

# WINE BUSINESS MONTHLY

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## VARIETAL FOCUS: **PINOT BLANC**

**PLUS: Smoke Exposure:**  
How to Determine if Fruit  
Has Been Compromised

## 2020 UNIFIED GUIDE

A preview of the Unified Wine & Grape Symposium



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## Making Great Pinot Blanc and Making the Most of Unified

**PINOT BLANC IS A** versatile French white wine variety first spotted in Burgundy and widely planted in Alsace. Most often used as a blender, it flies under the radar. Pinot Blanc, however, seems to be gaining notoriety.

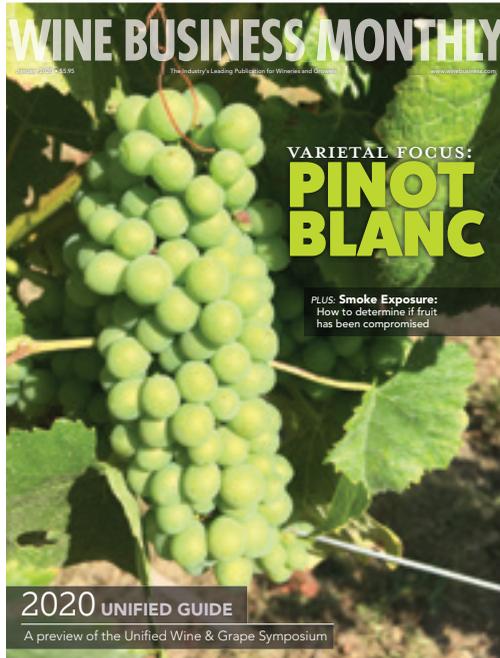
More than 1,400 hundred tons of Pinot Blanc were crushed in California in 2018, much of it in Monterey, and the average price statewide exceeded \$1,500 per ton.

Per Wines Vines Analytics, there are 137 wineries in North America making “Pinot Blanc.” Seventy of them are in Oregon, while 20 are located in British Columbia.

A grower in my neighborhood just pulled several acres of Chardonnay and replaced it with Pinot Blanc because a North Coast winery offered a lucrative contract.

This small rise in popularity of the grape spurred us to highlight Pinot Blanc in this month’s Varietal Focus. The intention with these Varietal Focus reports is to select a grape variety and see if terroir is ultimately a major determinant in the finished wine.

Three winemakers from each of three distinctive regions participated in tastings and joint discussions to identify regional characteristics. Varietal Focus reports feature winemakers talking about what they’re trying to achieve stylistically—and specifically about what they do to get there—while other winemakers assess how well they’ve done it. Including winemaker impressions helps readers assess how successful individual winemakers were in achieving their goals and determine which methods in the vineyard and at the winery translate into desired results. The feedback on specific wines can be revealing. In this case, Pinot Blanc from Oregon, The Okanagan and Mendocino exhibited clear differences in style.



The January issue also includes a preview guide for the Unified Wine & Grape Symposium. The symposium is a forum for discussing issues affecting the industry and is an opportunity for winemakers and growers to connect with suppliers. The “Unified Symposium Preview” (starting on page 17) offers a sneak peek at the newest products that will be exhibited during the show. It is truly amazing that there is so much innovation in the wine industry every year.

If you are attending the Unified Symposium, please come by and see us. Our staff will be exhibiting at booths P2246 and A122.

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# 2020 UNIFIED GUIDE

**PREVIEW GUIDE . . . . . 17**  
**CATEGORY INDEX . . . . . 18**  
**EXHIBITOR INDEX . . . . . 20**  
**PRODUCT LISTINGS . . . . . 22**

*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.

## winemaking

VARIETAL FOCUS:

# PINOT BLANC

..... 112



Lance Cutler

**PW PRACTICAL  
Winery & Vineyard**

**Impact of Oxygen on Red Wines  
Aged in Oak Barrels . . . . . 148**

*Alexandre Pons, Andrei Prida, and Philippe Darriet*



**The Brown, the Hazy,  
the Green and the Gold:  
Inert Pressing for Aromatic  
White Wines . . . . . 154**

Managing oxygen for specific wine types and styles

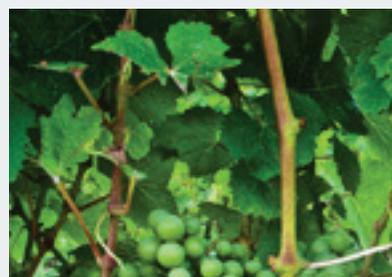
*Curtis Phillips*



**The Case for Dedicated Pumps . . . . . 142**

Tanks equipped with their own pumps make better wine using less labor, say convinced winemakers.

*Jim Gordon*



**Finger Lakes' Winery  
Grows from  
European Roots . