GMH Builders Inc.

A2817

Sonoma, CA • www.gmhbuild.com

Construction Management and General Contracting

of tried-and-true services. From detailed cost estimates and value engineering to preconstruction meetings and schedules that ensure projects get off to the right start and according to defined milestones, GMH professionals are reliable and true to their core service offerings. From 3D coordination to laser scanning, GMH Builders supports the level of detail required by the client.



These work practices provide a strong foundation for the latest technologies that are transforming the built world.

Nordby Construction

1229

Santa Rosa, CA • www.nordby.net

General Contractor

DESCRIPTION: Winery facilities, wine caves and custom estates are what Nordby Construction has built for more than 40 years. We continue to expand our services to offer our clients a seamless, knowledgeable and enjoyable process,



from project inception through project completion. Our extensive preconstruction services are our foundation for building trust and leadership with clients, and our construction process is professional, quality-minded and value-oriented.

Wright Contracting

1323

Santa Rosa, CA • www.wrightcontracting.com

Winery Construction

DESCRIPTION: Wright Contracting has been building wineries throughout the North Bay for decades. With expertise in complex winery construction, from hospitality to production to wastewater management systems, we are your partner when it's time to make your winery dreams a reality.

General > Facilities & Construction > Electrical

Arthur Engineering Inc.

638

Elk Grove, CA • www.arthurengineering.com

Electrical Design Services

DESCRIPTION: Arthur Engineering, Inc. (AEI) has more than 50 years of experience, providing quality electrical power distribution and control systems design for the wine industry, and delivering personalized attention to the individual needs of every project. If you are building a new facility or upgrading an existing one, we can assist with any power, lighting or control system design service.



Meltric Corp.

609

Franklin, WI • www.meltric.com

Switch-Rated Plugs and Receptacles

DESCRIPTION: Meltric manufactures a full line of industrial plugs and receptacles, including its signature brand of UL-listed Switch-Rated devices with Decontactor™ technology and push-button circuit disconnection. These all-in-one devices combine the safety and functionality of a disconnect switch with the convenience of a plug and receptacle and can be safely connected and disconnected under full load. Switch-Rated devices have rated watertightness up to Type 4X, which is achieved automatically when the plug is mated to the receptacle.



General > Facilities & Construction > Energy Saving Technology

EP Aeration

1840

San Luis Obispo, CA • www.epaeration.com

NEW SolarTub

DESCRIPTION: EP Aeration is now a distributor of SolarTub floating solar panels. SolarTubs can be used to power wastewater treatment systems, reservoir water treatment systems or just about anything else at your winery or vineyard. SolarTub is an "off-grid" energy solution, meaning it doesn't require permits or hoops to jump through with your energy utility. And since it can be floated on your



reservoirs and wastewater lagoons, it doesn't take up any real estate.

General > Facilities & Construction > Engineers

MKM & Associates Structural Engineering

1304

Rohnert Park, CA • www.mkmassociates.com

Structural Engineering

DESCRIPTION: MKM provides full service structural engineering, which includes new building and addition engineering, seismic rehabilitation, as-built drafting services, feasibility studies, seismic evaluations and third-party structural review.

General > Facilities & Construction > Flooring

Crown Polymers

Huntley, IL • www.crownpolymers.com CrownCrete U™ 838 TG Systems

DESCRIPTION: CrownCrete U Trowel Grade Product No. 838 is a three-part urethane polymer. It is a high-density packed, heavy-duty system applied at ³/₈" thick, depending upon design requirements. It is formulated to withstand aggressive environments offers excellent chemical resistance and superior thermal shock resistance with top-of-the-line functional performances.

Polytech Industrial Inc.

806

2217

Fresno, CA • www.polytechfloors.com

Vitrified Tiles

DESCRIPTION: Vitrified tiles are the gold standard in high-performance industrial flooring. Fully vitrfied tiles are born tough and durable for decades even in harsh environments.

General > Facilities & Construction > Waste Disposal / Wastewater Treatment

Blue Tech Water

A2914

Modesto, CA • www.bluetechwater.com

Agricultural and Industrial Water Treatment

DESCRIPTION: Blue Tech Water provides water treatment chemicals, services and expertise for boilers, refrigeration systems, wastewater treatment and irrigation water treatment.

Winesecrets 1121

Sebastopol, CA • www.winesecrets.com

NEW Aquacovery EMS

DESCRIPTION: This is a filtration solution that reduces the level of TSS in wastewater. It is designed to work in conjunction with a pond, digestor or MBR to reduce the level of salts in the water. Repurpose water to irrigation or other beneficial use with this technology.

General > Finance, Legal & Admin. Svcs. > Business Consultants

Azmera A2516

Napa, CA • www.azmeraconsulting.com

Continuous Improvement Programs

DESCRIPTION: From grape to bottle, and everything in between, Azmera's lean methodology-based "Better, Easier, Safer" continuous improvement programs help wineries execute



more consistent, predictable and standard operations and outputs. The programs target reducing waste and increasing value through standardization and continuous improvement.

General > Finance, Legal & Admin. Svcs. > Compliance Services

Avalara A2811

Seattle, WA • www.avalara.com

NEW Avalara Shipping Verification

DESCRIPTION: Avalara Shipping Verification is a new enhancement to Avalara for beverage alcohol, which provides a complete solution for direct-to-consumer (DTC) alcohol businesses across the compliance life cycle, from licensing and product registrations to tax calculations and returns. It allows wineries, breweries, distilleries, importers, alcohol retailers, alcohol marketplaces and alcohol delivery apps to check, in real time, major compliance areas of beverage alcohol DTC



shipments, including license requirements, dry areas and volume limits.

General > Finance, Legal & Admin. Svcs. > Financial Services / Banking / Leasing

Farm Credit 924

Rocklin, CA • www.farmcreditalliance.com

Financial Services

DESCRIPTION: Farm Credit specializes in financing farmers, ranchers, farmer-owned cooperatives, rural utilities and agribusinesses by offering



a broad range of loan products and financial services, including long term real estate loans, operating lines of credit, equipment and facility loans, cash management and appraisal and leasing services.

Moss Adams LLP

920

Santa Rosa, CA • www.mossadams.com

Accounting and Consulting Services

DESCRIPTION: Industry consolidation, competition, direct-to-consumer sales strategies and risks around smoke exposure and climate change are rapidly shifting the wine industry landscape. To keep your business moving forward, you need proactive strategies across your operations—from tax planning to sales and distribution, business transition, and acquisition and exit planning. Discover how our industry-focused solutions can help your business stay ahead of change and focus on what matters most: making and selling great wine.

General > Finance, Legal & Admin. Svcs. > Legal Services

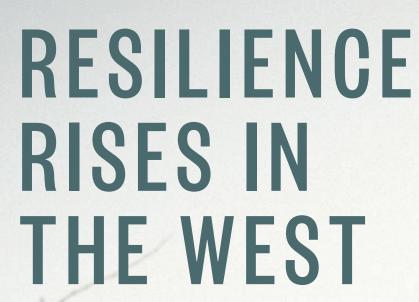
Dickenson, Peatman & Fogarty

519

Napa, CA • www.dpf-law.com

Legal Services

DESCRIPTION: DP&F provides legal services for members of the alcoholic beverage industry, assisting domestic and foreign wineries to navigate and comply with the laws and regulations of the federal Alcohol and Tobacco Tax and Trade Bureau (TTB), California Department of Alcoholic Beverage Control (ABC) and other administrative agencies throughout the United States. In addition, DP&F advises winery owners in all aspects of wine law, including vineyard and winery acquisitions, land use planning, grape purchase agreements and vineyard leases, state and federal licensing, distribution and export agreements, intellectual property protection, and labor and employment advice to companies throughout wine country.



NAPA, CA

7:14 AM

Innovative solutions. Engaged collaboration. Forward-looking perspectives. It's how Moss Adams brings West to business to help wineries navigate change and plan for what's next. Discover how our industry-focused accounting, consulting, and wealth management services can keep you focused on what matters most: making great wine.

STRATEGY & OPERATIONS CONSULTING

IT CONSULTIN

SUCCESSION PLANNING CONSULTING

RISE WITH THE WEST.



MOSS<u>A</u>DAMS

General > Finance, Legal & Admin. Svcs. > Personnel Services / Recruiting / Training

CalAgJobs

1921

Orland, CA • www.calagjobs.com

Job Listings

DESCRIPTION: A CalAgJobs job listing comes with promotion on CalAgJobs.com, a weekly e-newsletter to candidates in California agriculture, and is featured on social media, including Instagram, Facebook and LinkedIn. Package options are available to fit an employer's hiring needs.

Internship Listings

DESCRIPTION: Internship listings post for free on CalAgJobs.com and come with promotions in the weekly e-newsletter and on the CalAgJobs social media channels.

Recruitment Services

DESCRIPTION: CalAgJobs offers recruitment services for employers in California agriculture.

Winejobs.com

815

Sonoma, CA • winejobs.com

NEW Winejobs.com

DESCRIPTION: Winejobs.com, the leading job site for the wine industry, continues to add functionality to provide a complete recruiting solution. New this past year is a profile search, the ability for employers to search a database of more than 15,000 candidate profiles, created by those already working in the wine industry. This feature enables employers to reach out to potential employees who are a good fit for a job opening but not actively looking for a position.



General > Publications > Publishers

Gomberg Fredrikson & Associates

714

Sonoma, CA • www.gfawine.com

Gomberg Fredrikson Report

DESCRIPTION: The Gomberg Fredrikson Report is a monthly publication that monitors shipments of leading California wineries and wine imports by country. The report includes commentary and analysis of current trends and conditions that are shaping the market. GFA produces a number of market and pricing reports to inform and shape your



business success, including reports for import/export, Oregon, Washington and price analysis.

Wine Business Monthly

714

Sonoma, CA • www.winebusiness.com

Wine Business Monthly

DESCRIPTION: Wine Business Monthly continues to be the leading producer of wine industry information and

WINE BUSINESS MONTHLY

events for North America. WineBusiness.com's homepage offers the tools and resources to build a successful wine business-all in one place. Customized to your needs, the homepage brings together your favorite solutions. Our portfolio includes Wine Business Monthly magazine, Winejobs.com, Grapes and Bulk Wine Board, Daily News Email, WV Buyer's Guide, Gomberg Fredrikson Report and the Wine Analytics Report. Go to WineBusiness.com for custom solutions to your wine industry issues.



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.

www.gfawine.com • info@gfawine.com • 707.940.4744

General > Publications > Publishers

Wines Vines Analytics

817

Sonoma, CA • winesvinesanalytics.com

Wine Analytics Report

DESCRIPTION: The *Wine Analytics Report* is a monthly, digital publication that delivers the



latest and most comprehensive data, news and expert analysis on the wine industry. Based on Wines Vines Analytics' primary data and that of our partner research firms—bw166, Sovos ShipCompliant, Nielsen and Gomberg Fredrikson & Associates, the report features the monthly Wine Industry Metrics, plus news and commentary. More recently, WVA launched the Wine Analytics Database that—when used in conjunction with the Winery Database—enables multi-segment analysis and database contacts for sales and marketing.

General > Safety & Maintenance > Maintenance / Cleaning / Management

ATPGroup

A1

Windsor, CA • www.atpgroup.com

ATPGroup Cleaning and Sanitation Products

DESCRIPTION: A comprehensive cleaning and sanitation program plays a vital role in winery operations by reducing incidences related to contamination, ultimately contributing to the quality of your wine and improving your bottom line. ATPGroup offers a complete line of cleaning and sanitizing products and tools for small wineries up to large production facilities. Their technical experts can also offer guidance in complying with the FDA's FSMA (Food Safety Modernization Act).

Farming From Here On



The future of agriculture is here. Growers have more hands-on control with hands-off ease than ever before with the release of our next generation software and new features like AgCode Passive. Track equipment and labor activities as they happen and translate data into insights.

Learn how AgCode can elevate your operation and maximize profitability at agcode.com



General > Safety & Maintenance > Safety & Protective Equipment

BWS Distributors Inc.

1701

Santa Rosa, CA • www.bwssafetysupply.com

NEW GX3R-Pro Wireless Communication, Confined Space Monitor

DESCRIPTION: GX-3R Pro is the smallest and lightest gas monitor with wireless communication. Detect up to five gases simultaneously with simple two-button operation, Bluetooth communication with iOS and Android app, non-compliance indicator, three-user adjustable alarm levels, panic alarm, man down alarm, impact-resistant body, large full dot auto-backlit display with auto-rotation, field-replaceable sensors and filters, water- and dust-resistant design, IP66/68, and a three-year warranty.

GrayGuard MP Vineyard Spray Suit

DESCRIPTION: GrayGuard MP is a spray suit designed by vineyard workers for vineyard workers. Ask for special show pricing.

General > Technology & Industry Data > Industry Data

Azmera

A2516

Napa, CA • www.azmeraconsulting.com

JD Edwards

DESCRIPTION: JD Edwards is a true enterprise-scale software solution that manages data and operations, from grape to sales order. The JD Edwards ERP includes industry-specific grower, grower contract



and payments and blend modules, in addition to manufacturing, inventory, distribution, sales, financials and more in one seamless, end-to-end package.

General > Technology & Industry Data > Vineyard Automation

AgCode Inc.

2014

Glenwood, MN • www.agcode.com

NEW AgCode

DESCRIPTION: AgCode introduces the next generation of technology. Built for the greatest needs of customers and customized to each user profile, this new version of our software promises the best AgCode experience to date. The business intelligence customers have always gained from these tools is now at their fingertips with a personalized dashboard, faster performance and more features to take their operations to the next level.

Agworld Inc.

A2505

Sacramento, CA • www.agworld.com

NEW Frames by Agworld

DESCRIPTION: With Agworld now part of the Semios family, data insights from Semios' iOT equipment are now available on the Agworld platform, allowing grape growers and viticulturists to centralize their insights in a single location so that they only have to use one app to access all relevant information.

Branif Systems - Wireless Irrigation Technologies A2816

Laguna Hills, CA • www.branif.com

NEW Motorola IRRInet

DESCRIPTION: IRRInet, a Motorola-based wireless irrigation control and monitoring system, provides wine growers the automation technology to reliably automate their irrigation, fertigation and pumping operations. Wine growers who select Branif's platform can connect vineyards that are up to 45 miles from any cellular or internet



connection. Growers can view, manage and control their entire irrigation operation from anywhere, including their smartphone or tablet.

Farm and vineyard managers can optimize irrigation and fertigation based on several intelligent parameters. The system can measure (in real-time): soil moisture data from nearly any brand of soil sensor, weather information (including ET-based irrigation) from nearly any brand of weather station, temperature for built-in frost protection, filter top and bottom pressure for filter flushing, and flow meters and valve-level flow switches—for leak detection or water usage logging or reporting.

NEW IRRInet X - Irrigation Automation as a Service

DESCRIPTION: Automate your entire irrigation operations with a subscription. Growers now have the option to lease their wireless irrigation and automation system from Branif Systems. The lease includes the hardware, cloud software, automatic updates and support for as long as you lease the system. IRRInet X enables growers to automate their irrigation and fertigation at a significantly lower up-front cost than traditional automation systems.



NEW Motorola Fertigation Kit

DESCRIPTION: The Motorola Fertigation Kit is an intelligent cloud-based wireless fertilizer injection module that can proportionally inject up to 15 materials of fertilizer in real-time per location. Users can set a target ratio for each material, and our system will drive the fertilizer pumps to meet that ratio in a parts per million operation. The system takes into account the specific gravity for each material to drive pumps, such as VFDs, to



accurately meet the user-desired ratios. Control and monitor the Fertigation Kit from anywhere, including a smartphone or tablet.

Ceres Imaging

106

Oakland, CA • www.ceresimaging.net

NEW Irrigation Optimization from Ceres Imaging

DESCRIPTION: Aerial imagery and analytics provider Ceres Imaging debuts several new offerings for vineyards this year, including customized water demand maps and seamless integration of data from moisture probes and other ground sensors. In addition, growers can now measure, track and compare crop health at the individual vine level, as well as use built-in calculators to inform more accurate crop estimation.



SensorInsight

A2721

Houston, TX • www.sensorinsight.io

SensorInsight Precision Irrigation and Monitoring

DESCRIPTION: SensorInsight agriculture kits provide soil moisture and irrigation information, along with other input-related, decision-based data. The software is accessed via phone or tablet and can text alerts for certain soil and weather conditions you define. The industrial solid-state soil sensor and weather station include 22 parameters to keep you informed, the integrated irrigation sensor combines watering set data with rain events, and spray forecasting charts provide guidance for application timing based on weather and water information.

Wexus Technologies

A2824

Pleasanton, CA • www.wexusapp.com

Wexus Technologies

DESCRIPTION: Wexus Technologies is an IoT software company that is empowering the wine industry with renewable energy and water intelligence.

General > Technology & Industry Data > Wine Production IT

Azmera

A2516

Napa, CA • www.azmeraconsulting.com

NEW NuTrax for Wine

DESCRIPTION: NuTrax™ for Wine is an industry solution built for the wine and beverage industry. Built by NuVerge and implemented by Azmera, the solution is built on next generation SaaS + PaaS



application technologies with accelerators and pre-configurations can jump-start your next strategic enterprise-grade wine and beverage applications move.

vinoEZ

2123

Napa, CA • www.vinoez.com

vinoEZ

DESCRIPTION: From planning out the various steps in blending to scheduling harvest, vinoEZ provides a central location for winemakers, the cellar team, viticulturists and management to track and facilitate work.

vintrace

419

www.vintrace.com

NEW Inventory Management

DESCRIPTION: Reduce the risk of costly inventory discrepancies and inaccuracies by combining vintrace's powerful desktop inventory management with real-time adjustments, straight from the vintrace app. Users can make inventory-level corrections, view and manage materials, track relocations and improve record-keeping by attaching notes, documents and images on the go.

NEW vintrace en español | vintrace in Spanish

DESCRIPTION: El software de gestión de bodegas basado en la nube de vintrace se lanza en español. Cada miembro de su equipo puede elegir el idioma en el que desea trabajar y alternar entre inglés y español en cualquier momento, lo que hace que vintrace sea mucho más fácil de usar para todos.

vintrace's cloud-based winery software management is launching in Spanish. Each member of your team can choose and change their language preference.

General > Technology & Industry Data > Winery Technology

Doozy Solutions

A2726

Denver, CO • www.craftederp.com

Crafted ERP

DESCRIPTION: Designed and developed by industry veterans, Crafted provides a single platform to manage all aspects of a winery, including viticulture, winemaking, bottling, supply planning,



inventory, sales, accounting, reporting, analytics, compliance and more. Grape to bottle, wineries now have a 360-degree view of the entire organization coupled with real-time dashboards, providing the insights for agile decision-making through any market conditions.

Ekos 117

Charlotte, NC • www.goekos.com

Ekos Software

DESCRIPTION: Ekos is end-to-end winery management software that helps wineries manage their inventory, production, sales and accounting in one centralized tool, from harvest coming in through case goods going out. Ekos recently introduced Ekos Order Hub, an online platform for distributors and customer accounts to view available inventory and place sales orders online. DTC integrations with Square and Commerce7, as well as accounting integrations with QuickBooks and Xero keep information flowing seamlessly between systems.

InnoVint 216

West Linn, OR • www.innovint.us

NEW Mobile Experience

DESCRIPTION: InnoVint's new Mobile Experience is multi-platform and works seamlessly with both Android and iOS technologies. The user can easily switch to multiple devices, and the software always maintains functionality, automatically saving your data on your device whether on- or offl-ine. With a focus on speed, the Mobile Experience has



been developed in a way that encourages and enables rapid development and iteration. The Mobile Experience also incorporates improved technology for vessel scanning, vineyard tracking and vineyard management modules.

vinoEZ 2123

Napa, CA • www.vinoez.com

NEW Claret by vinoEZ

DESCRIPTION: Claret by vinoEZ is a suite of supply chain planning tools geared to the wine industry. Create operational forecasts collaboratively across your sales and marketing teams while leveraging statistical modeling to generate an accurate sales forecast. Build out your long term sales and supply plans (bulk wine and grapes). Claret is available now to help you and your company get a handle on your supply chain.

VinWizard 1328

Santa Rosa, CA • www.vinwizard.com

VinWizard

DESCRIPTION: VinWizard is a wine industry-specific operations automation platform, capable of interfacing with existing inventory management systems, like InnoVint and Vintrace, as well as capable of communicating with just about any equipment or field device already in place. It offers a proven ability to save money through peak energy demand pricing avoidance, Pulse Cooling and other



labor-minimizing capabilities. It is available now via subscription format, easing the financial burden and lowering customer risk.

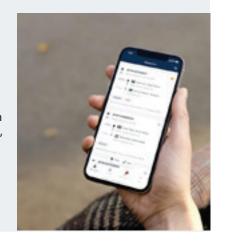
General > Warehousing / Shipping > Import / Export Service / Customs

Hillebrand 234

Benicia, CA • www.hillebrand.com

NEW MyHillebrand

DESCRIPTION: Hillebrand's customer platform to manage shipment logistics (tracking, documents, invoices, temperature API and emissions calculations) has been expanded to offer new features, including quote requests and electronic payment options. In addition to managing a shipment's logistics, customers can request new freight quotes and access electronic payment options. Take control of your logistics and have all shipment information in one place. The mobile version is also available in the App Store or on Google Play.



General > Warehousing / Shipping > Shipping

Wineshipping 205

Napa, CA • www.wineshipping.com

NEW 2021 Key Milestones

DESCRIPTION: All locations now provide 99.7 percent delivery in two days and 58 percent next-day coverage. 2021 milestones include improved on-time service to 99.7 percent, inventory accuracy to 99.2 percent and dock to stock in under eight hours. Wineshipping now provides a new developers' platform, portal enhancements and scheduled reporting. A new chatbox allows the company to expand and provide customer service after hours and weekends.





The Elephant in the Cellar: The Unspoken Challenges for Mothers in Wine

When it comes to child-rearing, female winemakers and viticulturists need more support, flexibility and company policies in place.

Jess Lander



Jess Lander is a freelance wine, beer, food and travel writer based in Napa Valley. Her work has also appeared in publications like *Wine Enthusiast, Decanter, VinePair, SevenFifty Daily, AFAR*, and the *SF Chronicle*. Follow her on Instagram at @willwriteforwine.

ANA DIOGO-DRAPER, director of winemaking at Artesa Winery in Napa, had her second son in the summer and, theoretically, should have been able to take a relatively standard maternity leave before harvest kicked into gear.

But it was 2016, and California was in year three of a drought. In the first week of August, the Chardonnay was ripe and ready, and on top of that, it was her first vintage as head winemaker. The winery didn't tell her she had to come back to work just one month postpartum, but she did anyway. Because that's the thing with wine: The grapes don't care about your plans.

"It was just my sense of responsibility. The grapes want to come in, and I



have to be there to make those decisions," she said. "Physically, I was a mess. I had a baby who wouldn't sleep, and he would wake up every two hours. I was up all night. It was very, very grueling."

Navigating the newborn waters is just one of the many challenges mothers face when working in wine production and viticulture, and in the male-dominated industry, they're rarely talked

about outside of the whispers of female friend circles. But

if the industry wants to continue to work towards evening out the gender imbalance, it needs to start here: with flexibility, support and policies that enable mothers to work and parent.

"The production hours are not [conducive] to having children. That's the reality of it," said Diogo-Draper. "When I'm home, I feel guilty because I'm not doing my work; and when I'm at work, I'm like, 'Oh my God, what a crappy mom, I should be home with my kids.' I'm getting pulled in two directions, and that balance is a struggle."

Pregnancy Problems

The unique struggles of having children while working in wine production begin during pregnancy, the most obvious being that a winemaker's job is to, well, taste alcohol.

"When I got pregnant the first time, I had a doctor that was like, 'Are you going to take a leave of absence?' I was like, 'No, why would I do that? I'm tasting and spitting.' I was very, very careful about how much I tasted," said Nova Cadamatre, mother of two sons, a Master of Wine and the senior director of winemaking for Robert Mondavi Winery. She has also made wine in the Finger Lakes region.

Even when she was spitting, Cadamatre found herself repeatedly in uncomfortable situations while pregnant, where colleagues couldn't resist letting their opinions be known. "When you show up to a tasting and you're very clearly pregnant, you get weird looks. There are people who don't care and people who are very judgy about it, even if they don't say it to your face," she said.

"There's also a lot of pressure in the industry. It's like, 'Oh, it's ok, they'll be fine, you can have a glass,' and I just never felt comfortable with that. I was surprised at that. There were definitely vocal extremes on both sides."

Pregnancy is also known to affect a woman's sense of smell and taste—both of which need to be extra sharp on the job. Cadamatre remembers her sense of smell going on high alert with her first pregnancy. "Things like Pinot

Grigio suddenly smelled like Muscat. Things like Muscat almost made me sick, the smell was so intense," she said, adding that it took some time to "recalibrate" her palate and sense of smell afterward.

Diogo-Draper said her palate "absolutely changed"













WINE SERVICES

Walla Walla Wine Services is one of the leading custom crush and custom bottling facilities in Washington, offering a full range of services to benefit the region's rapidly growing wine industry. Our clients have access to the highest quality and most technologically advanced wine production, bottling and packaging equipment available.

Complete Custom Crush - grape receival through to finished wine bottling

Custom bottling, labeling & packaging services

Sparkling Services - Tirage bottling, Riddling, & Disgorging

Local Fruit hauling and bulk wine transport

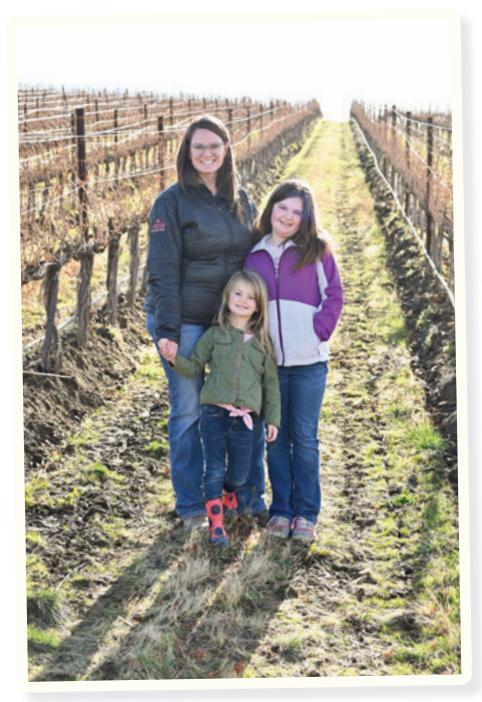
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during pregnancy, too, and that she would always have another person tasting with her, especially on blending decisions, as a backup. For Katy Wilson, a consulting winemaker for several brands in Sonoma and Mendocino counties, and a new mother to a daughter born last summer, her sense of taste, especially bitterness, was heightened. She was also sick her entire pregnancy.

"Wine never made me feel more nauseous," said Wilson. "You feel horrible, and you want to just lay in bed all day, but you have to keep working."

Moreover, wine production, in both the cellar and vineyard, requires the handling of or being in proximity to chemicals. "For my first pregnancy, I was in the lab, and I was very concerned because of all the chemicals I was exposed to. I had gloves on all the time," recalled Diogo-Draper.

Sadie Drury, general manager of North Slope Management in Walla Walla, Wash., and a mother to two daughters, said that while she wrote all the "spray recs," she made a point to stay away from the actual spray rigs while pregnant. Even post-pregnancy, she's continued to be careful. "I'm constantly mindful about re-entry periods and, in general, not handling any chemicals or being in the field," she said. "I would hate to have it on my clothes, pick up my kids and somehow transfer it to them."



Sadie Drury, Stella & Brinley



Baby Charlíe's fírst harvest at Emmalíne Ann Vineyard. Katy Wilson, David Meneses and Charlie LaRue Meneses

Timing is, Sadly, Everything

It's a no-brainer that most women winemakers would at least attempt to avoid having a baby right before or during harvest. But despite the best intentions and careful planning, the fact is that women have very little control over when they conceive and when their baby arrives.

"Definitely the timing was a big thing," said Wilson. "It would not have been possible to have her during harvest; I wouldn't have been able to work."

Drury had an even smaller window to work with than winemakers, for there's only one season of real downtime in viticulture: winter. "This is really sad, but I told my husband that if we were going to have kids, they'd have to be born in the winter, or we wouldn't have children. I felt like the only way I'd be able to not sacrifice anything in my career would be if I had my children when it was an appropriate time for me to have downtime," she said.

"I'm in charge of hiring and all of the big decision making. I wasn't in a position where I could walk away from those decisions for a while. I don't know that there's any way I could have had a baby during spring, summer and fall and not sacrifice something for my career or leave the companies I work with hanging."

A lack of backup is one big driver of this pressure to avoid a harvest baby at all costs and is a common issue within smaller companies or for consultants, like Wilson. "If you're the only winemaker, that's going to be a challenge," said Cadamatre. "In that case, talk to the employer ahead of time. See if they're willing to hire and train an assistant. Or have a flying winemaker come in [during your absence]."

Maternity Leave or a Lack Thereof

These days, maternity leave policies seem like a standard benefit for full-time employees, but in wine production, that's not necessarily the case.

"It still varies on what employers are offering in terms of paid maternity leave. There have generally been more men in those executive or winemaker roles, and so it hasn't been thought about as much for women," said Emily Santanelli, a broker with USI Insurance Services, which works with companies to find benefits for their employees.

"There are still a lot of employers who don't offer it in the wine industry; and if they do, it's maybe two weeks, six weeks," she said. "You can look up a lot of wine labels online, big ones and small ones, and it's difficult to find a career section on those websites; and when you do find them, there's nothing mentioned about maternity or paternity leave."

Yet Santanelli said that the current labor shortage due to the COVID-19 pandemic could actually be a huge turning point for women in the wine industry when it comes to getting maternity leave and other benefits that cater to their parenting needs.

"Given the climate of needing to find employees now, this might be something [for employers] to consider," she said. "The wine industry being impacted by the labor shortage right now and with calls for diversity, equity and inclusion...it's an opportunity for companies to be more thoughtful about presenting their brand online and supporting employees as parents."

Even with a good maternity policy in place, several of the women interviewed, like Diogo-Draper, reported not taking the full time they were given due to the nature of the job and pressures they put upon themselves.

"There is a pressure that's there," said Santanelli. "Am I closing the window on opportunity? Is it going to be frowned upon, even if it's not explicitly frowned upon? Will there be missed opportunities?"

Similarly, Cadamatre came back early from maternity leave at six weeks postpartum and looks back on it as a mistake. "It's one of those things where you really need that time to really re-up and recoup," she said. "You think you can do it all, but you have to give yourself some grace since physically, you've undergone one of the most traumatic things a human can go through, and you need to heal from that."

Drury said that with her second child, she started bringing her daughter into work with her at just two weeks old. "It was so I could keep signing off on timecards, paying the bills," she said. "I think the thing the viticulture industry could do to help mothers is to make sure women in management positions have people who can step up to the plate when they're out on maternity leave. But if you're small, you don't necessarily have two people who do the same job."

As a consultant winemaker, Katy Wilson didn't have the luxury of paid maternity leave or a team of people who could cover for her, so she went fully back to work very quickly. "I only took two weeks off," said Wilson, who delivered her daughter in late June 2020. "And for those two weeks, I didn't go anywhere, but I still had phone calls and emails."

Wilson makes wine for several brands, including Reeve Wines, Anaba Wines, Smith Story Wine Cellars and BloodRoot Wines, in addition to her own brand, La Rue Wines. Each year, she crafts more than 60 different wines at three different facilities, with fruit coming from more than 50 vine-yards across Sonoma and Mendocino counties. Taking an extended leave seemed completely out of the question, and on top of that, Wilson felt that she needed to provide extra reassurance to clients that her growing family wouldn't impact her work.

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"I was pretty nervous to let everybody know I was pregnant. You don't know how people are going to react. You have the feeling from being around the industry that it is not totally an accepted thing for a very successful winemaker to be able to have a baby without having any backlash or any repercussions," she said.

"There's a stigma that once you have a baby, you're not focused on your work. I had a lot of people asking me if I was going to slow down, let go of clients or not accept new clients. The first reaction from people is, 'Are you going to take a step back?' Eight out of 10 times, that's what people would ask me. It wouldn't even be a consideration to ask a man to not work as much because they have a baby."

Fortunately, Wilson said that all her clients were ultimately happy for her and supportive, but she's also done everything she can to remove any shadow of a doubt. At the time of this interview in mid-October, Wilson said she hadn't taken a day off since Labor Day weekend.

"It's been a lot of sleepless nights. When I get home, I just want to be spending time with her, so I don't sleep much," she said. "Trying to balance everything...it's not easy, that's for sure."

Pumping, Not Pump-overs

When many mothers return to work post-partum, they need to pump if they're choosing to breastfeed. In recent years, there's been a movement for traditional working environments to provide offices or private rooms that mothers can use, but finding that in a wine cellar or vineyard? Good luck.

"It was hard to carve out the time to pump and to find the place to do it," said Drury. "I would be doing it out in my truck sometimes in the field. My office door didn't have a lock on it, so I was propping a chair up against my office door. I made it work to the best of my abilities."

Santanelli said that ideally, wine industry employers should supply a private room for mothers to nurse or pump and a fridge in that room to keep their milk from spoiling, pointing out that employers "may not want bags of breast milk in the staff refrigerator."

Cadamatre can attest to the fact that a comfortable room can make a big difference. She struggled immensely to find a place to pump with her first child, but by her second, her employer had installed a "Mother's Room," and she was "much more successful."

"Employers could also help new moms cover the expense of a breast pump, by either having their medical policy cover some of it or by gifting additional money," suggested Santanelli. "You want to encourage employees to have connections, especially with a newborn, and it's the right thing to do."

The Never-ending Challenge

Childcare is certainly a nationwide issue, but the nontraditional hours of winemaking and viticulture can make finding childcare uniquely difficult, especially during harvest when mothers have to parent through the slog of long hours and virtually no days off.

Both Cadamatre and Diogo-Draper have had family come into town during harvest to live with them and help. Wilson's mother-in-law moved in with her and her husband for harvest this year to be with the new baby, for her husband works with her. A single parent with no family nearby, Melissa Stackhouse, the director of winemaking at Simi Winery in Healdsburg, Calif., has a nanny to help with after-hours care and, on occasion, has had to bring her daughter into work.

"There were times, when she was young, when it was 'Bring your daughter to work day' when it really wasn't 'Bring your daughter to work day," said



Olíva (Stackhouse) sampling grapes

Stackhouse, recalling times when her daughter would be in her stroller at the winery while she tasted tanks during harvest.

But harvest isn't the only culprit, Diogo-Draper argued. "On one end we have harvest every year, which is massive amounts of days and hours away from our families, but also, there's the traveling outside of harvest to sell wine, promote it, media trips. That takes us away from home too," she said. "I think there are a lot of winemakers who choose not to have children because of it."

In the vineyard, workers are often required to come into work in the middle of the night or very early in the morning, but most daycares don't open until much later. "For me, and probably my staff too, what's hard is that farming hours aren't 9-5, so it's really challenging to find a daycare that's flexible for those hours," said Drury. "A lot of the ladies who work for me have to have someone watch their kids when they come to work at 4:00, 5:00 in the morning during harvest."

Santanelli said that childcare assistance is another big way employers can sweeten the deal for prospective employees, suggesting they either offer some form of on-site childcare or a Dependent Care FSA, a pre-tax benefit account that can be used for childcare services. Employers can even opt to match up to a certain amount in that FSA.

"Some sort of childcare provided by wineries, or maybe even just during harvest, would go a long way I think," said Diogo-Draper. "I think it would be welcomed by many, many women in the industry, bring more women into the industry and retain more women in the industry. This is a profession that's very hard to do part-time. That doesn't exist. You can't just work two to three days a week."

Even small gestures can make a big impact, said Santanelli. Employers can compile a list of childcare providers within a certain mile radius of the workplace and a list of vendors that can help find childcare in emergency situations, anything from unexpected school closures to weather events in the vineyard.

"In viticulture, in particular, everything we do is so dependent on the weather and the seasons, and so I can't always predict when I'm going to need extra help with my kids," said Drury. "It's challenging, partly because of the hours I work and partly because of the unpredictability of the weather itself."

Nícolas

A Theoretically Easy Solution

Ultimately, the main thing mothers in the wine industry need from their employers is flexibility, and it's something that the COVID-19

pandemic has proven can be possible. "Women can be incredibly productive if given the freedom to manage their own time," said Cadamatre. "This whole concept of 'You have to be here 8-5, Monday to Friday' is very outdated. If people are just trusted to manage their own schedules, they will get a lot more done."

When Diogo-Draper arrived at Artesa, she had one non-negotiable: she wanted to take her children to school every day outside of harvest. "My team is here at 6 a.m. almost every day. If I was here at 6 a.m., I still wouldn't get home until 5 or 6, and I wouldn't see my kids. I had to find my balance," she said.

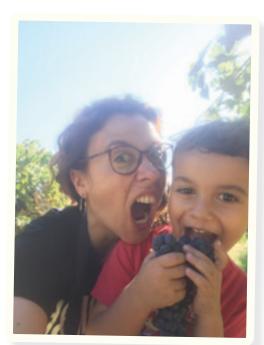
"There are a lot of women in the career path to becoming winemakers; and because of lack of support or the fact that it's such a demanding job, I know a lot of women who have moved away for a while, or they decide to forgo the career altogether for new opportunities that give them more flexibility and the ability to have more time with their families," she said.

Wilson believes that having more discussions about these parenting challenges could lead to impactful changes within the culture of the industry. "It

shouldn't be an issue if you want to leave on a Saturday afternoon for a few hours to watch your kid's soccer game," said Wilson.

"There's a little bit of an air of 'It's harvest, and nothing else matters,' but I think there's room for balance there. I personally have too many fermentations going on and too many clients to be able to do that; but if you're at one winery and you have an assistant winemaker, you should be able to take a day off during harvest once a week."

Even if support and flexibility are granted during the trying newborn phase, it's important it continues permanently, for the responsibility of child-rearing only increases as the years go by.



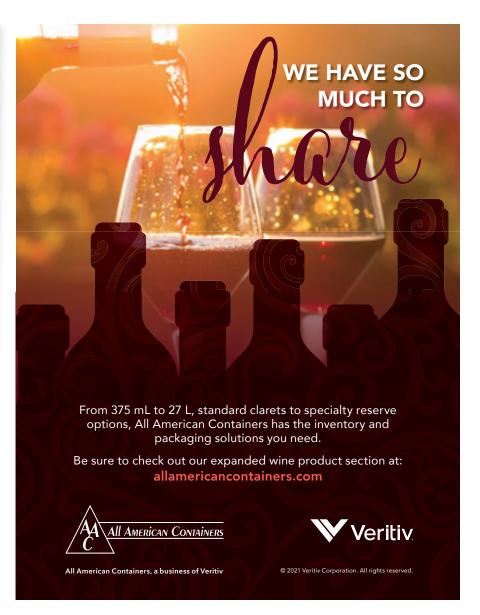
Ana and Nicolas

"I think some things that people don't think about is that when you have kids, those kids have doctor appointments, dentist appointments, afterschool events, during school events," said Cadamatre. "I think that's something we don't talk about enough; even after that baby period is over, people need to understand that there are other aspects of childcare."

"It doesn't get easier," echoed Diogo-Draper. "The challenges are always there; they just keep shifting as the years go by." **WBM**







winemaking



PHOTOS BY JOSEPH DANIEL

ONE CLIENT MAKES WINES with Cabernet Sauvignon grapes and Sauvignon Blanc lees. Another is fermenting Greco on its skins in a locally made amphora. A cellar worker is making 20 cases of cider while yet another client is making a Syrah and apple co-ferment.

The building where Magnolia Wine Services operates in the city of Sonoma, Calif. may look like a standard-issue industrial park hangar but what's going on inside is anything but boring. Inside the building, Magnolia is a custom crush operation that encourages experimental winemaking, and its owner/manager's mission is to encourage regenerative farming.

One novice client, Joe Daniel, chose Magnolia to make his first commercial wines after reading an article about it in the *Sonoma Index-Tribune* newspaper.

"I know natural wine is where the movement in wine is," Daniel said. "I'm not 100 percent sure I'm with that movement, but I wanted to be exposed to it, and I wanted to do it without being shamed. At the same time, I'm taking the winemaking course at UC Davis, which is really traditional. I'm getting a nice double dose, coming from both sides."

The 2021 vintage was only the second for Magnolia as a business, but the building and much of the equipment have been around much longer. It was formerly a custom-crush operation run by Enkidu Wine owner/winemaker Phillip Staehle. Staehle wanted to get out of the custom crush business, so he put the operation up for sale in early 2020.

Jack Sporer was production manager of the business at the time. Then just 30 years old, he hadn't planned on being an owner/manager of a custom crush house: he was just as interested in his own wine project, Fresh Wine Co., which he was making at Enkidu. Sporer's uncle is Will Bucklin, founder of Bucklin Old Hill Ranch Vineyards, which also made its wines there. They didn't want to move, so they bought the business. Bucklin owns 90 percent; though Sporer owns just 10 percent of the operation, he is the manager and handles every aspect of the business.

"I feel like I'm pretty good at making wine, but now I have to make sure people get paid on time and get billed on time," Sporer said. "It's a big job. There's a lot that I have to do, but I feel lucky. I get to make my own wine, and I get to help with other people's wines. I get to work with a good cast of



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characters. One of my strong suits is that I'm good with people. A lot of wine-makers make great wines but they're not great with people."

Spending a day at Magnolia shows the truth of that. One winemaker impatiently waits for Sporer to taste tank samples with her because she wants his feedback. A little later he shows a new part-time worker how to drive a forklift to dump a vat of grapes into the press. Another winemaker stops by to ask Sporer's advice on how to fill out a compliance form, and later a different winemaker drops by apparently just to say hello.

"I worked with Jack from before it was Magnolia," said Isobel Gassier, whose family owns Famille Gassier winery in Costières-de-Nîmes in the southern Rhône valley. While in Sonoma County, Gassier is winemaker for the Á Deux Têtes collaboration project between local grapegrower Phil Coturri and Rhône winemaking consultant Philippe Cambie. The project involves délestage—draining the tanks and keeping the skins separate—so that their Grenache can sit on the skins for 30 days for greater complexity. It's not natural wine, but it's not ordinary either.

"I had worked with Jack before, and I liked that experience," Gassier said. "He's quite open-minded. What we do is not conventional. It's not obvious why we spend so much time on the skins. I like how invested he is. I like to have his input. I think he is quite pragmatic."

Magnolia currently has 16 clients. In 2021 the facility handled 200 tons of fruit.

"In 2020 we did about 70 tons," Sporer said. "We learned a lot about smoke taint. We were hoping to do 100, but we were lucky to do 70. But it was a 'gimme' year—2020 was a bad year to make a capital investment. Everyone lost money that year. We weren't alone. And I got to work out a lot of the kinks without it being super risky."

Sporer says Magnolia has room for more clients, and he wouldn't mind having some larger-size clients, using 20 tons of grapes. "A lot of people here made only 1 or 2 tons," he said. "I don't want to not have small clients, though. One out of every 10 will grow into a big one."

Sporer's Story

Sporer grew up around the wine industry. His grandmother, Anne Teller, owned Oak Hill Farm in Sonoma Valley; it's now owned by his mother and run by his cousins, who also run neighboring Old Hill Ranch.

"I grew up in San Francisco on 9th Avenue," Sporer said. "I came up on weekends. I never gave a hoot about agriculture or wine, but I helped my uncle bottle his first harvest in 2001. I hated it."

Sporer studied biology at Providence College in Rhode Island, but he says when he graduated in 2012, he had no idea what he wanted to do, though he realized academia wasn't it.

"In the fall of 2012, my uncle and my grandmother conspired to get me a job here at Enkidu," Sporer said. "They always need bodies. I worked my first

harvest here and loved it. When I was a teenager, I wanted to smoke weed with my friends. Now I wanted to experience life. I had always been an urbanite. That was when I started to realize being a country boy could be fun too. 2012 was a great harvest. Winemakers were happy. Everyone was stoked. I wanted to keep going, so I applied for every wine job I could in Australia."

Sporer got a job at a large industrial winery in Victoria.

"The tanks were huge. The catwalks were three stories high. I've never worked anywhere that big since," Sporer said. He then went immediately to work at Château Pavie-Macquin in Saint-Émilion. "Everything was very controlled. In Australia, they said, 'Go do this task'. At Pavie-Macquin, they would say, 'Go do this task, and I'm going to watch how you do it."

Sporer took a year off from wine-making to work in retail at San Francisco Wine Trading Company. "That was where I fell in love with wine. I did that for a year, and I realized I loved wine, but I wanted to work in production," he said. Sporer went to New Zealand, took a bicycle tour, and then walked up to wineries in Marlborough and asked them to hire him. Allan Scott did. "I started getting more confidence in myself."

Then he worked for two vintages at Chappellet in Napa Valley.

"That was like cellar hand boot camp," Sporer said. "They run a really tight ship. They don't make wine that I like to drink but they do it in a way that I really understand, so I learned a lot."

He spent a vintage in Chile as the enologist at Flaherty, a small winery, and then decided to move back home and go to Santa Rosa Junior College.

Finding Footing in the Natural Wine Movement

"It's crazy how many times you can work in a winery and not set foot in a vineyard," Sporer said. "That was my goal: to figure out the other end of the equation. The JC was cheap and accessible. I learned how to prune. I started taking over a small vine block that my uncle takes care of. It had been neglected. It was part of Oak Hill. The vineyard predates Highway 12; Highway 12 cuts right through the vineyard. The east section, we don't till it. I put owl boxes in to control the voles. It's a natural cover crop that comes up every year. Farming that small block has been really eye-opening for me. It's old vines, Petite Sirah mostly, but it's a field blend, and there are some whites in there. It's a Bucklin single vineyard small blend.





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"It wasn't until I went to Santa Rosa Junior College that I got interested in natural wine. I was interested in regenerative agriculture, and it all ties in. I want every winery to make wine from regenerative agriculture. Agriculture is some of the biggest sources of pollution in the world. But agriculture can be a carbon sink. If you use methods like lower till, if you take a soil-first approach to farming, you can have a reduction of carbon in the soil, and that can reduce the amount of carbon in the atmosphere. It's a way to reduce the impact of climate change.

"I'm not into natural wines because I like to drink funky wines. It's that there's a moral imperative to farm in a way that diminishes the impact of climate change."

After finishing at the JC, he got a job at Williams-Selyem. "I had the best job," he says. "They had 1 1/2 lab positions. I was the half-lab, half-doing vineyard samplings. They make wine from the best vineyards, and I love their wines. They're very good. But they don't really give a shit how it's farmed. I learned a lot there. By that time, I'd had enough harvests. I knew how to work with efficiency. I knew the lab."



VANESSA PRITCHARD

Crew member Coral Yang in front of the Europress

Sporer took the job as production manager at Enkidu; in addition to his work at the family vineyard, it gave his uncle a chance to see his work, which apparently Bucklin had been unimpressed with when Sporer worked his first harvest at age 10.

"Will's a really conservative guy," Sporer said. "He didn't think that I was going to be good for the first eight years of my wine career. I persevered by not pushing the issue. I just said, 'I'm around.' We poured wine at ZAP together. That was fun. Then I worked on that part of the vineyard, and working at Enkidu, he had a chance to see me work up close. I feel very fortunate to work with him because he's a great grapegrower and a great winemaker. He lets me do things. He teaches me what to care about, like starting with the farming.

And less is more. Not doing too much to your wine. There's a different sulfur regimen, but he's only two steps from being natural."

Sporer started his wine brand, Fresh Wine Co., which he abbreviates as Fres.Co, in 2019, the same year he became production manager at Enkidu. In a business sense, it was a trial partnership with Bucklin, who is a co-owner, though Sporer makes the decisions.

"It's a Sonoma Valley-based brand, making natural wine," Sporer said. "We want to transition people away from Roundup. If you drive around Sonoma County, you'll see a lot of bare land under the vines. A lot of people think that's a clean vineyard, but that's a dead vineyard. You can't sequester carbon in it. Fres.Co helps people move away from using Roundup and highlights the farmer. All my bottles have the farmer's name on the label. The winemaking is fairly traditional, but I don't use sulfur until bottling. Sometimes I might add a little water or acid. I'm not anti-water or anti-acid. It's about putting all that information out there. I want to be as transparent as I can."

Sporer said he helped one grower who worked with Gassier transition away from Roundup on his Sauvignon Blanc vines by offering to pay more.

"For 2021 he stopped using Roundup on the Sauvignon Blanc vineyard," Sporer said. "I paid him more than he was getting for the grapes, and I agreed to buy them for several years. It's a change in management, and it's more labor. That's why I'm paying more. It acknowledges that it's not a flick of the switch. Farmers work their asses off. They're strapped for time and cash. They can spray once a year or till three times a year. They're not spraying Roundup because they're evil people. I want to be the wine that takes natural wine mainstream because I really believe in the mission of converting people to organics. There's 100,000 acres of grapes in Sonoma County that could be organic."



Jack Sporer at the press controls

Sporer made the Sauvignon Blanc wine as an orange wine, with skin contact and zero sulfites added.

"It sold like crazy," Sporer said. "I was not expecting it. My distributor (Roni Selects) told me there's a hole in that area. I made a whole lot more this year. Natural wine is a different beast. Most of my wine goes to distribution. A lot of it goes to California, but I'm also distributed in Ohio, and I might be in Denmark this year. I purposely undervalue the wines so I can expand the brand. I'm charging \$23 to \$26 for these wines.

"I take exception to the wine industry saying everything is so special. 'This is the best wine from the best vineyard.' This scarcity and being so exclusive...I want my wine to be available. Wine sales have been great. I've been able to grow every year. Whatever I'm doing is working. I think of Joel [Peterson, founder of Ravenswood and a neighbor at a nearby custom crush] as a path I want to follow. His wines weren't expensive."

But Sporer regrets that he has less time to deal with Fres.Co now because he has 16 very different winemaking clients to work with.



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Jesús Hernández is one. He makes Cabernet and Petite Sirah for his label, Vimandres, at Magnolia.

"I've been making wine for 20 years, but now it's my own company," Hernández said. "It's like a dream. They do everything here. I just do some additions."

In fact, while Sporer encourages clients to do their own work in theory, in practice he vets them before, allowing them to use the equipment. In a compressed vintage like 2021, where multiple winemakers are in the facility at the same time, he must be a bit of a traffic cop, and he has to arrange the use of the facilities in a way that makes sense.

There's only one press, for example. It's a Europress, and Sporer likes it because "we can use it for all our lots, even the smallest. At less than a ton, you start to lose a little bit of yield but only a little bit." But obviously not everyone can use it at the same time.

When he gets a new client, Sporer wants to meet them in person.

"We talk about their protocols to see if it works for them and works for us," Sporer said. "I don't want to offer more than I can deliver. And I can't let people who are not employees on a forklift. I want people who are seasoned vets running pumps. We had one guy in here who did all his own work. He cleaned his own pumps. He was great. But most clients who do their own work slow us down."

Little by little, Sporer is revising the setup that he inherited from Enkidu. This summer he added a catwalk above the tanks. Previously, the facility did punch-downs with a pneumatic system and a forklift.

"It was really inefficient because you had to have the floor clear to do it," Sporer said.

Now winemakers can use the catwalk to do punch-downs from above, using a fairly simple pneumatic device created by a local man named Brans who services tractors and "just likes to build things." It's attached to a rack above the tanks for easy movement.

"It makes punch-downs super easy," Sporer said. "You want to do three punch-downs in a day? OK."

Magnolia ordered three new 3-ton tanks from Sonoma Stainless Steel that have thicker insulation and more glycol for better cooling. "They have variable capacity so you can do whites or reds," Sporer said. "Also, you can bottle out of them." He bought cloth covers from Custom Cover Upholstery in Healdsburg, Calif. to keep flies out.

His next project for the main winemaking room is to have drains installed, hopefully next year, but that won't be a cheap job because they will have to dig up the floor. "We're trying to replace what we can when it makes sense," he said.

There's a separate barrel room that has an auxiliary chiller, a G&D Chillers model NK24B that plugs into the cooling system on hot days.

It's Not Just About the Grapes

The barrel room is mostly set up for standard 60-gallon barrels, though there are a few variations. Marioni Wines, one of Magnolia's largest clients, and Fres.Co are both selling wine in 5-gallon plastic kegs that are made by G3. They go to bars for wine-on-tap programs. "It's a nice alternative to glass," Sporer said. "It's lighter, and it's cheaper." The room also holds several clay amphorae made locally by Nielsen Ceramics. In one, client Wavy Wines is making Greco on the skins; in another, it's doing a Syrah/apple co-ferment. This type of grape/other fruit co-ferment is popular in the Vermont wine scene but hasn't been seen much yet in California.

"It's really disingenuous of me to say I support diversified agriculture but then only support one kind of agriculture," Sporer said.

Vanessa Pritchard, an employee at Magnolia, is also making cider there for her brand Kill All Men; she plans to call it Homicider. She found apples at an orchard in the Sierra Foothills and decided to make a tiny commercial batch: she estimates 20 cases. "I used to do experimental cider with leftover beer yeast," Pritchard said. "It worked, so I kept doing it." Magnolia did not have an apple crusher, so she acquired an antique that once had a hand crank but was adapted for electricity.

"We're not set up for apples," Sporer said. "But it's great to do something small before you try to go to market. These apples came in in October when the winery was empty. I couldn't be happier to help Vanessa. She's earned it. Maybe next year we'll do more for apples. We'll see what equipment we need."

Defining Natural

"Your bar for success with natural wine or cider is a little lower. It just has to taste good. It doesn't have to taste the same every year. And it's all going to be drunk within a year." This is Sporer's reasonfor not putting capsules on the Fres.Co wines; he says they're not meant for long term cellaring, so the capsules are unnecessary and wasteful.

Sporer also doesn't like his sorting table, which is banished outside the winery. "I hate this thing," Sporer said. "It takes up a lot of space. I have to store it all year. And you lose a lot of wine. I don't think a couple leaves are going to change the taste of the wine. But maybe I'm wrong."

Sporer's goal for 2022 is to rationalize the production schedule more: to find more uses for the tanks. He wants to find winemakers who pick early so the tanks will be full and then done before the main group of winemakers start picking.

Though the focus of the facility is natural wines, several clients use commercial yeast—even some who are making natural wine. Apparently, it's commonplace in the natural wine community to use "finishing yeast" for stuck fermentations. In any case there's no keeping commercial yeast completely out of Magnolia because it's still the same building as it was when it was Enkidu. "There's plenty of native yeast in the walls of this building now," Sporer said.

Building a Home for Winemakers

What he wants to maintain is the sense of community. "I want people to be proud to say our wine is made at Magnolia," Sporer said. "A lot of wine is made at custom crush operations in California, and you never hear about it."

On a beautiful fall day, he set up a table for lunch on the winery floor and sat down to eat burgers and fried chicken with his employees. Winemakers dropped by, checking on their wines or maybe just checking in.

"I come from a very traditional background and was trained for wine-making," Gassier said. "It's quite cool to meet people who weren't trained for this, to meet people who are adventurous. They take risks I wouldn't take, but it's great to hear ideas that are out of the box. It's fun to see what crazy things people are up to. 'Crazy' is a strong word, I guess."

Sporer replied, "Not for some of our wines." One of Fres.Co's wines is, for example, a Chardonnay on which he encouraged flor in the barrel, like in Jerez but without fortification. Marioni makes a Rosé from Syrah that he presses right away, then adds white skins from a different lot in the same tank, as well as a different Rosé of Cabernet Sauvignon fermented with Sauvignon Blanc skins. "It's ridiculously good," Sporer said. "The trick is lining up the picks."

Daniel, the first-time commercial winemaker, is a filmmaker who was seduced into winemaking by a documentary he was working on called Tiny Vineyards. He moved from Colorado to Sonoma four years ago for the film and just stayed. He did home winemaking while working on the film and this year made the leap at Magnolia. He's making a Syrah, a Cabernet, a Malbec and a red blend, all conventional wines in the natural wine custom crush facility.

"My biggest surprise is how much easier it is to make wine in smaller lots than in big lots," Daniel said. "When you come here and have access to all the equipment, there's a lot less chance for mistakes." **WBM**



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The Data Driven Winery

Richard Carey

INCREASINGLY, WINE INDUSTRY EQUIPMENT suppliers are developing data-driven tools to provide essential information to aid production of consistently better-quality wines, and several developments have been released that show how this process is advancing.

As precision agriculture continues to develop, data can be collected and amassed for evaluation and review to catch trends before they become problematic. For example, researchers at Cornell College of Agriculture and Life Sciences (CALS), funded by the Cornell Institute for Digital Agriculture, are working on remote disease sensing so that targeted efforts can be instituted to slow, or even eliminate, disease pressure before it can reduce the plant's production or viability. Dr. Katie Gold, assistant professor of grape pathology at Cornell AgriTech, and her laboratory members are working on many projects that examine the fundamental and applied science of plant disease sensing to improve early grape disease detection and management.

The interrelationships of the environment, plant, pathogen and their management—the interconnected subgroups that result in disease—are shown in **FIGURE 1**. Though a vineyard manager may use a pesticide, remnants of the disease either "hide" and return or mutate around the pesticide and attack vines with new intensity. Early detection targets the disease where it emerges, allowing vineyard managers to target specific locations for mitigation. This mode of operation significantly reduces a pathogen's ability to mutate and develop resistance to any of the protective measures growers may use against it.

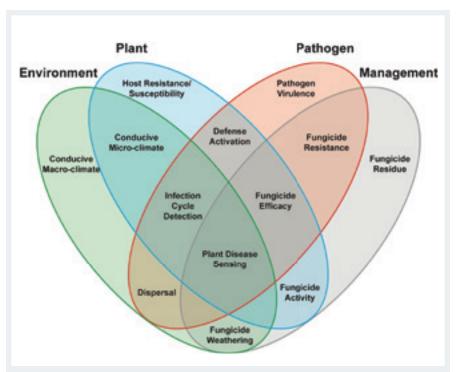


FIGURE 1 Similar to our human pathogens, understanding those of plants take a multivariant analysis of the pathogenic system. This figure shows a simplified version of a plant pathogen venn diagram for the possibilities of a solution to the problem. It requires lots of data to solve.

Multiple pathogens attack grapes and other fruits used in the wine industry, and each one has its own ways of attacking the plants. The pathological pathways have different spectral, spatial and temporal effects on the plant. The use of remote sensors generates information to help determine what, where and when an action should be implemented to combat each of these organisms.

In the past, the spectral element examined just a few wavelengths that were photosynthetically important. However, over the past few decades, hyperspectral imaging sensors have been developed and made more available to agricultural researchers to use (**FIGURE 2**). Hyperspectral sensors "look" at wavelengths from infrared to the ultraviolet in band widths as narrow as 1nm. This vast increase in data can show disease development in certain plants or sections of a vineyard as compared to the disease-free plants and also detect very small differences in plant growth.

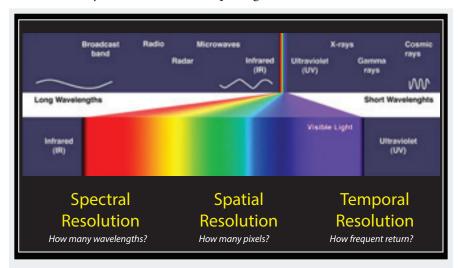


FIGURE 2 Hyperspectral analysis looks at the electromagnetic spectra from infrared to ultraviolet in discreet chunks of the spectrum examined. These resolve into three buckets for analysis: What is the narrowest band of wavelengths that can determine the greatest amount of actionable information; what is the greatest number of pixels a sensor can have that is cost effective to give the clearest resolution of the problem; and how frequently can the sensor review the temporal target to supply a reasonable response to the issue being monitored.

We know pathogens change plants physically and chemically. Those pathogenic actions also change the plants' spectral appearance. Gold's team and others are looking at remote images produced by hyperspectral sensors on satellites and fixed-wing aircraft to determine outbreaks of disease. This data can then be sent to the vineyard manager for either robotic sensor inspection of the targeted area or for the physical inspection of the target vine(s) by the vineyard manager using a vineyard plot map.

Remote sensing is an important tool to protect grapevines from disease. Work on grapevine leafroll virus (GLRV) is an example of the partnership with NASA's Jet Propulsion Laboratory and the Gold team. Fernando Romero Galvan, a Ph.D. student at Cornell University with Dr. Gold, is the



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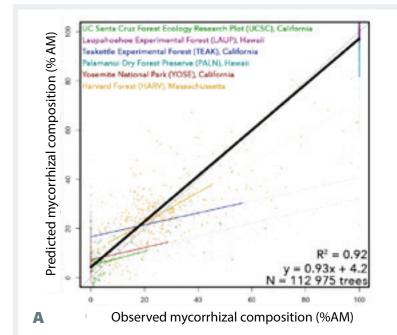


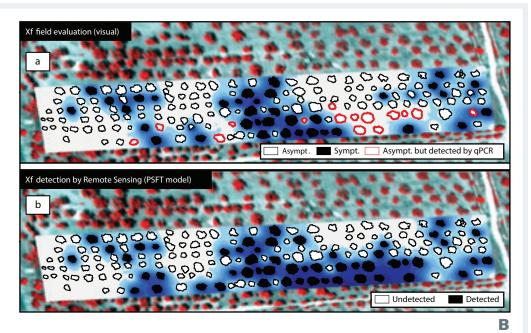


FIGURE 3 An example of high resolution imaging that captures the presence of Grapevine Leafroll Virus disease in a vineyard, transmits that data in real time to a vineyard plot, and identifies a specific vine for confirmation and/or treatment

lead researcher validating the utility of airborne, and eventually spaceborne, hyperspectral data for viral disease detection and management (**FIGURE 3**).

Two articles have recently been published that demonstrate the usefulness of spectroscopy for non-visible plant-microbe interactions. One article, published by Sousa, et al. (FIGURE 4A), mapped forest mycorrhizal composition across diverse ecosystems with airborne spectroscopy, and a second article, by Zarco-Tejada et al. (FIGURE 4B), pioneered pre-symptomatic disease detection with airborne spectroscopy. From Gold's lab, the type of work in FIGURE 4C is now being expanded to global and regional warning systems. These figures show how important this can be for the whole agricultural arena when we can see the passage of plant disease surveilled from one continent to another from space and locally from an orchard and the soil in a forest, and then be able to start remediation before a pathogen attacks or to protect a specific tract of land under threat.





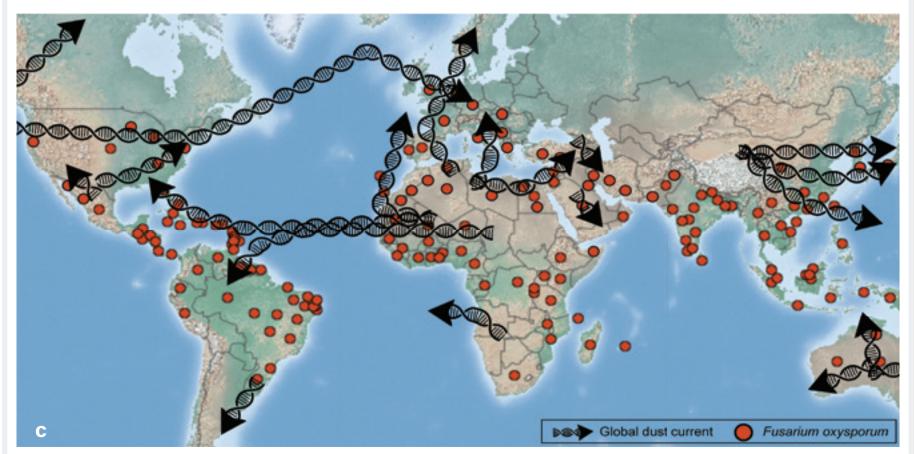


FIGURE 4 Hyperspectral imaging will be important for many tasks such as monitoring soil health as in Figure 4a, detecting diseases in an orchard/vineyard as in Figure 4b, and looking at incoming threats carried by atmospheric conditions globally such as the spread of *Fusarium oxyporum* shown in Figure 4c.

Data Advances from Pellenc for Vineyard to Cellar

Remote sensing is rapidly advancing and includes some data management features that can be applied to many aspects of grape growing and wine production. In 2022, Pellenc will release a new data management system called Pellenc Connect that can be added onto their line of equipment. It will be a cloud-based system composed of fleet management, vineyard and winery applications. All buyers of new over-the-row harvesters will be able to add on a telemetry system that will connect the three Pellenc Connect cloud applications. Wineries with Pellenc equipment will also be able to add their presses and tank monitoring equipment. The central Fleet Management App is the required piece that joins the vineyard and winery applications together.

The Fleet Management Application will permit the central office/management team to observe where every unit is located (**FIGURE 5**). This app will also be able to monitor several diagnostic functions remotely, such as fault codes, where the unit is located at this moment, the hours run, the level of fuel, if it is working at that moment, and more.

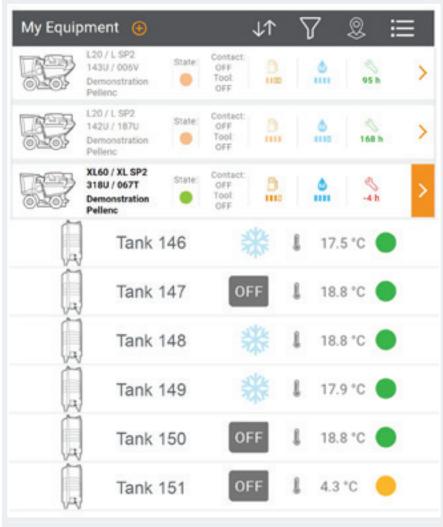


FIGURE 5 Pellenc Connect provides operation management so that a company can keep track of where important assets are located and what working functions that the item has been doing, as well as marking fault codes that may need immediate attention.

If the vineyard option is selected, the onboard Human Machine Interface (HMI) controller will allow the operator to use a language neutral ICON based electronic pad that controls many of the harvester functions from the cab (FIGURE 6). For example, if the vineyard has a particular winery customer who wants 18 tons of grapes, that number can be set from the cab as the target. The harvester operator can keep track of the weight of the grapes harvested in comparison with previous harvester loads and against the target set for that grape varietal. It is also important to note that the





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FIGURE 6 The Harvester Management Instrument controls many functions of an over-the-row harvester such as speed, amplitude and force of the beater bars, harvest weight and targets.

harvester weight functions are accurate for any terrain on which the harvester is designed to operate. The accuracy of these sensors is designed to be better than 3 to 5 percent.

Management can access and observe operational functions remotely and set ranges of action for various components. The operator can control the amplitude and speed of the beater bars, berry separators and fan speed from the HMI pad. The beater bars, for example, can be controlled so that they do not beat slower than a management set rate or higher than a management set rate. The operator of the cab can make their own judgment between these two rates. The harvester will also be able to generate weight certificates, and data on each load that is transferred to a grape transport unit can be printed from the HMI pad.

With the proper sensors added to the tractor, a vigor map can be constructed from the added pre-pruner sensor option to Pellenc Connect (FIGURE 7). The vigor of a vineyard is deduced from measuring scans of wood density and wood diameters of the vines at pruning time. The harvester will open automatically around the "stakes."

In the winery, Pellenc has the same type of functions available for their optical sorters, tank temperature controllers and presses. The telemetry option has both local and remote access elements. Remote diagnostics will evaluate fault codes if something starts to wear out or fail. For tanks, the system currently can measure tank temperature and Brix levels. For presses, the app will report all the details of the press cycle functions. The information will be transmitted to Pellenc Connect for viewing by the winery management team.



FIGURE 7 Pellenc Connect provides harvest yield information based on actual field collection of data such as vigor during pre-pruning. In the winery, Pellenc presses and tanks can be equipped with Pellenc Connect devices that will report data on wine status for production record keeping.

This first release of Pellenc Connect will include the cost of the Pellenc Connect service for three years from the date of purchase of the equipment. After that, there will be an annual fee. A Pellenc spokesman told *WBM* that additional functions and features will be available after development is finalized. Automatic scheduling and control of pump-overs were mentioned as one of the new functions coming sometime after the launch of the Pellenc Connect.

Parsec Continues Development of Aphromate and CellarMate

In October 2020, *WBM* published an article about the SAEn 5000 system for winery automation that introduced an air actuated system for large scale winery pump-overs and included a short reference to a project called Aphromate for Charmat wine production. This year, Parsec has brought online the fruition of Aphromate and CellarMate. This article will review CellarMate, while Aphromate will be discussed in a separate article that will focus on the Charmat processing of wine.

CellarMate is a system that simplifies winery production of yeast starter cultures for both still wine production and for Charmat yeast dosage. It is useful for establishing regular and safe fermentations in still wines. One of the original goals for the development of the CellarMate product was to increase a healthy pied de cuvee in Charmat wines during the second fermentation.

Yeast starter cultures should be a high-priority subject for winemakers during and after harvest. Although commercial yeast production companies have given numerous talks about the importance of this part of winemaking, many winemakers don't appreciate how important a healthy starter culture is for making a good wine. This is especially important when yeast companies introduce new yeast strains to bring out some nuanced aroma in a particular varietal that you as a winemaker have wanted to tease out of your grapes, only to have that aroma disappear. CellarMate can come to the winemaker's rescue.

Starting with a 500 L (132 gal) system and increasing in product sizes up to 250 HL (6,600 gal), a winemaker can create yeast starter cultures for just about any size winery (**FIGURE 8**). The 250 hL size was designed specifically for Charmat production on a regular basis.

This begs the question why: it all has to do with data. Commercial yeast producers have spent decades trying to create the ideal yeasts for winemakers to use. In their trials, they have determined exactly what yeast winemakers need and when they need it. The challenge for these suppliers is to give a recipe to winemakers who don't have the time or the equipment to get close to the suppliers' recommendations.





FIGURE 8 Parsec's CellarMate devices range from the small 500L basic system (top) to the modest 30 hL fully automated system (bottom), and the large 250 hL system designed for the largest wineries and those facilities producing Charmat dosage on a regular basis.

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Unfortunately, the time pressures of harvest, lack of skilled labor and the general inability of many workers to closely follow rules get in the way of providing high quality starter cultures on a regular basis. Parsec estimates that 60 percent of inoculation issues result from not rehydrating the yeast properly and that up to 90 percent are due to lack of vigor and viability in the inoculum, which happens during the conditioning of yeast for addition. These problems have cost the industry heavily in reduction of wine quality, cost of yeast, and other factors related to yeast starter production.

What Parsec has created is a system that can provide consistent starter cultures with higher levels of yeast viability and greater degree of acclimatation to the fermentation at hand than manually created starter cultures, as well as a more consistently higher number of viable cells than the competition. CellarMate provides the vehicle for the winemaker to have control over the starter production process. The smaller systems are not built with the degree of automation found in the larger systems, primarily because the cost of automation for smaller systems does not provide sufficient value for smaller wineries as it does for the larger wineries that need the extra control over the volume of wines they are producing.

If one looks at the research investigating yeast fermentations, it is abundantly clear that small deviations in the preparation of the starter are critical to yeast viability. Many wineries look at cell counts when trying to determine when the culture has reached a sufficient level (targeting over 1 x 10° cells per ml). Virtually all wineries count total cells, but most likely do not realize that many are not viable cells. Research shows that the average viability of commercial yeast strains in starter cultures ranges from 50 percent to 70 percent. CellarMate is designed to increase that viability to as high as 96 percent (FIGURE 9). It does this by precisely controlling the addition of all parameters needed by the yeast cells to achieve fastest growth, greatest viability and best acclimatization to the culture media. This last point is the important aspect of the Parsec system over other systems of creating starter cultures.

The general CellarMate system provides for automation of up to seven steps, only one of which is manual. The steps include:

- 1. water and nutrients loading,
- 2. warming water to 38° C (100° F),
- 3. yeast loading (manual step),
- 4. micro-oxygenation of yeast,
- 5. multiplication of cell numbers,
- 6. acclimatization, and
- 7. maintenance.

All but the last element are possible with the smallest system.

As shown in **FIGURE 9**, at time 0, these yeast starter cultures begin with about 68 percent viable yeast cells. In the next 18 hours, this culture can build up a starter that is 95+ percent viable cells. With a system that offers this increase in viability of yeast cells at pitching, the fermentation would start more vigorously and with a shorter lag time.

Larger CellarMate systems can connect to a winery pigging system for automated supply of must through the system's interconnect lines that are controlled by connection to Parsec's SAEn 5000 winery management system. When CellarMate calls for must from the target tank, SAEn opens tank valves and sends the requested must to CellarMate. The must is added into the starter in the process of acclimatization. Once acclimatized, the starter can then be sent into the target tank to start fermentation through the same transfer process.



FIGURE 9 A key function of CellarMate is its ability to increase the viability of the cells during the preparation of a starter culture. Starting at an average viability of 68%, from hydration to 18 hours later, the culture has reached 96% viability and is ready to pitch.

Acclimatization is an important part of CellarMate's starter culture success. The use of oxygen during this phase of the process is built in to help yeast adapt to a wine system. It is well known that *Saccromyces cerevisiae* are facultative organisms, meaning they can metabolize aerobically and anaerobically. As in a starter culture, the organism needs the appropriate quantity of oxygen, correctly dosed to multiply rapidly. While yeast often need more oxygen than what is generally used by wineries when producing their starters manually, caution is required to avoid using too much oxygen, which can undo the process.

Another less well-known fact about starter cultures has to do with the foam that appears in the starter bucket. This is one place where what looks to be an active culture is not necessarily the case. The CellarMate system actively suppresses foaming, and keeps the yeast submerged and moving. Thus, each cell is still multiplying and growing. If yeast cells are not fed continuously and managed well, they can die prematurely, reducing the percentage of viable cells.

CellarMate can occupy its corner of the winery and produce yeast starter cultures on demand, following the proscribed procedure, whether it needs heating or cooling at 3:00 a.m. or at noon. For larger wineries that need larger volumes of yeast starter, CellarMate can reduce yeast costs by 90 percent or more through the regeneration function.

During the interim time when starter for immediate production is not actively being created, the batch can be held in a maintenance condition. Parsec recommends stopping the system to sanitize it every 10 to 15 days because of the significant issue of wild or inappropriate yeast gaining a foothold on the process. This would be an expensive error to make.

A generalized yeast producer's recommended protocol is outlined in **FIGURE 10**, which shows the yeast cell counts required to get to a level for pitching into a fermenter. **TABLE 1** shows the potential offered by CellarMate in the cost of dry yeast that is possible with the CellarMate system.

CellarMate is useful for creating custom protocols for specific winery goals. As an example, if a winery wanted to use spontaneous fermentations for their wines, they could have Brettanomyces take over and ruin some of their wine. A protocol for CellarMate has been created to control starter buildup for inoculation to enhance the better wild yeast strains while mitigating the bad actors such as Brett. In addition, CellarMate can also create live yeast paste for inoculation. The same system of generating a liquid starter may be used to form the paste by taking that product and sending it through a centrifuge. This will create a live yeast paste that can be solubilized as needed for inoculation for up to one season.

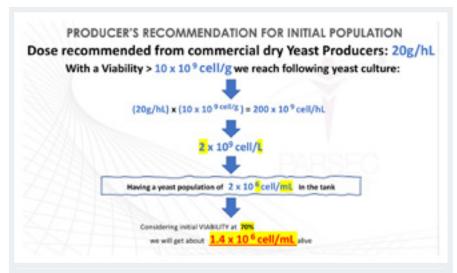


FIGURE 10 An example of rehydration instructions for a typical yeast starter culture shows that their recommendations for the manual method of restarting requires 20 g/hL. However, due to lower real viability, the procedure delivers 1.4 x 10⁶ viable cells per ml.

TABLE 1 Optimal reduction of active yeast doses via CellarMate

	Traditional	CM plus	CM plus	CM plus
Utilization		Rapid	Normal*	Advanced**
Dosage used	20 g/hl	5 g/hl	0.5 g/hl	0.2 g/hl
Total quantity of yeast per an average vintage 100,000 hl	2,000 kg	500 kg	50 kg	20 kg

- * With the special PARSEC multiplication procedure.
- ** With the special PARSEC multiplication procedure and Parsec acclimatization.

This table shows the potential for production cost savings for yeast needed for fermentation. In the example above, a 100,000 hL (2.64 M gal) production winery with an average cost of \$40/Kg at a yeast dosage of 20 g/hL, could save from \$120,000 to \$158,400 over the manual starter method, depending on the size CellarMate system that is used. The savings would be less if another rehydration system was used.

The Parsec strategy on the Charmat process of winemaking that utilizes the special skills of yeast propagation for the dosage addition for sparkling wine will be the subject of a future article. **WBM**

References

- 1. Sousa, D., J. B. Fisher, et al. "Tree canopies reflect mycorrhizal composition."

 Accepted by Proceedings of the National Academy of Sciences as a future issue. info@pnas.org.
- Zarco-Tejada, P. J., C. Camino et al. "Previsual symptoms of Xylella fastidiosa infection revealed in spectral plant-trait alterations." Nature Plants 432 Vol 4, July 2018, 432–439.

Acknowledgement

I would like to thank Patrice Albert, CEO, Pellenc America in Santa Rosa, CA and Paso Robles, CA; Dr. Katie Gold, assistant professor of grape pathology, Cornell AgriTech, Geneva, NY; and Andrea Uliva, winemaker, research and development, Parsec, Fiorentino, Italy (distributed in USA by ATP Group in Windsor, Calif.) for their assistance in preparing this article.



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WINES VINES ANALYTICS

Mini-Head-Training: A Curiosity for Most, a Necessity for Some

With climate change at our door, is that about to change?

Loni Lyttle

A COUPLE MONTHS AGO, Mark Greenspan and I were called out to a Sonoma County vineyard to examine a mysterious phenomenon: Crown gall...everywhere. At least it looked like that. Almost every vine was afflicted with a zipper-like splitting of the trunk, opening up to the core and flanked by tumescent growths on either side.

To *WBM*'s readership outside of California, this may not seem all that weird. Crown gall is endemic wherever you get a real winter. While there's no such thing as easy farming, California is a pretty cushy place to grow grapes in this regard.

I did my master's thesis on cold hardiness in Eastern Washington, so this brought back a lot of memories. After the spontaneous nosebleed subsided (ever had to teach yourself statistics?), I was able to identify the problem as one relating to winter injury.

As a vine enters dormancy, it also accrues cold-hardiness. In other words, a vine slowly acclimates to colder and colder temperatures by accumulating solutes in the cells' cytosol. This process is gradual and works well if the weather changes slowly. What would kill a vine in early October is nothing to a vine in mid-February, precisely because that vine is more cold-hardy. However, if the temperature drops abruptly in early fall, you may end up with tissue freezing (winter kill) or water freezing in the intercellular layer, causing cracking.

In the case of the aforementioned vineyard, the problem was two-fold. Excessive soil moisture meant the vines were still growing in August when they should have been entering dormancy. Shelters were left on as well, which kept the vines too warm and prevented them from adequately accruing cold-hardiness. The rootstock tissue cracked, *Agrobacterium vitis* entered the wound and boom: Crown Gall.

Is This the Latest Thing to Lose Sleep Over?

The weather has been whacky for a while, and it's getting wackier. This is going to make farming harder, even in a place like sunny California. No, I don't think winter kill is going to be a huge problem here anytime in the next few decades. However, if we're going to be prepared to grow grapes in a changing climate, we shouldn't be wearing blinders.

So how do people grow vines in places with extreme cold? Answer: they bury them. While traditionally this involves burying selected canes, there are those out there who just bury the whole vine and unearth it in spring. This may sound bizarre; but if I wanted to work with a normal crop with normal people, I would have gone into cannabis. No one's weirder than a viticulturist...no one.



Loni Lyttle began her viticultural journey in 2010, when she visited the bucolic hillsides of Piedmont, Italy, and decided to stay there. Over the next eight years, she worked as an assistant vineyard manager and cellar hand while earning a bachelors and master's degree in viticulture and enology from the University of Turin. She specializes in grapevine physiology, cold hardiness, and obscure Italian varieties. In 2019, she found a home at Advanced Viticulture Consulting in Windsor, Calif., where she works as a viticulturist and contributes regularly to the Advanced Viticulture blog.



Zipper vine: It's not common you see Crown gall in a Sonoma County vineyard. Note the tumor-like galls on either side of the wound.



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VARIETAL INNOVATION AS A RESPONSE TO THE ISSUE OF FUNGAL DISEASES?

Today, the objective of the varietal creation work is to obtain varieties that are resistant to fungal diseases (mainly mildew and powdery mildew) in response to sector requirements for reducing use of phytosanitary products. This work was initiated by the researcher Alain Bouquet in the 1980s and then taken over by the INRAE in Colmar from 2000.

For the past ten years, through the creation of the UMT Géno-Vigne (mixed technological unit), a partnership between INRAE, Montpellier SupAgro and the IFV, the latter has been committed to the creation of varieties resistant to mildew and oidium and, by 2030, resistant varieties with regional

characteristics. The first resistant varieties were validated 3 years ago and the initial generation, called RESDUR1, was created by INRAE in Colmar from crosses between American Vitis, German varieties (JKI), Vitis Rotundifolia and INRA varieties (Bouquet).

They have several genes which are resistant to diseases, two against mildew and two against oidium. Today 4 varieties have been accredited: Artaban (red), Vidoc (red), Voltis (white) and Floreal (white).

Other generations of resistant varieties are in the process of being accredited. The RESDUR2 and RESDUR3 programmes, which build upon the first generation RESDUR1, are still in their test phases. They will provide enhanced long-term resistance, quality and typicity adapted to viticulture.

These innovative varieties and clones will soon be sent to quarantine to be made available to ENTAV-INRA licensees in the USA.

CLIMATE CHANGE: GREEK GRAPE VARIETIES FINALLY IN THE USA!

Recent selection work on forgotten historic grape varieties and on grape varieties from around the Mediterranean arc (Spain,

Portugal, Italy, Greece), has made it possible to offer growers significant options for adaptation to climate change. These include Agiorgitiko, Assyrtiko, Moschofilero and Xinomavro, which will soon be available for the US market.

Many of these old varieties had been abandoned because they were low in sugar, too high in acidity and matured too late. Today, more than ever, these «defects» are sought-after qualities, and these varieties are of definite interest to the sector in the context of global warming. The Castets in Bordeaux, the Tardif in the South-West, but also the white Piquepoul are examples of what the richness of our heritage can bring in terms of adaptation.



SEVERAL GENES RESISTANT DOWNY MILDEW AND POWDERY MILDEW

WHAT ABOUT THE CLASSIC CLONES, THEN?

ENTAV-INRA keeps feeding the quarantine's pipeline. Chardonnay 1067, Syrah 1140, Grenache 1212 (the small berries clone) are in quarantine and might be released in a couple of years? To be continued...

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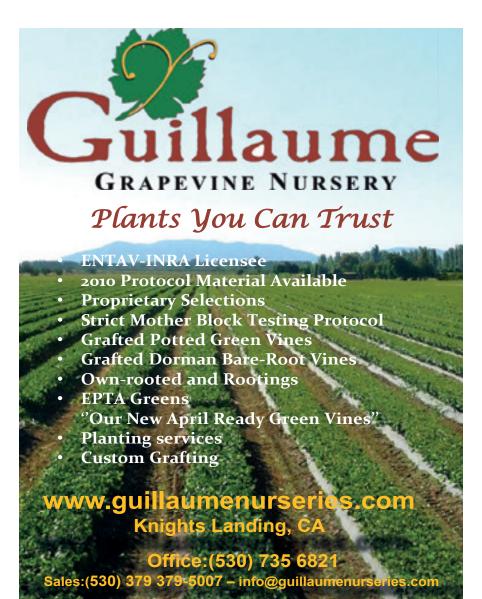












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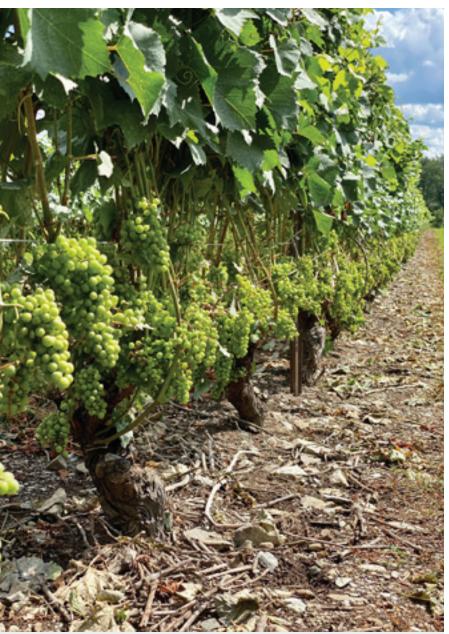
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Mini-Head-Training: A Curiosity for Most, a Necessity for Some



ALAIN BAZINET

Given how low fruit hangs with MHT, the grower must be timely with leafing and weed control.

Getting to the Point: Mini-Head-Training (MHT)

Mini-head training is just what it sounds like. Start with a bush or goblet-pruned vine and shorten the trunk until the head is 12" to 18" off the ground. Instead of choosing canes for burial, these vines are spur-pruned and can be buried completely by farming equipment. The soil insulates them from extreme cold temperatures. I decided to call up a couple people who use this method to get a better idea of how it's put into practice.

I first contacted Alain Bazinet, a winegrower in Quebec. Canadian-born Bazinet got his credentials in Europe at the viticulture and enology school in Beaune. Then he returned to Southern Quebec to work on his father-in-law's farm, Vignoble de l'Orpailleur. While Bazinet does grow some *Vitis vinifera*, many of his vines are hybrids that are bred for the cold. Some vines he simply wraps in geotextile blankets, which do a good enough job capturing radiated heat from the soil. Others, in colder areas, need to be buried.

He describes his MHT vines as looking like a goblet but opened onto a row. Each vine has about nine two-bud spurs, usually from a sucker. Vine spacing along each row is only 2.5 feet, so each vine practically touches its neighbor.

Vines are buried via two passes with a standard V-plow. This, he says, pushes enough soil to completely cover the vines with a hill of 2.5 feet. Bazinet's vineyard is around 25 hectares (62 acres), and each hectare requires an hour of tractor time to fully cover the vines. Removing the dirt is more laborious,

taking around three hours per hectare. First, he passes with an over-the-vine tractor that brushes the dirt off with brushes—a bit like a Zamboni. Then the vines are retouched on foot with a shovel.

Does it work? Yes. Even in a place where the temperature drops to -28°C (-18.4°F), the vines stay protected from winter kill. The only ones not immediately protected are his Minnesota hybrids, which can survive at temperatures down to -30°C. As one of the few winegrowers with the guts to grow in Southern Quebec, their 50,000 bottles go quickly on the local market.



Post-harvest, Alain Bazinet covers his vines using a standard plow.



Uncovering the vines is much more laborious, employing three times the number of hours needed to bury them.



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BROOKE ROBERTSON

The Rocks District in Walla Walla became its own AVA in 2015. It is the only AVA based entirely on a soil series: the Freewater Series.

What About Vitis Vinifera?

The next person I spoke to was Brooke Robertson at Delmas Wines. Robertson has pioneered mini-head training in Washington state, where she grows mostly Rhône varietals. As a grower in the aptly-named Rocks District of Walla Walla, she found that trying to bend and bury canes was just leading to more wounding and more Crown gall.

She made the switch to MHT after several freezes forced her to completely cut her vines down to the base due to severe cold injury (70 percent bud death). Instead of training her vines back up to cane-pruned VSP, she took inspiration from roses and trained up the remaining suckers to form a head at 16" to 18" off the ground with four to five spur positions per vine.

As soon as harvest ends, she covers the vine by using a standard V-plow with disks on either side that shore up the hilled soil. The Rocks District has a very short growing window, and temperatures are already below freezing in early October. In spring she begins uncovering the vines by flipping the direction of the disks. Then she passes with the Clemens Weed Knife. Finally, she passes manually with a shovel.

In addition to protecting against the cold, MHT also protects Delmas' fruit from excessive heat. Like Sonoma County, Walla Walla saw a heat spike in early June, hitting 118°F. While some clusters fried, the umbrella-like canopy kept more of her fruit in the shade. I'm a big fan of bushy canopies in general for just that reason: more shade, more airflow, more dappled light.

What are the Limitations?

Burying anything is going to be pricey, but at least MHT is less expensive than old-fashioned cane burial. The hidden cost lies in how long all other operations will take with a fruit zone at the same height as lettuce. Admittedly, Robertson says she pays by the hour for harvesting her MHT vines just because each ton of harvested fruit takes so much longer to pick. I can imagine it's similar for suckering and leafing. Robertson says that her



BROOKE ROBERTSON

In addition to costing \$1,000 an acre, burying canes proved too difficult in the rocky soil of the Rocks District.



BROOKE ROBERTSON
Keeping vines so short creates different challenges,
including where to lay the dripline.

vines have equilibrated in terms of vigor and fruitfulness, making less of a need for suckering and fruit-thinning. This may not be the case in all vine-yards, especially ones that aren't growing out of rocks.

In addition to price, your labor pool may not be immediately capable of head-training a 12" vine. At the start, Robertson found this to be the case and had to prune the 10 acres of MHT vines herself.

Weed control is always a drag but just think if your fruit zone was practically on the ground. While Bazinet uses a few organic herbicides, both growers rely mostly on mechanical means, i.e., the Clemens Weed Knife or the Timor Finger Weeder. With dense farming operations, these apparatuses tend to miss quite a bit. At that point you just have to grab yourself a hoe.

Where do I lay the dripline? If you're relying on mechanical weed control, you can't very well lay your dripline on the ground. Bazinet waters via tractor; however, in Quebec I can't imagine he needs to water as much as we do on the West Coast. In Walla Walla, Robertson solved this by raising the dripline above the vine structure but below the canopy. According to her, "it doesn't drip on the vine. It just looks weird."

Permanent cover crops are all the rage, but it's hard to do that when you need to plow a ton of soil over your vines every year. Both growers have experimented with cover cropping. Robertson sows seed after the burial and mows before uncovering her vines in the spring. Bazinet has found that some species of cover crops tend to form large clods that make vine burial more difficult, so he chooses grasses with simple root systems. No-till isn't an option.

I asked both growers about their spray program, and both said that they were essentially "restrained conventional." I like that term. With Quebec's high rainfall and humidity, I would have been very surprised to hear Bazinet say he was organic. Honestly, I'd be surprised if either of them were. Going organic means you have to spray less potent fungicides more often, and that means more compaction. If your soil is all fluffed up from burying your vines each year, this problem would be much worse.

What Happens When I Bury a Grafted Vine?

It's worth mentioning that these vines we're talking about in Washington and Quebec are own-rooted. This is due to a stubborn insistence that phylloxera is not present in these regions. It is. Thankfully, the same freezing temperatures that kill vines limit the spread of our little aphid friends. For vines grafted to resistant rootstocks, phylloxera only becomes a problem when the graft union is buried accidentally. In this case, the susceptible scion takes root, and the rest of the vine, preferring its own legs as opposed to prostheses, begins to rely exclusively on its own root system.

So, what happens when you bury it completely? Won't this bring about scion rooting? In theory, the roots aren't active until the spring. As long as the vine is uncovered early enough, this shouldn't be a problem. However, there aren't a lot of examples of people burying grafted vines in places where phylloxera poses a huge threat.



ALAIN BAZINET

Harvest isn't the only job that is made longer by the height of the fruiting zone.

What Does this Mean for Growers Where the Weather Isn't Miserable?

Climate change has already thrown us quite a few curve balls. In addition to wildfire and heat spikes early in the season, I wouldn't be surprised to eventually see wild weather events blindside us in the winter months. Ignore signs that your vines aren't hardening off and you may end up with an expensive replant on your hands.

I don't think the average California grower is going to have to bury his/her vines anytime soon. I do think, and I say this as a Californian, that we tend to be a little myopic. Farming grapes in California is awesome, and the weather is awesome—until it isn't. We can learn a valuable lesson from the resilience of growers elsewhere. More than that, though, the world is wide, and there are those that produce wine in the wildest of places, using the most heroic of methods. Isn't it just spectacular? wbm

VITICULTURE TRIAL

Using Soil Moisture Data to Save Water, Eliminate Tilling

Markham Vineyards worked with Napa's Regional Conservation District to make vineyards more sustainable—both in water and labor—for the long haul.

Bryan Avila

Bryan Avila sees wine as an artform created by visionaries whose tools are business, science and engineering fueled by innovation. He helps educate students online in the fundamentals of wine for Santa Rosa Junior College, and provides best-practice winemaking instruction and advisory services to vintners via his company, avila.wine. He writes to inspire growers and vintners by spotlighting great examples of applied research for *WBM*. Bryan works with local governments to solve regional labor and environmental issues.



VITICULTURIST ADRIENNE UBOLDI of Markham Vineyards shares her collaboration with Napa's Regional Conservation District to explore soil moisture probe technology in the vineyard to save water and reduce tillage. Early insights from the application of this tried-and-true technology has resulted in a no-till vineyard and reduced irrigation by an average of nearly 600,000 gallons of water per year since switching to soil moisture data.

Trial Lead: Adrienne Uboldi

Growing up as a fourth-generation farmer, with 15 years of experience managing vineyards, it's not a surprise Adrienne Uboldi is a lover of nature, science and soil. As vineyard and sustainability manager for Markham Vineyards, she takes the lead on all viticulture operations, which includes managing the quality production of grapes, implementing innovations



in regenerative farming and water conservation, and ensuring that the soil and land remain healthy for generations to come. She serves as president of the Youth Ag & Leadership Foundation of Sonoma County, cheers on the Oakland Athletics and is currently cultivating a butterfly garden in her leisure time. Her sustainability-centered vineyard management approach is invaluable to the health of Markham Vineyards' employees, land and fruit.

Napa RCD Advisor: Miguel Garcia, Ph.D., CCA

Miguel Garcia is the Sustainable Ag program manager for the Napa Resource Conservation District (RCD). He provides on-farm technical assistance and planning related to soil health, nutrient management, erosion control, carbon sequestration and irrigation management. He also designs educational programs



in Spanish to provide vineyard farm workers with valuable information on various topics related to sustainable agriculture. Garcia firmly believes that worldwide implementation of sustainable and regenerative agricultural practices is paramount to ensure the integrity of delicate natural resources and the food supply chain necessary to feed an ever-growing world population. Garcia is a certified crop adviser and has a Ph.D. in environmental sciences and a B.S. in chemistry from UC Riverside.

BACKGROUND

The three major concepts in this article deal with the motive for the trial, a new application and a source of expertise that are key to the success of this project—specifically, a desire to achieve regenerative farming practices, installation of soil moisture probes, and the participation of a local government conservation district. The following provides a brief background of each.

Regenerative System Design: Growers and vintners from around the world continue to deal with the increasing effects of climate change. As mega-fires and atmospheric rivers continue to increase in frequency and strength, growers are putting their faith back into the healing power of nature in a movement called regenerative agriculture.

While regenerative farming practices are not new (and most likely ancient) they represent a significant deviation from the conventional norms that galvanized farmers of the 20th century. However, the foundation that our global ag-economy was built upon is cracked and inspiring stakeholders to think in new directions.

Soil Moisture Probe: The tensiometer for soil moisture measurement was invented as early as 1907 and commercialized by the 1920s. This technology is not new. However, our world is inundated with so many new and old technologies for so many different applications that it's impossible to keep up with all the best practices. According to Grand View Research, "the global soil moisture sensor market size was valued at USD 173.6 million in 2018 and is expected to grow at a compound annual growth rate of 14.0 percent from 2019 to 2025. Increasing the adoption of these sensors by the agricultural sector to enhance the farm's productivity and reduce water consumption is expected to drive market growth over the forecast period." While this technology may have been optional for some industries in the past, it is rapidly becoming a best practice, especially on the West Coast.

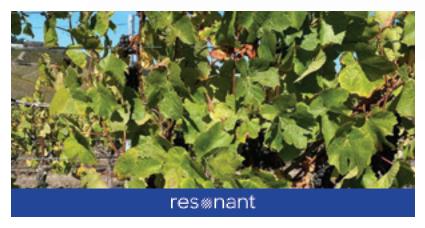
Conservation Districts: According to Dr. Hugh Hammond Bennet, the founder of the USDA's Natural Resources Conservation Services, "One of the best, and certainly the most promising, of the devices yet invented by man for dealing democratically and effectively with maladjustment in land use, as



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Pinot Noir photos taken from the Russian River Valley AVA - 2021 Harvest

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David Grimes | President of the World Meteorological Organization (2011-2019)

What our clients are saying about our vineyard solutions:



"We have been using Resonant's SOP Inside technology for a few years now and we have seen many benefits. In our recently planted Chardonnay vineyard, the vines have a higher degree of vigour and vitality, whereas in the Pinot Noir vineyards, Resonant Technology has enabled the vines to better cope with water stress, avoiding berry dehydration. We have also noticed a greater regularity in the internode length and increased content in leaf chlorophyll, both visually and as a result of laboratory tests."

Willi Stürz | Kellermeister & Technical Director, Cantina Tramin

well as for carrying forward positive programs of desirable conservation, and for maintaining the work, is the soil conservation district."

The supplier of the probes for this project, Brian Bourbonnais of Irrometer, said on a phone interview, "Soil moisture sensing has been around for decades, but I still get folks from all industries that learn about our technology for the first time at our exhibit booth. It's a technology that once people learn about it, they live by it. The first thing I tell anyone farming a new area is to reach out to your local conservation district. They work with multiple industries and are experts at helping growers navigate regional farming challenges. While there is often paperwork to fill out for these resources, the assistance gained can save time, money and a lot of water."

TRIAL OBJECTIVE



A 55-acre vineyard in Calistoga was selected to establish a baseline of soil moisture in the vineyard and to gain a working knowledge of the technology to scale the application to other vineyards within Markham and the Distinguished Vineyards & Wine Partners group.

Photos: Markham Vineyards, Calistoga



TRIAL DESCRIPTION

Ten 200SS Watermark sensors were placed throughout the vineyard, according to RCD recommendations based on best practices for winegrapes. Each station was checked weekly to determine soil water status and to inspect the system for general functionality. Irrigation data was recorded on a Watermark Monitor wired data logger. This practice was carried out for two years, and the data was compared to that of the previous six years, except for 2019. The 2019 data was not available as the flowmeter was broken and had to be replaced. During this time, the new system was also installed.

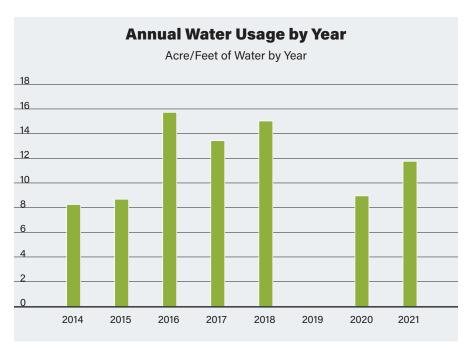
Control: Watered by schedule from 2014 to 2018

Treatment: Watered based on soil moisture probe feedback 2020 and 2021

CONCLUSIONS

The following data is based on annual water usage applied to this vineyard over an eight-year period. As mentioned in the trial description, vineyard irrigation was based on soil moisture data during the 2020 and 2021 vintages. The chart shows the actual water usage by year.

As you can see from the water usage data shown, prior to installation of the soil moisture monitoring system, the water usage between 2014 and 2018 ranged between 8.2 and 15.7 acre-feet for an average of 12.18 acre-feet per year. Following installation of the soil moisture system, between 2020 and 2021, the average water usage was 10.35 acre-feet. So far, this has resulted in an average annual water savings of 1.83 acre-feet each year. This equates to nearly 600,000 gallons of water saved now that irrigation is based on soil moisture data rather than above-ground assessments and schedules. In



addition to the water savings, since Markham Vineyards could immediately see that there was ample water for the vines from soil moisture data captured early in the process, they were able to discontinue tilling in that vineyard, saving fuel, operator hours and reducing further compaction of the soil.

Post-Mort Q&A

What was the motivation to conduct this trial? Why were you interested in monitoring soil moisture in the vineyard? What system were you using previously?

Uboldi: We're in the middle of a drought, so of course, water usage is at the top of everyone's list. That said, Markham has been at the top of their sustainability game for years, and we've been busy working toward regenerative farming, little by little. Precision water usage was a natural next step for us.

Who else worked with you on this trial? What were your and your team's initial hypotheses before beginning the experiment?

Uboldi: A lot of viticulture is focused on the ground, up. I wanted to see what's under the soil. The winemaking team and the management company worked with us on this trial. Our vineyard in Calistoga is one of our toughest sites to water. I mean, you could barely get a shovel into the soil. The vineyard was previously farmed based on the idea that there was very little soil moisture, so we did what we could to remove any competition for the vines, which sometimes included multiple passes with the tractor to disk and remove weed pressure.

Which vineyard did you study? Why did you pick this vineyard?

Uboldi: We studied our vineyard in Calistoga. It's mostly planted to Merlot but also to some Cabernet Sauvignon, Chardonnay and Sauvignon Blanc. It was the vineyard that puzzled us the most around vegetation management and irrigation.

How did you set up your monitoring trials? What did you measure? How do you determine success?

Uboldi: When I started in February 2019, I was the first vineyard employee hired by Markham Vineyards. We were using a system called Vintel to provide direction to see what they should be doing. During my first year, I



was introduced to the Napa RCD, so I had the support and the momentum that I needed to get started on this trial. Since we had not been measuring soil moisture previously, our goal was to take a slow and steady approach to truly learn the system and to get to know our vineyard, using soil moisture data. Before, we mostly used above-ground assessments, such as visual observations and pressure bombs, to check vine status for irrigation.

We followed Miguel's recommendations on where to put the probes. Based on his recommendations, I used Google Earth Pro to see which areas looked stronger or weaker. I found that Google Earth Pro can view different snapshots of a location over time. This allowed me to study foliage and growth patterns from one year to the next via satellite imagery.

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

Uboldi: While manually checking the soil moisture data of each vineyard, we found that farming machines find wires very easily. After all, they are just probes connected to wires hanging from a box. Many wires had to be replaced, and some data gets lost, but now we know how to manage this better in each vineyard. Our goal was to learn. Maybe someday we will get the wireless version, but for now we are getting the most out of this technology.

Since we were still getting used to the technology, we went with one of the simplest iterations of the probe that required a manual check. We weren't ready for the online system just yet. One can have all the tech in the world; but if you don't invest the time to understand it, you will never get the most out of it, and that's a waste of money. Too much data can equal paralysis through analysis. We wanted to make sure that our research was actionable and that we are getting the most out of the investment.

What was the most important outcome of the trial that growers can use?

Uboldi: Understanding that there will be complications. Tech is not a silver bullet. You have to be able to adapt to it and with it. For example, we're trying to do under-vine management. If your drip emitters are not set up right over the probe, you're measuring dry earth. You will get false readings if they are not installed correctly.

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

Uboldi: Absolutely! This vineyard is now a no-till site as of 2020 and had been full-till prior. We weren't expecting that. Dr. Garcia's insights into the soil and geology of that vineyard told us that, contrary to our original belief, the soil in the Calistoga vineyard has more water-holding capacity than we initially thought. We eliminated all the practices that did not influence water saving, such as disking to remove weeds. Being able to go no-till in Calistoga for two years exceeded our expectations by showing us what we can't see and allowing us to become better farmers because of it.

What was your impression of the water savings when it came to grape and wine quality?

Uboldi: Wines that we trialed during 2020 are still in barrel but the vines have responded very well to the new irrigation strategies. We are paying attention to when the vines need the water the most versus rather when we think it needs the water.

What was your greatest learning from studying soil moisture?

Uboldi: We are getting closer to being able to correlate soil moisture to pressure bomb and visual observation methods. Not only does this methodology give us more insight around the greater picture about what is going on with the vine, it also helped us have more informed visual observations as we can now correlate soil moisture numbers to our surface observations of the vine. Before, we might have thought one thing based on visual observation; but when the data and science tell us something different, we truly understand what is going on. Changing our perspective in how we look at what we're doing has been, and will prove to be, beneficial in many ways—especially when we need to modify what we do when we get non-standard weather events. The science makes our "magic" stronger!

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

Uboldi: Absolutely, we're just getting started with monitoring soil moisture. There is much that we still need to learn and were excited about what we've learned so far. Even though this technology is not new, it's a new system for Markham's vineyards. The whole goal of this project was not only to study this vineyard but to get used to having this data so we could see what else we could do with it. I'm looking forward to using this in conjunction with deficit irrigation trials based off soil moisture, in addition to visual observations and pressure bomb measurements. Layering these technologies together really helps to paint a more accurate picture of what is happening with the vine above and now below ground.

What was it like working with the Napa RCD?

Uboldi: Working with Miguel was enlightening. He is extremely knowledgeable. The Napa RCD listened to our needs, applied for a grant from the California Department of Water Resources and was awarded \$4,000 to purchase 21 probes for installation into four vineyard sites. This breakthrough via the application of soil probes has inspired several changes in our farming practices, from more effective irrigation to reduced tilling events.



Grapevine Latent Bud Dormancy in Changing Climates

Anne Pellegrino, Suzy Rogiers and Alain Deloire

Anne Pellegrino is an associate professor at Montpellier University, L'Institut Agro (SupAgro), France. Suzy Rogiers is a senior researcher at National Wine and Grape Industry Centre (NWGIC), Department of Primary Industries-NSW, Australia. Alain Deloire is a professor at Montpellier University, L'Institut Agro (SupAgro), France.

GRAPEVINE DEVELOPMENT comprises different phenological stages from bud break to berry maturation, which are mainly temperature- and water-dependent. Before bud break, there is a crucial stage called dormancy, which can be divided into two main successive periods: endodormancy and ecodormancy.

Climate change (increased average temperatures) is expected to accelerate the release of ecodormancy and thus the onset of bud burst. However, bud burst may occur later than expected if the required chilling units for the breakage of endodormancy have not been met.⁹ The result is greater heterogeneity in the onset of bud burst, especially in cases where defective endodormancy is also apparent.

Poor bud development, erratic bud burst timing and duration and subsequent heterogeneous shoot growth are the consequence of internal imbalances in the regulatory signals within the bud brought on by warmer winter temperatures. Obviously, this could increase the risk of shoot exposure to abiotic and biotic constraints and ultimately lead to lower yields and poorer fruit quality.⁹

Notably, bud burst brought on by warmer winters may advance grapevine maturity with implications for berry composition and harvest time. In this regard, the ability to assess when climatic conditions are suitable for dormancy release and to predict the date of bud burst is important.

Grapevine Latent Bud Dormancy

Grapevine dormancy is a crucial grapevine phenological period comprised of both endodormancy and ecodormancy.⁶ This period prepares the development of the latent buds to eventually undergo bud burst the following spring. The latent buds bear the primordia of the future primary shoots and the primordia of the inflorescences, hence the future clusters (**FIGURE 1**).

Endodormancy

Endodormancy is the inhibition of growth originating from the latent bud meristem.¹³ It is brought about by internal factors within the plant, which prevent bud burst even if external factors are optimal for growth. In grape-vines, these internal factors could be related to changes in the concentrations of primary and secondary metabolites, together with hormones, such as abscisic acid (ABA). It is proposed that ABA maintains dormancy by repressing bud meristem activity.

Key Points

- The timing and extent of budbreak are dependent on physiological changes within the plant as well as external environmental conditions: these are referred to as endodormancy and ecodormancy.
- Cold winter temperatures are required for vines to be released from endodormancy. Then warm temperatures are necessary to break ecodormancy.
- Warmer and drier winters, resulting from climate change, may increase the variability in the timing and extent of bud burst.
- Climate modeling and choosing appropriate varieties for specific regions will help ensure consistency in bud burst and optimal shoot development.

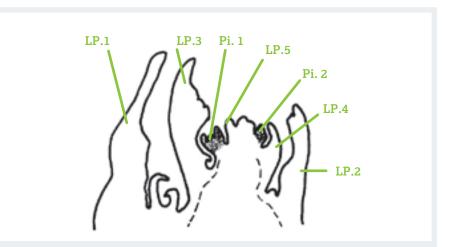


FIGURE 1: Longitudinal section of a latent bud that shows the origins of the future primary shoot (from Carolus, 1970). Growth and differentiation of the latent bud stops in February (southern hemisphere) and in August (northern hemisphere). In this example, the primordium of inflorescence 1 is placed opposite the leaf primordium 4; the primordium of inflorescence 2 is placed opposite the leaf primordium 5. The future primary shoot will bear two clusters in position 4 and 5 from the bottom. LP: leaf primordium; Pi: primordium of inflorescence.

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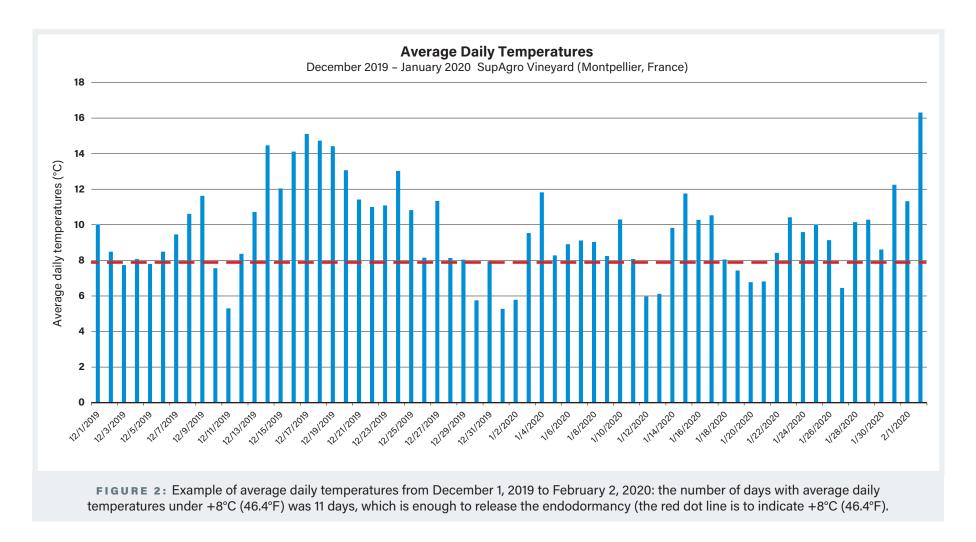
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Artificial degradation of bud ABA levels through viticultural techniques is difficult. In contrast, the application of chemicals, such as hydrogen cyanamide or sodium azide, regulates ABA metabolism and signalling, thus promoting the release of dormancy,⁸ but some of these chemicals are not allowed in Europe. Pruning is also used to break dormancy as it stimulates the accumulation of sublethal levels of reactive oxygen species and nitric oxide, which trigger genes important to cell expansion required for bud growth.¹⁰

Aside from hormonal regulation, endodormancy is triggered by shorter days and cooler temperatures. Winter chilling, or cold accumulation, is then necessary to overcome endodormancy. Although the effect of chilling temperature on dormancy release needs further research at the molecular level, N. Dokoozlian (1999) reported that a 200 hour-period (eight days) with a mean daily temperature under 8°C (46.4°F) proved to be efficient to permit the grapevine buds to break within a reasonable duration and to an acceptable level (ca. 35 days at 22°C to reach 50 percent of cumulative bud burst). In addition, R. Anzanello et al. (2018) observed that the chilling requirement was stable for a given cultivar, regardless if the cold period was interspersed with warm temperatures (e.g., constant temperature of 3°C versus daily cycles of 18/6 hours or 12/12 hours at 3°C and 15°C during dormancy).

However, there are varietal differences in how much chilling is required. Based on bud burst modeling approaches,⁵ chilling requirements calculated for 10 cultivars in French vineyards were the lowest for Ugni Blanc and Syrah and the highest for Chasselas and Cabernet Sauvignon.

FIGURE 2 demonstrates that from December 1, 2019 to February 2, 2020, the required number of days (eight days) with a mean temperature of under +8°C (46.4°F) has been reached to release the bud from endodormancy (South of France; data from L'Institut Agro-Montpellier SupAgro (IHEV) experimental vineyard weather station).

Ecodormancy

When endodormancy has been surpassed, grapevine cultivars are physiologically ready for bud burst, but conditions that lead to ecodormancy must also be overcome. Vines can exist within an ecodormant state if environmental factors that support root activity and bud growth are not optimal. These main environmental factors include temperature (air and soil) and water (soil water content), and their interactive effects as the heat transfer and storage in the upper soil layer are assumed to be higher in wet soils.

Although the potential of irrigation to prolong ecodormancy is worthy of further research, it is likely that soil and air temperature will override plant water status. It has, however, been demonstrated that delayed pruning can delay bud burst, thus avoiding the frost period, and also delay flowering into the warmer stage of spring so that fruit set is improved.¹¹

A few temperature models have been developed to assess and forecast bud burst.^{2,5} The dates of endodormancy and ecodormancy release in those models are predicted from chilling and forcing air temperature requirements only. Bud burst is predicted in the models when 50 percent of buds have reached this particular stage (**FIGURE 3 B, C, D**).

However, the models do not predict the duration of bud burst from the onset to the maximum bud burst rate, nor the maximum bud burst rate and thus the shoot number. Along with temperature and soil moisture other internal factors, such as carbohydrate reserve levels, are important to these parameters.



FIGURE 3: Example of grapevine latent bud (a) and latent bud burst stages (b, c, d) and example of shoot development (e).

Shoot Development

After bud burst, temperature continues to play a crucial role for primary shoot development from the preformed organs within the latent buds (**FIGURE 3**). The number of unfolded leaves on individual main shoots can be predicted in the absence of environmental stress from the phyllochron, defined as the Thermal Time between the development of two successive unfolded leaves or two phytomers (one phytomer = one node + one internode), each bearing one leaf and sometimes tendrils or clusters.

Thermal time is important to the progression of leaf development along the main axis. For example, two consecutive days with an average temperature of 21°C (70°F) are enough to form a new unfolded phytomer.⁷ This is calculated by using a base 10°C (50°F), because 10°C (50°F) is the minimum required temperature for a vine to grow.

Questions to be Addressed in the Context of Climate Change

Most of the world's viticulture regions are located between latitudes of 40° and 50° N in the northern hemisphere and between latitudes of 30° and 40° S in the southern hemisphere, referred to as the temperate climatic belt. If the climate in these regions changes in favor of warmer winters, lack of cold temperatures to release endodormancy could have a negative impact on yield and wine quality. This could have impacts on:

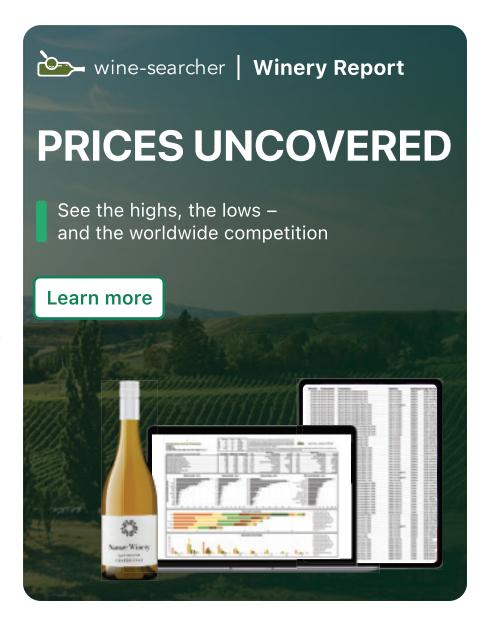
- the number and the homogeneity of latent bud burst and shoot growth,
- the latent bud fertility from bud burst onwards,
- the number of developed primary shoots and clusters per vine that impact yield,
- and the dynamics of berry maturation that increase the heterogeneity of bunch ripeness and associated wine quality.

These recent issues observed in warm-hot wine regions (South Africa, Australia and South America) need further observation and experimentation to find appropriate solutions, for example: the choice of cultivars and rootstocks and adaptation of cultural practices.

Where to Go From Here?

Temperature can be used to predict the date of bud dormancy release (ecoand endodormancy) and primary shoot development. Cold winter temperatures (under 8°C/46.4°F) are required for vines to be released from endodormancy. Then, warm temperatures (above 10°C/50°F) are necessary to break ecodormancy so that bud burst and shoot development can occur. Choosing a grape variety that is adapted to a particular growing region's future climate will decrease the risks associated with variable bud burst and shoot development. Temperature modeling of future climate scenarios will assist with variety selection. Moreover, the designation of new regions suitable for sustainable viticulture in the future will ensure that the global viticulture industry remains viable in the long term.

However, most temperature-based models of bud burst do not predict the duration and the rate of bud burst which may induce exposure to environmental risks, such as frost, and may impact crop load.



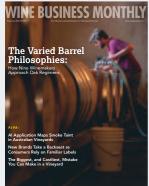
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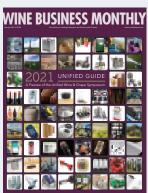








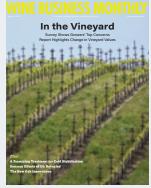




















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Grapevine Latent Bud Dormancy in Changing Climates

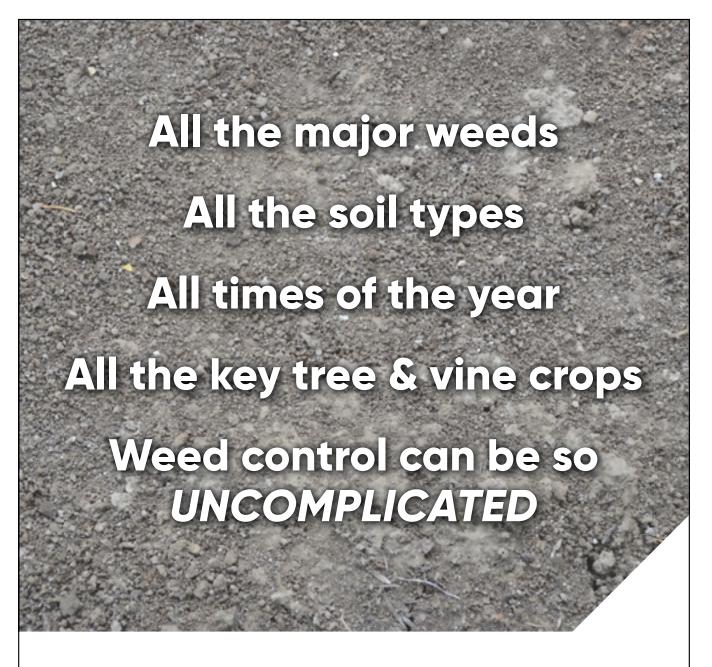
In addition, they do not consider other environmental factors (photoperiod, water and nutrient supply) and crop management (pruning rate and date, source-to-sink ratio), which also impact the vine's ability to enter into dormancy, to begin growth from bud burst onward and for the phytomers to develop. These deficiencies highlight the requirement for further research on practical intervention methods to manipulate bud burst and the development of a climate change adaptation strategy at the vineyard level by researchers and the industry itself. **WBM**

This content was originally published by the International Viticulture and Enology Society (IVES, https://ives-openscience.eu/) and the journal IVES Technical Reviews (http://ives-technicalreviews.eu/) in April 2020 and republished here with the permission of IVES as first publisher.

- 9. Webb, L.B., Whetton, P.H. and E.W.R. Barlow. 2007 Modelled impact of future climate change on the phenology of winegrapes in Australia. *Australian J. of Grape & Wine Research* 13, 165–175.
- 10. Sudawan, B., Chang, C., and H. Chao, et al. 2016. Hydrogen cyanamide breaks grapevine bud dormancy in the summer through transient activation of gene expression and accumulation of reactive oxygen and nitrogen species. *BMC Plant Biol.* 16, 202. https://doi.org/10.1186/s12870-016-0889-y.
- 11. Petrie, P.R., Brooke, S.J., Moran, M.A. and V.O. Sadras. 2017. Pruning after budburst to delay and spread grape maturity. *Australian J. of Grape & Wine Research*, 23 (3), pp. 378-389.
- 12. Carolus M., 1970. Recherche sur l'organogenèse et l'évolution du bourgeon latent de la vigne (*Vitis vinifera* L. Var. Merlot). Thèse 3^{ème} cycle, Bordeaux.
- 13. Torregrosa L., Carbonneau A., Kelner J.J., (2021). The shoot system architecture of *Vitis vinifera* ssp. *Sativa*, Scientia Horticulturae 288, *https://doi.org/10.1016/j.scienta.2021.110404*

References

- Anzanello, R., Fialho, F.B. and H.P. Santos. 2018 Chilling requirements and dormancy evolution in grapevine buds. *Ciência e Agrotecnologia*, 42, 364-371.
- Caffarra, A. and E. Eccel. 2010
 Increasing the robustness of phenological models for Vitis vinifera cv. Chardonnay. *Int. J. of Biometeorology*, 54 (3): 255-267. doi: 10.1007/s00484-009-0277-5 handle: http://hdl.handle.net/10449/19073.
- Carbonneau A., Deloire A., Torregrosa L., Jaillard B., Pellegrino A., Métay A., Ojeda H., Lebon E. and P. Abbal. 2015 Traité de la Vigne, Physiologie, Terroir, Culture. Editions Dunod (2^{ème} édition), pp 573.
- 4. Dokoozlian, N.K. Chilling Temperature and Duration Interact on the Budbreak of "Perlette" Grapevine Cuttings. *Horticultural Science*, VOL. 34 (6), October 1999.
- Garcia de Cortazar Atauri I.G., Brisson N. and J.P. Gaudillere. 2009 Performance of several models for predicting budburst date of grapevine (*Vitis vinifera* L.) *Int. J. Biometeorol.*, 53:317–326, DOI 10.1007/s00484-009-0217-4.
- Lang et al. 1987 Endo-, para-,and ecodormancy: physiological terminology and classification for dormancy research. Horticultural Science. 22, 371-377.
- Lebon, E., Pellegrino, A., Tardieu, F., and J. Lecoeur. 2004 Shoot development in grapevine (*Vitis vinifera* L.) is affected by the modular branching pattern of the stem and intra- and inter-shoot trophic competition. *Ann. Bot.* 93, 263–274.doi: 10.1093/aob/mch038.
- 8. Pérez, F.J., Vergara, R., and Or E., 2009 On the mechanism of dormancy release in grapevine buds: a comparative study between hydrogen cyanamide and sodium azide. *Plant Growth Regulation*, 59: 145–152.





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COVID Accelerator Drives E-Commerce

Digital markets and digital marketing help retailers adapt to changed market

Andrew Adams



Andrew Adams is the editor of the *Wine Analytics Report* and was a writer and editor at *Wines & Vines* magazine for nearly a decade. Adams grew up in the city of Sonoma, Calif. and graduated 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.

THE DRAMATIC INCREASE IN the e-commerce sales of wine, beer and spirits has been one of the main narratives of the past two years, along-side the increase in winery DTC shipments.

As consumers took their shopping online, the increase in the value and volume of beverage alcohol sales has been stunning, yet behind that increase in spending has been an equally impressive, but much less visible, amount of change in the systems to facilitate those sales.

The total U.S. beverage alcohol e-commerce market was pegged at around \$2.6 billion in 2020, according to Rabobank, and has no doubt enjoyed strong growth through much of this year. Concurrent with retailers—and producers—growing more savvy in marketing in the digital space is the potential that one or two key court decisions could pave the way for increased retailer DTC shipments and even more transformative change.

New Jersey-based Gary's Wine & Marketplace is one of the largest fine wine retailers in the New York metro area but moved west in a major expansion in 2019 when it opened a location in St. Helena, Calif. in the former Dean & DeLuca building.

Mike Fisch, the company's director of innovation, said in an email that sales from the retailer's wine clubs have grown close to 150 percent while the Gary's Wine mobile app has enjoyed more than 35,000 downloads. "We allocate a significant budget toward paid, digital marketing efforts," Fisch explained. "This channel is an excellent source of new customer acquisition provided that the cost of acquisition remains below the average lifetime value of the customer."

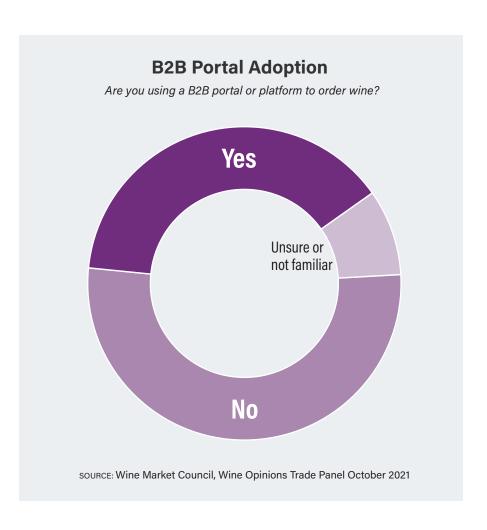
Seamless E-commerce

But in addition to the digital outreach, Gary's worked with the New York firm City Hive to deploy technology in its marketing efforts for seamless, efficient e-commerce. "City Hive allows suppliers to compliantly deploy marketing dollars toward driving sales to retailers," he stated.

The biggest changes are app sales and local delivery. On the East Coast, Fisch said the company coordinates with Onfleet for delivery routing and logistics while also operating a fleet of delivery vehicles to support a pace of around 1,000 deliveries a week. Local delivery from the St. Helena location is provided by FedEx.

Founded in 2016, City Hive started out working with a small group of independent retailers in New York before settling into what has been a lucrative groove in beverage alcohol sales. Within one month, founder and CEO Roi Kliper said the company was working with more than two dozen wine and liquor stores. The company's SaaS platform links wholesale and inventory management with sales, as well as sales analytics and consumer recommendations.

What started as a way for small, independent stores to compete in the e-commerce space then exploded through 2020 and into this year, Kliper noted, as leading distributors, major retail chains and thousands of independents have started to work with the company.





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In a June interview, Kliper said total revenue in 2021 was 12 times what it was the previous year. The company is working in 38 states with more than 2,000 retailers and processed nearly \$500 million in transactions in 2020.

The company is working with a few wineries, but the focus so far is on retailers. City Hive is supporting a few national and global brands, with the primary focus on local delivery. The technology is also expanding sales opportunities.

In July, the Prosecco DOC consortium ran a National Prosecco Week campaign supported by more than 500 retail stores in the United States. Working with City Hive and Wine.com, SevenFifty, VinePair, 3X3 and others, the campaign included the usual slate of consumer and media tasting events as well as a special online shop where consumers could purchase Prosecco and then have it delivered via a local retailer.

In less than two years, the majority of U.S. beverage alcohol consumers have gone from being limited to just in-store retail shopping to having the ability to purchase a variety of wine, beer or liquor online and get those products delivered the same day or even the same hour. A niche market mainly in just the major metro areas has gone national, and all of the data from purchases within the past two years are providing a foundation for further analysis to build upon an explosive start.

As retailers, big and small, have invested to support e-commerce so too have distributors. The various chains that link the beverage alcohol sales system have become shorter, and the different players are more closely linked than ever before.

Rabobank Food and Agribusiness beverage analyst Bourcard Nesin said the rapid "Shopify-cation" of beverage alcohol is further integrating distribution and inventory with point of sale and CRM, and that integration will ultimately provide a bonanza of actionable data through a network effect. "There's a stacking up and sophistication of an entire industry now," Nesin observed. "There had always been the promise of digitalization and a big gap between that and the reality."

With the pandemic showing consumers they can get what they want delivered from a place they know (and which is likely providing customized recommendations based on previous purchases), the sophistication of those offers and wider digital marketing will only get better.

Fisch, with Gary's retail chain, said the company relies on its wholesale partners not just to provide the product but increasingly the sales materials to help sell it. "It's more important than ever for wholesalers to maintain the quality of their product information online," he urged. "If a product does not have an image or tasting notes on our website or mobile app, customers are less likely to purchase it online."

Take a Trip Through the Portal

All of the major wine wholesalers have made major investments in streamlining this end of the market and continue to improve using what they've learned over the past two years. "Digital is having a wide impact on how our industry operates," noted Darrell Riekena, chief information officer and executive vice president for Republic National Distributing Company. "We see it in how our customers are using new technology to manage and run their businesses, to how consumers are leveraging digital capabilities to place orders online for alcohol."

Riekena said the wholesale business has shifted from "an inventory-driven model" to one that is less reactive and more proactive based on the wealth of new insights available through data analytics, predictive modeling and other inputs.

"With the pandemic showing consumers they can get what they want delivered from a place they know, the sophistication of those offers and wider digital marketing will only get better."

During the Wine Industry Financial Symposium held Nov. 9-10, Carlos Vigil, vice president and general manager of Southern Glazer's Wine & Spirits' B2B e-commerce portal, Proof, said it is being used by 146,000 accounts or customers in 28 states.

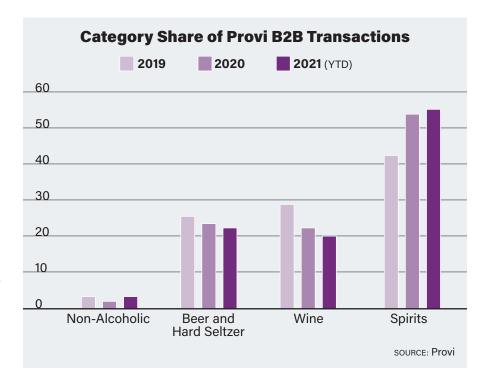
Vigil said Southern was lucky to have Proof up in running by March 2020, but work on the site began well before the pandemic because it had become clear even then that sales and product ordering were moving online.

Just as sales and marketing have gone omnichannel so too has B2B ordering. Vigil cited a B2B study by management consulting firm McKinsey & Company that found between August 2020 and February 2021 a greater share of B2B buyers were using digital platforms to research new products, yet there was a similar increase in wanting a "traditional, in-person" interaction when ordering and reordering.

The new e-commerce platforms are not replacing human interaction but instead supporting them and providing a new way to facilitate business. The same report by McKinsey found that 24 percent of those respondents reported that the new sales systems were much more effective in serving existing and new customers compared to just 9 percent in April 2020.

Southern's Proof also features an e-commerce homepage for brands where targeted offers to buyers can be distributed and used to provide content for email and SMS text offers. Wineries can also work with Southern on promoted searches and category placement to better ensure their products are seen by Proof users or even purchased via a "shoppable content modal" powered by Zmags.

A coming fine wine section will further separate out the brands and suppliers in this category to help buyers find and compare brands while also getting more information and assets to support sales.





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The Wine Market Council recently commissioned a study by Wine Opinions of 4,700 people working in wine distribution and retail: the preliminary results found that 39 percent are using some form of B2B portal while 53 percent said they were not, and the rest said they were "unsure or not familiar."

Of those who use such a portal, nearly half said they only do about 20 percent of their ordering through this medium, but nearly a quarter use it for 25 percent of their sales while some conduct 80 percent of their business this way. "The people who adopted it, adopted it rapidly for a larger number of their orders," said the WMC's research director Christian Miller during a recent webinar on new technology in the wine industry.

Because it appears early adopters have shifted more of their ordering to such online marketplaces, Miller said it's suggestive that more buyers will follow suit.

One of the companies featured in the WMC session was Provi, which hosts a digital, B2B marketplace for the beverage alcohol market. The company's vice president of strategic partnerships, Andrew Levy, said the Chicago-based firm was founded in 2016 and just recently raised \$100 million in Series C funding to compete in what he described as an explosion of startups in the B2B marketplace space.

Provi is working with more than 10,000 retail accounts in 30 states and employs 150 people, which is about double the number of people working for the firm in January 2021. Levy also cited survey data that indicate trade

buyers prefer remote human interactions and digital self-service.

Most B2B marketplaces, he said, have not been built with buyers in mind, and Provi's focus is to make it easier for them to find products while also helping suppliers get brands in front of buyers.

And with distributors launching their own portals similar to Southern's Proof, the digital space may seem to have already become as crowded as the traditional market. Yet being active in multiple markets can help wineries market their brands by "dropping as many hooks into the water as possible," and Levy likened it to how consumers can book a flight directly on Delta's website or through Expedia.

For brands, Provi also provides sponsored searches, and Levy said 57 percent of the retailers working with the company purchase suggested products. Insights on buyer activity, such as the fact that around 40 percent of all orders are made outside of regular business hours, can also help wineries know how and when to market their products to the trade. "We have a lot of data across total beverage alcohol and, in particular, our retail set that is over-indexed on independent," Levy said.

Provi is also working with Breakthru Beverage Group, which is one of the top wine distributors in the United States. The partnership with Provi is one part of an "end-to-end digital ecosystem that brings Breakthru, our suppliers, and our customers closer to the end consumer," said Adam Pizer, the company's vice president for wine business development.

Pizer said e-commerce is no longer a niche "but a serious growth driver"

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that has changed the market and convinced Breakthru to invest more than \$80 million in infrastructure and technology platforms to keep pace. "Whether through click-and-collect or deliver, retailer sites or marketplaces, more consumers are buying their alcohol online and we will work across platforms to help our partners optimize their business wherever consumers shop," Pizer said.

He said the company has also upgraded its portal, Breakthru Now, to provide an improved buying process. "It was developed in partnership with our suppliers to expand exposure of their brands and allow customers to manage their business anytime, anywhere."

Such portals also ensure a brand's place on a digital wine aisle that is growing increasingly crowded. "You may not need to romanticize the liquid

in the same way: it's a different conversation, but there's a huge opportunity for suppliers to be talking to retailers and optimizing their content for that," he said.

According to 3X3 CEO Mike Provance, national brands have typically been out in front of retailers when it came to digital marketing, yet COVID-19 forced the current surge in B2B e-commerce because retailers needed to catch up.

Prior to the pandemic, Provance said the percent of retailers that offered e-commerce was likely in the single digits and now that's grown to a third or as much as half. "There's a lot of catching up that a lot of the stores are doing," he said.

Data-driven alcohol marketing network, 3X3, draws information from more than 1,000 independent retailers and more than \$14 billion worth of transactions. The data has enabled the company to build shopper profiles for different categories and track them over time. Companies with new products or growing brands can use 3X3's data for targeted, project-based marketing, and retailers, in turn, use the data for seasonal or occasion-based marketing.

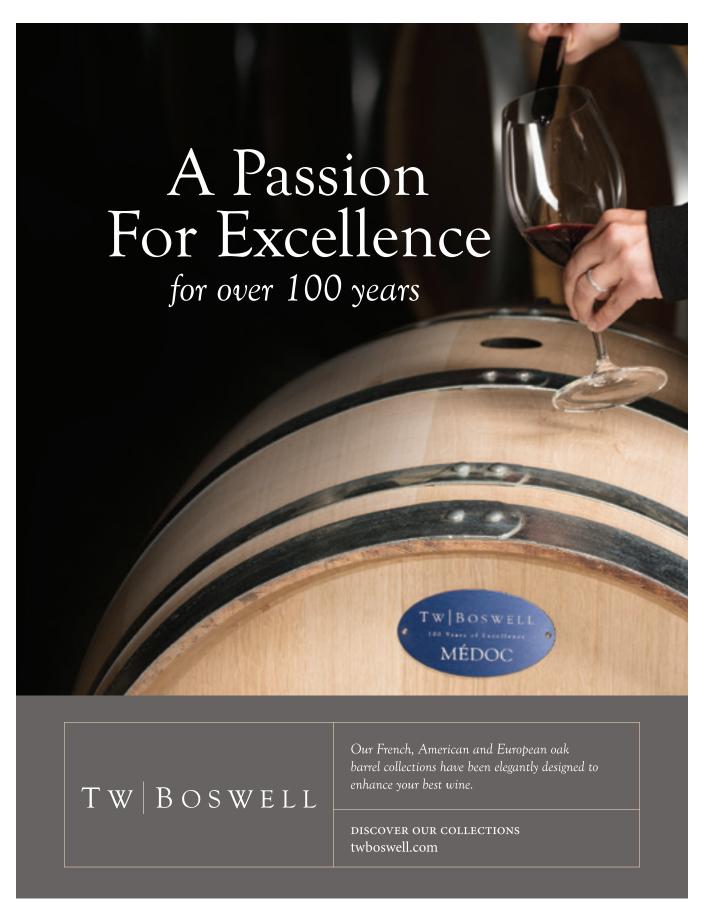
In step with the rapid adoption of e-commerce, the legal wrangling over retailer DTC shipments continues. The opportunity for shoppers to peruse the digital aisles of retailers in other states and then get their purchases shipped to them at home could radically change the off-premise market further.

On Oct. 12, the U.S. Supreme Court declined to take up a lawsuit that challenged Missouri's law barring out-of-state retailers from shipping to

residents there. That case is one of several that have the potential to either open the United States to retailer DTC or further restrict it.

In a webinar hosted by Wine Industry Network in September, Tom Wark, executive director of the National Association of Wine Retailers and a long-time advocate for liberalized retailer shipping, said the coming year has the potential to further remake the beverage alcohol market.

Wark noted that cases similar to the one recently declined in Arizona, Indiana, Ohio, North Carolina, Rhode Island and New Jersey may also lead to a decision by the highest court. "I think 2022 will be a fascinating year for beverage alcohol regulation and compliance," he said. "We're going to see a lot of decisions come down on a lot of these lawsuits, and I'm looking forward to that." **WBM**



The Pandemic Domino Effect: Shipping Backups, Packaging Unavailability and Cost Increases

While smaller harvests have mitigated a grape surplus and brought supply into balance, wineries still see supply chain disruptions for packaging materials—despite producing fewer cases.

Michael S. Lasky

ADAM SBRAGIA, WINEMAKER AT the 15,000 case Sbragia Family Vineyards in Geyserville, Calif., concisely summed up the dilemma now faced by both small and large wineries: "I'm having to plan for glass when I don't even have the grapes and seller yet. It's definitely been difficult just trying to obtain glass. Even when you do finally get glass, it arrives later than when you wanted it." For his 2022 bottling run, he had to order glass before September 2021; but as he said, pile-ups at the ports mean that he still may not receive his order when expected.

"The worst part of this situation is the prices are just going up and up, not just for glass but corks, foils and labels, too," he added. "Just one example of this domino effect is pallet prices. They have doubled from \$7 to \$14 each because of lumber availability and the transportation to get them delivered."

Sbragia's plight is not isolated. He ostensibly could be speaking for all wineries, no matter their size.

With more than 6 million cases sold annually, the 40-brand Jackson Family Wines (JFW) certainly has muscle in the wine industry. But just like the relatively small Sbragia Family Vineyards, it too is also a victim of the global supply chain crisis.

"The single biggest problem in the last six months has been just the availability of glass and glass suppliers being able to meet our quantity needs and schedule volume needs," Mike Eaton, JFW's senior vice president, supply chain, noted.

Eaton told *Wine Business Monthly* that JFW uses predominantly domestic glass, about 90 percent. "But domestic suppliers don't have enough capacity to meet all wine business needs, and we have come to rely on a chunk of imported glass to fill in what domestic suppliers can't fulfill," he explained.

There are three other issues that are complicating the shortage: an increase in demand as the economy recovers from the pandemic, programmed shutdowns of furnaces (which cannot be restarted) and a dwindling labor force.

"What we have encountered is not enough labor at the ports, not enough labor to move the containers off the ships, not enough truck drivers to move the unloaded containers and not enough place in the ports to store offloaded containers that await the truck drivers," Eaton said. "This has just backed up the entire global supply chain, and wineries and other consumers are feeling the result."

Like other wineries, JFW now needs to order glass 120 to 180 days out—at least double the time it would take before—and that is not even a guarantee. "The glass companies are saying they're committing to us inside 30 days or telling us within 30 days, 'I can't meet all your volume. Or I can meet part of it," Eaton said. "The problem is they're not able to give what they're committing to. That's our biggest issue we have right now."

The Domino Effect: Lead Times for Ordering Most Packaging Supplies Can Be Half a Year Now

What Jackson Family Wines is experiencing is consistent with every winery *WBM* queried for this report. "We, as a business, have always planned long term, and now we are planning double long term," said Stephanie Hoenig, director of international sales and public relations for Napa Valley's Hoenig Vineyard and Winery. "We've been trading one problem for another."

In this climate, Hoenig would have had trouble purchasing and receiving barrels for the winery's 2021 Rutherford Sauvignon Blanc, which sees a bit of oak. However, because smoke taint from the Glass Fire meant they were not able to produce any red wine in 2020, Hoenig was able to use barrels from 2020 on the 2021 Sauvignon Blanc. "That saved us from having to hunt down barrels now," she said.

Despite all the chaos in the supply chain, Hoenig reports that being nimble has helped her source much-needed supplies. "Glass from the U.S. dried up, so we ordered from China. But getting it across the ocean and off the ship and out of the ports is mired in unplanned delays. Our next batch of glass is coming from Chile, of all places," she said.

JFW's Eaton offered further concern: "Everything that is imported is an issue and has been for at least half a year. Then on the other side, pushing finished case goods out to distributors is also another cause for anxiety because there's a trucking shortage. And that's, again, tied back to the truck drivers' lack of availability."

Another emerging supply-side issue that's vexing the wine industry is a shortage of paper-based packaging, from the cardboard needed for wine

2021's Smaller Harvest is a Blessing in Disguise

While total grape harvest numbers vary from one AVA to the next, anecdotal reports indicate that, overall, the 2021 harvest is down by 25 to 30 percent. This follows a smaller crop in 2020.

Two years of smaller harvests are a blessing in disguise for a pair of reasons. The first is obvious: At the start of 2020 the wine industry was dealing with a mammoth grape surplus, and the two years of short harvests helped bring grape supply into balance.

The other reason is more subtle but still salient: The pandemic-fueled global supply chain crisis has walloped the wine industry hard, making obtaining glass and other packaging difficult to fulfill timely—or even at all. A shorter harvest means wineries will need less glass and other packaging supplies than in previous, more robust, harvest years.

For instance, Jason Haas, general manager at Paso Robles-based Tablas Creek Vineyard, reported harvest totals down about 27 percent because of a cold winter and drought. The reduction means less wine goes to bottle, which can be interpreted as a plus, considering how hard it is to get glass and for it to arrive on time.

Jackson Family Wines' Mike Eaton offered the following: "The 2020 smaller harvest coming through was actually welcomed timing. And then the smaller 2021 vintage will help us recover from the previous oversupply. True, this can mean fewer bottles to order, but there is a lag to bottling as it doesn't occur until a year or two later from the vintage. That's perhaps the timing we need to overcome the current supply issues."

cartons to the labels on the bottles—even the adhesives needed to affix the labels are in short supply.

Logically, it might be assumed that if paper labels are hard to come by, wineries would consider screen printing on glass. But according to Mike Bergin, president and CEO of Napa's Bergin Screen Printing and Etching, that is not the expected scenario.

"We have to be extremely nimble with our schedule now," he said. "Our winery clients are frequently calling us to plead for extra time to deliver their bottles for printing because those bottles are still sitting on shipping containers. Our issue is not clients who want to switch to screen printing because they can't get labels."

Locally, Wineries Wait for Trucks

The cascading effect on fulfilling customer orders has meant that large multiwinery companies, like Jackson Family Wines, are working 90-plus days out with wholesalers on scheduling trucks to ship finished case goods.

This has been an irksome situation for Farrah Fenton-Jolley, vice president of sales and marketing at Lodi, Calif.-based Klinker Brick Winery. "For us, the major reason for increased costs is not being able to get our logoed cardboard cartons. Our glass is arriving in white content boxes instead of the logoed ones with our brand. This has resulted in an additional expense of having to repack the bottles from the generic boxes into our labeled boxes," explained Fenton-Jolley.



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The Pandemic Domino Effect

Adding to the current woes at Klinker Brick is finding local truckers to come by and pick up the winery's case goods from the warehouse to deliver to distributors and retail accounts. "We've experienced backlogs; for example, orders we have had ready to ship since last September didn't get picked up for a month or longer," Fenton-Jolley said.

Kevin Luther, owner of Voluptuary & Lucid Wines, an 8,000 case winery in Sacramento, could be speaking for all small-scale operations: "We are a small winery, and as small wineries go, we're a little more cash-strapped. With the prices for all supplies doubling and tripling, we are getting squeezed, trying to eat the extra expense and not raise our wine prices."

Plan for Delays, Be Patient and Be Flexible

"The first piece that most people probably don't realize is that the U.S. wine market has increased its imports of bottles from 27 percent, back in 2007, all the way up to 38 percent in 2020," said Kathy Brooks, senior vice president at global packaging giant, TricorBraun. "That's approximately 100 million cases of glass that come from outside of the U.S.

"When then you factor that into all the global issues that we've all been facing since the onset of COVID, it's been incredibly challenging to get that glass into the U.S. with obviously all the out-of-sight container prices and the ports being overwhelmed to boot," she added. "Compound that with China being probably the largest exporter and China's most recent struggles with their energy crisis, which has reduced the capacity of the factories by about 50 percent."

The glass vendors are also feeling the crunch for cardboard, which has resulted in 10 to 12 week delays on top of the three to four weeks it would usually take.

Much of this time delay can be mitigated by adjusting expectations, said Brooks, but the sentiment is felt by many others.

"To be perfectly honest with you, if wineries didn't have their 2022 orders in by last September, they're going to be in trouble for the entire year," said Kristin Bongiovanni, marketing coordinator at TricorBraun WinePak. "Every glass manufacturer is at max capacity, sold out or oversold. Every single one. What we are trying to do is bring on as many more suppliers as distributors. We're working with suppliers in other countries to try and get some of their capacity so that we could supply the U.S. wine market."

Since the third quarter of 2021, TricorBraun, like all other glass suppliers, has paid a premium to secure a container, even with no promise it would be put on a ship. "Fortunately for TricorBraun," Bongiovanni said, "we are able to pay that premium and secure containers, but maybe half the amount we really need."

Bongiovanni estimates the cost for glass is 50 percent higher than what it normally would be. "It all boils down to the law of supply and demand."

So, what does TricorBraun tell its customers about this predicament? "We're just telling them to plan for delays, be patient and be flexible. If they can be flexible and take a bottle that normally they wouldn't use but it's what we have available, that's going to be their best success for 2022," Bongiovanni said.

She realizes that a lot of their winery customers have an issue with this as they're trying to schedule mobile bottling lines, but there's not much anyone can do other than try to build in as much time as possible.

While experts claim that the supply chain won't be fixed anytime soon and any remedy might seem like putting a Band-Aid on a coronary, there is one factor that does mitigate this wine industry stress: the projected 2021 harvest figures. **WBM**



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PACK DESIGN SHOWCASE

A One-Finger Salute from Napa's Tank Garage

Tank Garage Winery

Napa, Calif. | tankgaragewinery.com

ANNUAL CASE PRODUCTION: 10,000

AVG. BOTTLE PRICE: \$45
FEATURED WINE: Middle Finger

DESCRIBED AS A "giant, luxurious f—k you to 2020," Middle Finger by Tank Garage Winery features a simple label adorned with just one image that speaks volumes.

An entry in the Classic category of the 2021 Pack Design Awards contest, the label earned praise from the judges who said the attention-grabbing image also effectively communicated the winery's ethos. Everything else in the brand's packaging—black wax capsule over a cork and white label—serves as a simple canvas to let the original, high-impact art elevate the wine's profile.

The limited-production run of 325 cases sold out within hours and remains one of the winery's most sought-after brands but don't expect a return of the image or the brand, and that's at the core of the winery's business plan. "While Middle Finger was one of our fastest-selling wines ever, we aren't going to simply milk the design," said general manager Ed Feuchuk. "Though this strategy may limit short term sales, we like to think it challenges us to be creative and evolve, which ultimately is more valuable to our wine brand." Feuchuk said the winery's brand strategy is similar to how Nike or Supreme will produce limited runs of footwear that can sellout in minutes. "All of our wines are limited-edition, one-time drops, meaning once we sell out of a particular blend, we never make them again," he said.



Packaging Vendors

DESIGNERS: Alessandro Paglia, James Harder
BOTTLE VENDOR: Berlin Packaging
CLOSURE VENDOR: Amorim Cork America
CAPSULE VENDOR: Kingswax
LABEL VENDOR: MCC

Middle Finger was the result of a collaboration with Italian artist Alessandro Paglia who created a sculpture of the hand, and Feuchuk created an image of the sculpture that was used for the label printed by MCC. The brand is just one of more than 150 released by the winery since it opened in 2014, and each had distinctive, artistic labels. Nearly all were designed by James Harder who co-founded the winery with vintner and grower Jim Regusci. Harder also founded James Cole Winery with his wife, Colleen, and prior to that had risen through the ranks to the post of vice president of marketing for Vincor International, which at the time was the largest wine company in Canada and one of the largest in the world.

In addition to the eclectic labels, Tank Garage operates a tasting room in a renovated gas station from the 1930s. Located on Highway 128 in Calistoga, Calif., the tasting room is in what would have been the service bay of the gas station that still bears its original Art Deco curves and a couple of restored, antique gas pumps out front. What may have been an incongruous mix of Napa Valley winery and car repair is instead both traditionally familiar and unique.

It's not unlike using a universally known hand gesture on the staid format of a wine bottle to create a cathartic send-off to what had been a very miserable year for most. **WBM**

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RETAIL SALES ANALYSIS

Retail Wine Sales Down 9 Percent in October

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 9 Percent in October

Off-premise table wine sales fell nearly 9 percent versus a year ago in the four weeks ended Nov. 6, NielsenIQ scan data showed, totaling \$1.2 billion. Sales for the latest 52 weeks totaled \$16.3 billion, down nearly 5 percent from the previous year. With four-week periods since June posting declines in sales value versus last year in the order of 9 percent, the impact of the pandemic on sales is becoming clearer. While wineries face a fight for market share, NielsenIQ data indicates that sales through the outlets it tracks are up more than 9 percent versus two years ago.

Sales Volume Down 11 Percent in October

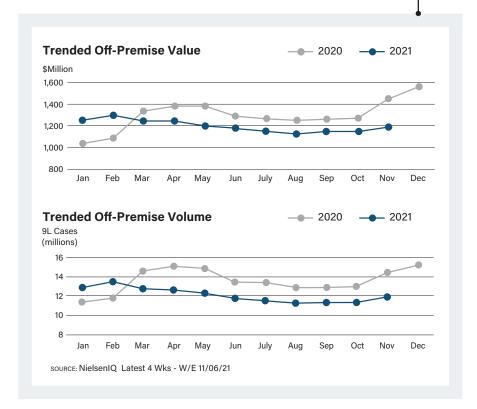
Off-premise table wine volumes dropped 11 percent versus a year ago in the four weeks ended Nov. 6, totaling nearly 11.9 million 9L cases. Case volumes in the latest 52 weeks declined 9 percent versus a year earlier to 163.8 million 9L cases. While sales volume declined almost in step with value during the latest four weeks, the sharper drop in volume versus value in the latest 52 weeks pointed to a shift among consumers to more expensive purchases.

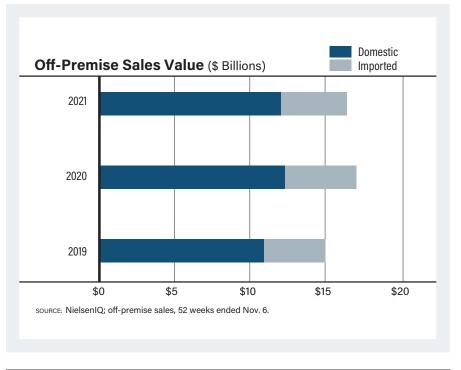
Imports Retain Pandemic Gains

One of the trends many observers have identified in recent months is the growth of imports. A number of factors are supporting the growth. The settlement this past spring of a tariff dispute with the European Union has made the U.S. a more attractive destination for wines from France, Spain and Germany and other producers. Consumers have also shown a willingness to purchase imports over domestic wines.

NielsenIQ data for the 52 weeks ended Nov. 6 show that sales of imported wines fell 6 percent in the latest 52 weeks to \$4.5 billion after rising more than 17 percent last year. The shifts outpaced the category as a whole on both counts, but came off a low base relative to domestic wines. According to NielsenIQ, imports claim a 27 percent of sales value. Domestic wines, with a larger share of off-premise sales, saw slower growth that imports last year, rising 13.5 percent, while sales this year fell just 4 percent.

But as the pandemic recedes and consumer behavior stabilizes, the numbers reveal that imports have done a better job of holding onto last year's gains. Versus the comparable period of 2019, sales of imports have increased 10 percent while domestic wines are up just 9 percent. The shift is even more pronounced when case volumes are examined, with the volume of imports up more than 2 percent in the latest 52 weeks versus two years ago, and the volume of domestic wines down 1 percent.





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.

NielsenlQ Table Wine Category Segments MARKET: Total US xAOC+Conv+Military+Liquor Plus PERIOD: Week Ending November 6, 2021

		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 11/06/21	Latest 4 Wks - W/E 11/06/21	Latest 52 Wks - W/E 11/06/21	Latest 4 Wks - W/E 11/06/21	Latest 52 Wks - W/E 11/06/21	Latest 4 Wks - W/E 11/06/21	Latest 52 Wks - W/E 11/06/21	Latest 4 Wks - W/E 11/06/21	Latest 52 Wks - W/E 11/06/21	Latest 4 Wks - W/E 11/06/21
}	TOTAL TABLE WINE	16,342,598,301	1,196,636,826	-4.7	-8.5	163,803,067	11,932,713	-9.0	-11.3	8.31	8.36
	вох	1,609,934,673	121,007,704	-6.7	-8.6	36,496,049	2,741,896	-7.9	-8.6	3.68	3.68
(0	\$0-\$3.99	579,177,246	42,484,964	-10.6	-10.9	19,439,019	1,431,222	-10.8	-10.5	2.48	2.47
lers	\$4+	1,030,671,730	78,513,331	-4.4	-7.4	17,055,348	1,310,496	-4.3	-6.4	5.04	4.99
I	Total Table Wine Glass	14,392,238,263	1,050,408,172	-4.6	-8.7	123,504,283	8,914,244	-9.6	-12.3	9.71	9.82
00	Value Glass \$0-\$3.99	516,409,937	36,560,442	-17.3	-17.4	12,801,731	905,738	-18.1	-17.6	3.36	3.36
PRICE TIERS BY CONTAINERS	Popular Glass \$4-\$7.99	2,860,271,531	203,437,071	-14.0	-14.8	42,635,451	3,020,515	-14.7	-15.5	5.59	5.61
	Premium Glass \$8-\$10.99	3,358,317,185	246,112,104	-9.8	-13.5	29,274,362	2,142,986	-10.1	-14.0	9.56	9.57
	Super Premium Glass \$11-\$14.99	3,583,921,721	260,214,764	-1.4	-7.8	23,559,513	1,702,285	-1.7	-8.1	12.67	12.73
8	Ultra Premium Glass \$15-\$19.99	1,940,463,656 763,814,767	146,939,762	4.0	-0.8	9,433,783	717,893	3.3 5.4	-0.6	17.13	17.05 21.68
	Luxury Glass \$20-\$24.99 Super Luxury Glass \$25+	1,358,550,409	54,991,976 100,521,031	4.7 14.8	-2.9 5.5	2,951,714 2,801,794	211,281 204,986	11.3	-2.3 1.9	21.56 40.39	40.85
	IMPORTED	4,483,314,329	318,798,445	-6.3	-10.0	43,409,799	3,093,802	-9.4	-12.3	8.61	8.59
	ITALY	1,479,451,508	105,650,106	-4.1	-8.6	11,904,872	847,904	-6.8	-10.4	10.35	10.38
	AUSTRALIA	703,494,011	50,358,799	-12.3	-16.1	11,244,149	804,500	-12.7	-14.9	5.21	5.22
	FRANCE	622,656,376	41,301,686	-2.3	-7.0	3,446,108	218,493	-6.2	-14.7	15.05	15.75
8	CHILE	372,733,715	27,704,829	-11.7	-13.6	6,390,490	480,839	-10.8	-11.7	4.86	4.80
IMPORTED	SPAIN	154,704,417	11,180,058	-7.3	-15.3	1,131,097	81,374	-13.2	-20.5	11.39	11.45
₹	GERMANY	81,348,574	5,996,947	-9.7	-5.5	699,804	49,954	-13.0	-9.7	9.69	10.00
	NEW ZEALAND	633,723,348	45,217,509	-0.8	-2.2	4,387,945	309,724	-2.3	-3.5	12.03	12.16
	ARGENTINA	321,275,996	23,428,830	-12.2	-15.5	3,265,383	235,722	-15.2	-17.1	8.20	8.28
	SOUTH AFRICA	27,004,232	1,926,364	-4.8	-12.8	223,195	15,790	-4.4	-14.6	10.08	10.16
	PORTUGAL	50,366,325	3,556,412	-5.4	-10.7	498,937	34,803	-6.2	-12.4	8.41	8.51
	DOMESTIC	11,859,283,972	877,838,381	-4.1	-8.0	120,393,268	8,838,910	-8.8	-10.9	8.21	8.28
	CALIFORNIA	10,640,631,585	791,409,555	-3.9	-7.4	111,027,204	8,182,400	-8.9	-10.5	7.99	8.06
	WASHINGTON	630,180,455	43,369,941	-9.5	-17.1	5,019,306	340,993	-10.9	-18.4	10.46	10.60
DOMESTIC	OREGON	311,731,398	23,350,741	3.7	-6.7	1,538,734	113,544	1.7	-8.5	16.88	17.13
OME	TEXAS NEW YORK	32,950,142	2,354,070	-9.6 -9.5	-9.8	362,598	25,780	-10.6 -13.0	-10.7 -12.0	7.57	7.61 7.03
	NORTH CAROLINA	42,662,905 45,355,395	2,477,878 3,279,803	-9.5 -0.8	-4.1 -5.1	465,192 464,062	29,382 32,587	-13.0 -1.6	-12.0	7.64 8.14	8.38
	INDIANA	26,085,404	1,813,422	-2.5	-5.9	281,241	19,523	-2.5	-6.4	7.73	7.74
	MICHIGAN	27,268,214	2,588,903	-2.4	-15.8	274,809	27,025	-4.9	-18.7	8.27	7.98
(0	RED	8,533,644,354	643,773,524	-4.0	-9.4	75,152,217	5,625,968	-9.3	-12.8	9.46	9.53
TYPES	WHITE	6,563,999,840	473,396,662	-4.8	-6.5	72,595,399	5,237,061	-8.1	-8.8	7.53	7.53
_	PINK	1,238,765,694	78,281,090	-8.6	-12.2	16,007,503	1,060,849	-11.9	-14.2	6.45	6.15
	TOTAL CHARDONNAY	2,737,454,833	200,009,436	-5.1	-6.9	29,739,653	2,164,850	-8.3	-9.3	7.67	7.70
	TOTAL CABERNET SAUVIGNON	3,195,931,069	242,232,834	-2.0	-6.9	26,214,583	1,985,768	-8.1	-10.9	10.16	10.16
	TOTAL PINOT GRIGIO/PINOT GRIS	1,475,601,111	107,958,254	-4.9	-5.0	18,336,323	1,348,834	-7.1	-6.2	6.71	6.67
	TOTAL PINOT NOIR	1,342,806,121	102,910,093	-1.0	-7.1	9,285,791	706,367	-5.9	-10.2	12.05	12.14
	TOTAL MERLOT	661,448,605	47,661,520	-11.6	-14.5	8,443,908	609,119	-15.0	-15.8	6.53	6.52
S	TOTAL SAUV BLANC/FUME	1,280,675,752	92,929,678	0.7	-1.4	10,751,253	778,494	-1.4	-3.6	9.92	9.95
VARIETALS	TOTAL MUSCAT/MOSCATO	649,204,079	43,179,023	-12.5 -13.2	-15.0 -14.3	9,175,363	613,275	-15.0 -14.5	-16.5 -14.4	5.90	5.87
ARIE	TOTAL WHITE ZINFANDEL TOTAL MALBEC	245,262,849 252,491,380	16,968,170 18,823,320	-13.2 -11.4	-14.3 -14.6	4,774,643 2,246,957	332,506 168,406	-14.5 -13.6	-14.4 -15.3	4.28 9.36	4.25 9.31
>	TOTAL RIESLING	242,454,790	16,610,837	-11.4	-14.6 -13.6	2,430,391	165,932	-13.0	-15.5	9.36 8.31	8.34
	TOTAL ZINFANDEL	227,583,275	17,982,865	-8.6	-12.4	1,495,358	119,727	-12.2	-15.2	12.68	12.51
	TOTAL SHIRAZ/SYRAH	134,796,397	9,578,098	-13.7	-20.5	1,362,482	95,557	-18.3	-22.7	8.24	8.35
	WHITE BLENDS (ex. 4/5L)	255,139,586	17,468,641	-6.0	-12.8	2,773,485	193,713	-10.3	-12.8	7.66	7.51
	RED BLENDS (ex. 4/5L + CHIANTI)	2,238,050,634	169,218,998	-3.2	-11.0	18,623,847	1,391,262	-7.3	-14.8	10.01	10.13
	ROSE BLEND	706,102,918	41,776,812	-5.5	-10.4	5,536,085	334,646	-8.7	-14.1	10.63	10.40
	750ML	12,154,979,570	887,126,180	-3.1	-7.9	86,472,118	6,254,458	-7.6	-11.4	11.71	11.82
ES	1.5L	1,947,492,639	141,071,680	-13.3	-13.3	32,210,175	2,307,308	-14.2	-14.2	5.04	5.10
GLASS SIZES	3L	53,882,933	3,754,527	-15.5	-18.2	1,261,554	87,991	-16.1	-17.6	3.56	3.56
ASS	4L	70,355,181	5,171,828	-12.7	-12.7	2,159,651	158,001	-13.8	-13.7	2.72	2.73
9	187ML	95,265,878	7,587,886	-9.2	-17.7	1,075,797	81,548	-11.6	-17.1	7.38	7.76
	375ML	50,103,050	4,030,712	46.6	18.0	194,933	15,899	52.2	22.0	21.44	21.14
BOX SIZES	ex. 4/5L	1,125,745,588	85,349,311	-5.3	-7.7	19,587,765	1,493,516	-5.7	-7.0	4.79	4.76
	1L	33,478,905	2,606,985	-6.9	-4.3	475,628	37,143	-7.4	-2.6	5.87	5.85
	1.5L	20,493,115	1,424,971	-23.1	-21.2 10.9	387,048	26,257	-25.2	-26.0	4.41	4.52
B0	3L 5L	840,813,995 484184 938	62,729,403	-6.9 -9.8	-10.8 -10.7	15,887,714	1,201,806 1,248,367	-6.3 -10.2	-8.6 -10.4	4.41 2.39	4.35
	TETRA	484,184,938 265,123,887	35,657,872 21,244,495	-9.8 2.1	4.0	16,908,181 3,320,038	1,248,367 265,951	-10.2	-10.4	6.66	2.38
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Accounting Challenges in a Post-COVID World

Jamie Emerson-Heery

Jamie Emerson-Heery is a senior manager in the Assurance and Advisory practices at BPM, a top 50 accounting and advisory firm with more than a dozen offices across the West Coast. He has more than 12 years of experience in public accounting. Emerson-Heery currently focuses on performing financial statement reviews and year-end audits for businesses in various industries, including numerous wineries and grape growers.

VITICULTURE, LIKE ANY AGRIBUSINESS, is constantly filled with significant risks and rewards. But once the vines are pruned and readied for the start of the growing season, a lot of the success or failure for the harvest is out of the vintner's hands. The list of possible threats to the crop is long, but the most common are severe drought or insufficient water, sudden cold snaps that could damage the grapes, pests like mites and mealybugs, and wildfires that can burn the crop or contaminate the wine with smoke taint. But as we all discovered just over a year ago, there is also the risk of a once-in-a-lifetime event, like a global pandemic, to churn even the healthiest wineries' books.

Many California wineries faced significant challenges even before the COVID-19 pandemic hit. Fluctuating bulk grape and wine prices made it a challenge to forecast future market value. In the years leading up to 2019, for example, harvests were on the large side, but wine sales did not grow at the same rate. This abundance in supply combined with stable demand resulted in price slippage. It was the typical supply-demand curve in all its glory.

If that was not bad enough, in March 2020, the pandemic caused lock-downs across North America and the world. Unlike other parts of the economy, the wine industry actually fared reasonably well in the early stages of the pandemic as people flocked to stores to stock up on staples, like toilet paper and alcohol. This allowed many wineries to clear out their inventory. A survey of California winemakers recently conducted by BPM found that despite the down economy, sales actually grew in a number of key areas. Wineries that reported up to a 10 percent increase in sales saw more than 34 percent of that new revenue coming from within California, with New York (7.4 percent), Florida (7.3 percent) and Texas (6.6 percent) with the most significant areas of growth outside California. For wineries that saw sales increase by more than 20 percent, the largest growth area was also in-state, soaring by nearly 54 percent.

Wineries with a business model built on direct sales to restaurants or tasting room visits needed to pivot quickly last year to find new revenue channels, such as a retail sales model. Making this kind of significant change is not easy, and not all wineries that attempted it were successful. Many California wineries struggled to stay in the black over the past year, and some have even opted to skip making a 2020 vintage wine altogether. Others, if they were financially able to do so, took a more aggressive position and bought more bulk wine to take advantage of the spike in alcohol sales.

In 2020, wine-growing regions up and down the West Coast faced further challenges with multiple wildfires. The Glass Fire in Napa and Sonoma counties burned more than 67,000 acres of vineyards and destroyed or damaged structures at nearly 30 wineries. Many wineries that managed to avoid direct damage from the fires needed to deal with another challenge: smoke taint. The regular intake of red winegrapes harvested in 2020 was cut by about 40 percent over usability concerns due to smoke contamination. As a result, some vineyards decided not to harvest any grapes and instead filed insurance claims because their crop was spoiled. Others took risks and harvested more grapes than usual so they could experiment and find innovative ways to remove the smoke flavor and aromas from the wine.

The impact of all these external challenges varied depending on a winery's business model. The BPM survey found that last year's tumultuous events impacted a majority of respondents: Around 80 percent of wineries that own their vineyards reported medium to extreme disruptions while only 60 percent of virtual vineyards (wineries that sell finished wines from a variety of sources) felt the same. While the survey shows that nearly all participants felt affected by these external events, the data also show that experience counts. Wineries established more than 30 years ago reported significantly less disruption compared to more recently started operations. One explanation for this is that owners and key decisionmakers at older wineries have experienced previous crises and were better prepared and equipped to deal with the challenges of 2020.

There is still much uncertainty over the wine industry's immediate future. While the vaccine rollout has been successful across the country, we do not know if retail consumers will continue to purchase large amounts of wine for consumption at home. Will sales revert to pre-pandemic levels and will



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people return to eating in restaurants? For growers on the West Coast, there are recurring challenges. Much of California is categorized as either in an extreme or exceptional drought category by the U.S. Drought Monitor. And so far in 2021 there have been nearly 5,000 wildfires burning across the state. All of this has set up some unique challenges for the wine industry in 2021 and probably for years to come. For accounting purposes, here are three areas where issues could arise.

Paycheck Protection Program

The Paycheck Protection Program, or PPP, was one of the first COVID relief programs for businesses that President Trump signed in March 2020. The purpose was to offer small businesses low interest (and potentially forgivable) private loans to help cover payroll and other expenses. The idea was that the money would help workers continue to receive a wage and retain health insurance coverage. Thousands of companies across the country took advantage of this program, so this issue does not just affect the wine industry. However, figuring out how to properly account for PPP can be a challenge. Is it a loan or a grant? If a company is notified of forgiveness, should that be presented in the financial statements?

There are other accounting issues regarding the PPP loan for businesses in California. Federally, loan proceeds used for expenses, such as payroll, rent and other eligible costs, are considered deductible expenses and will therefore reduce the business' taxable income. However, California's state tax law does not entirely follow suit. For a company to be able to deduct these expenses, it has to show that gross receipt income declined during the period it accepted PPP, compared to the same period in the previous year. If the revenue did not go down, a business must report the loan proceeds as income on its state tax return. For nuanced accounting rules like this, it is highly recommended that any business in this situation speak with a tax professional.

Interest Rate Swap Agreements

Many wineries (and other businesses) use interest rate swap agreements as a cash flow hedging instrument. During times of economic uncertainty, interest rates can fluctuate and are currently at historic lows. The way swaps work is that a company with significant debt can lock in a fixed rate of interest in exchange for a variable-rate payment from the bank. The idea is to mitigate the risk of fluctuating interest rates during times of economic uncertainty. The challenge for this is recording it accurately for financial statements. There is a value to the swap agreement that may need to be registered as an asset or liability. The corresponding fluctuations are recorded as gains or losses on the income statement.

Pivoting to Retail Sales

Many wineries employed a business model to sell their vintages directly to restaurants or consumers through tasting rooms. However, the pandemic-imposed lockdowns effectively shut down these types of sales, requiring the vintner to pivot to new revenue channels to stay in business. For some, this entailed working with a distributor to ensure that products got into stores and on the shelves. This new business model also requires new accounting methods, and these wineries now need to keep track of novel expenses associated with this practice, including the price and discounts they give to distributors, plus adjustments like depletion allowances (a system where the winery could knock a couple of dollars off a case to help with sales promotions).

There are also possible accounting pitfalls for wineries that started using the direct-to-consumer model, the most pressing being collecting state sales tax. Up until 2018, retailers were not required to collect sales tax in states where they did not have operations (e.g., stores, warehouses, offices, etc.). Under the law at the time, states were barred from collecting tax on mail order or internet sales. As online shopping started to boom over the past decade, many states saw a steady decline in sales tax revenue. The Government Accountability Office estimates that in 2017 alone, states missed out on \$13 billion in sales tax revenue they could not collect.

However, the 2018 Supreme Court's South Dakota v. Wayfair ruling changed all of that. Fundamentally, this case gave states the ability to require retailers to collect and remit sales tax, even when they do not have a physical presence in the state. In response to this ruling, many states rushed to establish criteria for having an "economic nexus" in their jurisdiction. These criteria typically include a threshold of sales in a state that a retailer needs to hit before they are required to collect sales tax. For many states, this threshold is either sales over \$100,000 or 200 shipments. Since this is not a uniform threshold, make sure you check with individual states to ensure compliance with their nexus laws.

In this new reality, wineries that make direct-to-consumer sales out of state now have to keep tabs on the volume and value of transactions. If they meet the nexus threshold for, say, Mississippi, they would need to register with the Department of Revenue and charge, collect and remit the tax.

However, there is a workaround to this burden of collecting the tax, and that is the new marketplace facilitator laws that 46 states either have in place already or else will soon. A "marketplace facilitator" is a multi-sided platform, like Amazon or Walmar,t that connects small businesses with customers around the country or globe. When a winery (or other retailer) works with them, the facilitator lists the product, collects payment and may help facilitate shipments. Most importantly, from an accounting perspective, a marketplace facilitator takes care of collecting and remitting sales taxes to the various states.

Looking Forward

While most wineries have wrapped up their 2020 fiscal year, it is essential to know that these three challenges require an accounting professional with the expertise to navigate these unchartered waters and comply with U.S. Generally Accepted Accounting Principles (GAAP). Having the ability to account for pandemic-related challenges is essential for maintaining your financial records, where both investors and regulators will expect to see them detailed in reports. Finally, financial institutions will also require this documentation to ensure that a winery is complying with its financial covenants. Failing to address these issues could damage the relationship between the company and its financial institutions, so it is imperative to record all pandemic changes accurately.

As the vaccine rollout continues across North America, many businesses are returning to a near pre-pandemic normality. Restaurants are once again having indoor dining. More people are travelling to visit friends and family they have not seen in a while, and wineries across California are gladly receiving visitors to their tasting rooms and shops. The events of 2020 were unprecedented, but it was an experience that showed the importance of resilience and the value of quick, decisive action for many businesses. Exposure to these challenges can only make the wineries better prepared for any crisis in the future. WBM

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Wineries & Winemaking



Debbie Detrick

Dry Creek Vineyard hired Debbie
Detrick as chief financial officer.
Detrick directs all financial activities
for the nearly 50-year-old family
winery, including financial planning
and reporting, general accounting and
budgeting. Detrick takes the helm from
Dru Cochran, who has retired after 21
years as the CFO of the family-owned

business. Previously the director of finance with Clos du Val Winery, Detrick joins Dry Creek Vineyard with 20 years of experience in finance within the wine industry. Her prior roles included stints at Round Pond Estate, Pernod Ricard USA, Terlato Wine Group and Beam Wine Estates. Detrick holds a B.S. of Business Administration from Saint Mary's College and is a Certified Public Accountant.

Constellation Brands, Inc., a leading beverage alcohol company, appointed Billy Lagor as senior vice president, brand management, wine and spirits division. Lagor reports to Robert Hanson, president – wine and spirits division. Lagor oversees the organization responsible for brand management supporting the company's mainstream and premium wine and spirits brand portfolio. He guides the organization in driving innovative marketing strategies that support Constellation's strategic imperatives to drive growth, market share expansion, and consumer engagement. Previously, Lagor spent 15 years at Hasbro, Inc., most recently as senior vice president and general manager overseeing the company's global e-commerce and channel strategy.





Daniel DeBell



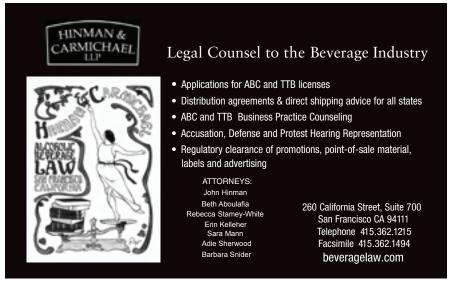
Marc Hurlbut

Daniel DeBell and Marc Hurlbut have been named to leadership positions at Hazlitt 1852 Vineyards. DeBell has been promoted to president and COO and Hurlbut to chief financial officer. John Keeler, who served as president starting in 2009 announced his retirement earlier this year. He will continue to serve during the transition. Before joining the Hazlitt team in 2011, Daniel DeBell worked for 19 years at the Goodrich Corporation, IRS Systems in Ithaca, NY. The management, negotiation, and problem-solving skills he utilized there as general manager has translated seamlessly into the wine business. Initially hired as general manager, he was promoted to executive vice president in 2015. Marc Hurlbut was hired as controller in February 2021. His 30 years of finance experience in the manufacturing industry quickly benefited financial operations at Hazitt's two production facilities and retail

locations in Hector, NY, and Naples, NY as well as the company's custom wine production business, East Coast Crush & Co-Pack. Before working at Hazlitt, Marc was the executive vice president finance administration at SYNTEC Optics, Wordingham Technologies in Rochester, NY.

Industry Services & Suppliers

Innerstave promoted Cody Ewers to vice president of global sales and marketing. Ewers previously served as Innerstave's U.S. sales and marketing director, reporting directly to president Steve Dorfman. He will continue to do so as he manages the global sales and marketing strategies for Innerstave beyond the U.S. In his previous role at Innerstave, Ewers helped Dorfman usher in a new era for the company with a fresh brand identity, new company culture and a revitalized commitment to innovation for the more than 40-year-old company. He also oversaw all domestic sales efforts and assisted in evaluating and forming new strategic partnerships.



Innerstave also appoiinted Lee Tatum as managing director, spirits, based in Louisville, KY. In his role, Tatum will manage the introduction of Innerstave's innovative products and services to the spirits industry to help spirits achieve a range of flavors, aromatics, and texture through the use of oak, micro-oxygenation and Fiber Infused Technology. Tatum brings nearly 30 years of experience in the wine and spirits industry, including a long and successful 23-year career at Brown-Forman, where he held several important roles, such as vice president, director of portfolio innovation, chief of staff to the CEO, Director of Business Development and new brand development, as well as a variety of additional executive positions.

Mazzei Injector Company announced Justin Bennett has been promoted to vice president of engineering and operations. Bennett began his journey with Mazzei in January 2005 and has performed in several key roles during his tenure. Since 2013 he has served as director of engineering and development overseeing Mazzei's production and design efforts. In addition, he coordinated with the sales and research and development teams on new product development and on optimization of existing Mazzei products. In this new role, Bennett will develop and implement long range programs to improve quality, timeliness of completion and cost efficiency of production and fabrication. Employee development, cross training and general risk management activities will be part of his focus also.

Associations & Education

Allied Grape Growers named Pam Bond as its North Coast operations support, effective Dec. 1. In her new role, she works closely with AGG's North Coast regional manager and grower relations representative, providing administrative support around contract negotiations as



Pam Bond

well as field support for grower relations. Bond worked with AGG through the 2021 harvest as a seasonal employee before accepting this full-time position. She previously worked for Swanson Vineyards and Winery in Oakville as director of vineyard and estate operations from 2010 to 2020 and as assistant vineyard manager from 2002 to 2010. Bond was a member of the California Department of Food and Agriculture's PD/GWSS Board from 2012 to 2020, including a one-year term as board chair.

Wine Institute appointed Geralyn Lasher as its director, Great Lakes States, effective Dec. 1, 2021. Lasher previously served as a commissioner on the Michigan Liquor Control Commission, where she was responsible for licensing, policy and enforcement of the state's liquor code. She also works with a wide range of partners in the alcohol beverage industry including brewers, distillers, distributors, retailers, suppliers and winemakers. Lasher's career includes extensive state government external relations experience. She served as senior deputy director for external relations and communications at the Michigan



Geralyn Lasher

Department of Health and Human Services, where she managed relationships with the statewide business community, not-for-profit organizations, governmental entities, universities and other stakeholder groups crucial to the department. **WBM**



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Celebrate

CHUY PALACIOS EXPERTLY TWISTED the cork on a magnum of Louis Bouillot Brut Rosé Crémant de Bourgogne. No loud explosion from the great chef, more like a soft pop followed by the effervescent bubbling of fine wine being poured into a glass. It's New Year's Eve at Jake Lorenzo's house; and if you didn't know better, you would think things were back to normal (except that all guests were required to be vaccinated and have booster shots where applicable; then we took the added precaution of administering COVID rapid tests the day of the event.)

Jake Lorenzo was outside under the carport, tending the crab pots. The propane tanks roared like jet engines and set the liquid in the pots boiling vigorously, exuding heavenly aromas of bay, lemon, garlic, onion and crab boil. I dipped my paddle into the broth, rubbed a finger along the surface and tasted it. I added a little more salt. Then I cut off the rubber bands that held the Dungeness crab claws shut and carefully put eight of the crabs into each pot. Once they had returned to a boil, I set my timer. Only then did I clink glasses with Chuy and sip some of the Crémant.

Exactly five minutes later, I shut off the propane and savored the quiet, now that the roar had subsided. I gave the crabs a stir, slapped Chuy on the shoulder and we went inside to wait the 45 minutes it would take for the crabs to absorb the flavor of the boil.

A dozen people meandered through the kitchen and living room, eating various hors d'oeuvres, sipping their sparkling wine and telling stories of how they survived these two years of pandemic. A long 12-foot table occupied the center of the room, covered in newspapers. This detective always likes to have a theme to my newspaper tablecloths. Two years ago, just before the

pandemic, we had two additional guests from Italy. For that dinner I tried to represent the Italian flag with a wide swath of the *Chronicle* Pink Section, a mid-segment of white front page news and a final band of the Sporting Green. This year we celebrated baseball and magical 107-win season for the San Francisco Giants, the crushing loss to the Dodgers in the

National League Division Series and the sad news of Buster Posey retiring.

Glasses were close to empty, so I opened a magnum of Breathless Sparkling Rosé and passed it around to those in need. The appetizers looked great. Since our guests bring them, we never know what we will be getting. (Well, we always have chopped liver from Dottie Snider. After all, that is a tradition for New Year's at the Lorenzo house.) Lan brought some delicate shrimp spring rolls with a spicy peanut sauce. We had smoked salmon dip from Ray, and Jakelyn's mother had made her Pissaladière tart. This detective wandered through the house, visiting friends, sipping wine and tasting food. Every 10 minutes, I'd go outside and stir the crabs.

After the crabs soaked for 45 minutes, Chuy helped me lift the baskets out of the boil to let them drain. A few more friends drifted out to the carport, eagerly waiting to see the pots carried inside and dumped on the table. I still had to cook the vegetables, so we popped the cork on a magnum of Jacquesson Brut Champagne. The deliciously yeasty Champagne inspired Dr. Iggy Calamari (inventor of the wine-powered pacemaker) to lecture us about Adolphe Jacquesson who invented the muselet cork stopper with the wire cage in 1844, allowing Champagne to be shipped relatively safely around the

world once they improved the original muselet design and created the méthode champenoise technique. Jake Lorenzo figured that Dr. Calamari told the story about Jacquesson's muselet as one inventor's sign of respect for another

ILLUSTRATION BY BOB JOHNSON

Champagne was a beverage rooted in jealousy. The Champenois wanted to produce wine that would rival the great wines of Burgundy. The cold weather of their northern clime made that impossible. Their grapes seemed to never get ripe enough, producing acidic wines with little varietal character. Harvesting late in the season, hoping for more ripeness, meant fermentations rarely completed before the onset of winter, which caused the wine to become saturated with CO₂. Burgundy it wasn't, but the Champenois still had to sell it, and they did.

Because French kings were traditionally anointed in Reims, the local sparkling wine was served at all the coronation celebrations. Royals took to Champagne like baseball fans to hot dogs. Champagne remained popular with royalty throughout the 17th, 18th and 19th centuries. Savvy producers always associated their wines with royalty which made it popular with the developing middle class. The advent of the muselet and the méthode champenoise technique caused dramatic growth in production. In 1800, production was 300,000 bottles. By 1850, it was 20 million bottles. Current production hovers at 300 million bottles with over \$5 billion in annual sales. Centuries of linking Champagne to royalty and luxury created its reputation as the perfect celebratory beverage. However, downing three magnums at Jake Lorenzo's house was enough of that celebrating. It was time for some real wine.

Because French kings were traditionally anointed in Reims, the local sparkling wine was served at all the coronation celebrations. Royals took to Champagne like baseball fans to hot dogs.

We carried the crabs into the house, dumped them on the tables along with the potatoes, artichokes, green beans and sausage, and started to chow down. Chuy and I opened a nice selection of white wines along with several Pinot Noirs and told guests to help themselves to whatever struck their fancy. (We did point out that the Navarro Gewürztraminer went particularly well with Cajun boiled crabs.)

The night went on for hours. All the food got devoured. Over a dozen bottles of fine wine were drained. People cheered as Jakelyn's mother rolled up the newspaper to collect all the crab detritus, and we stuffed it into a waiting garbage can. It sure beats washing dishes. Desserts were served, and guests left slowly as the designated drivers showed up. Those friends who were spending the night had a nightcap and drifted off to bed. Chuy helped me fold up the tables and take them out to the garage. We dumped the crab boil and rinsed the crab pots. Then we returned to the house, sipped a final Fuenteseca tequila with Jakelyn's mother and discussed what a great evening it had turned out to be.

The pandemic isn't over, but things are slowly returning to normal. That's cause enough to pop a cork on a bottle of Champagne and celebrate. **WBM**

Mabel Ojeda, winemaker, Bravante Vineyards, Napa, CA

"Wine Business Monthly keeps me up to date with industry innovations. Recently I checked out a very helpful product review: 'Barrel Cleaning and Sanitizing systems.' It really emphasizes how important sanitization is in winemaking, especially when you want take care of the health of your barrels. I also really like the Varietal Focus where you can check what other winemakers do—and I love that there is so much diversity in winemaking. It is very helpful and a good support to have access to different topics such as vineyards, production, sales and marketing. This shows you that we have a nice community in the wine industry, where sharing information and knowledge helps us to improve ourselves and embrace new challenges."



NAME & TITLE: Mabel Ojeda, winemaker

WINERY NAME AND LOCATION: Bravante Vineyards. Founded by George and Nancy Bravante in 1996, Bravante Vineyards features two acclaimed Howell Mountain estate vineyards planted by viticulturist Peter Murphy: the Stone Ridge Vineyard, which was planted in 1998 and is the home to the Bravante Winery and Cave, and the Black Oak Vineyard, which was planted in 2000. Together, these two sites are planted to all five of the red Bordeaux varieties, as well as the Sauvignon Blanc Musque clone, and are the source for all of Bravante's estate-grown mountain wines.

ANNUAL CASE PRODUCTION: 2,000 cases

PLANTED ACRES: Six acres in the Stone Ridge Vineyard and three acres in the Black Oak Vineyard **CAREER BACKGROUND:** I was born in Chile and earned my bachelor's degree in food engineering from Universidad Austral de Chile. I did my first harvest in New Zealand in 2011, and after the first day, I realized that this was what I wanted to do the rest of my life. The combination of the beauty of nature and science piqued my curiosity and made me eager to learn more about it. I decided to travel more to be able to get more experience and learn from different areas and winemakers. I spent several years doing internships in wineries throughout Europe, including harvests in France, Austria and Switzerland. I also worked in Napa, Australia, South Africa and Chile. I came back to Napa Valley in 2014, where I worked as assistant winemaker for Clos Du Val until joining Bravante Vineyards.

The amazing experience of meeting different people, cultures, wine styles and

winemaking techniques will be something for which I will always be grateful. I'm thankful to the people who trusted me and allowed me to take this amazing road where you get to keep learning every single day.

WHAT HAS BEEN YOUR BIGGEST

challenge thus far would be the combination of a global pandemic and wildfires during the harvest season in 2020: figuring out how to keep up the morale of my team (and myself) and how to adapt to new protocols to keep ourselves safe from a new virus, all while being able to keep running all the winemaking operations and maintain quality.

VARIETALS THAT YOUR WINERY IS KNOWN FOR: Cabernet Sauvignon, Cabernet Franc and Merlot.





LABORATORIES

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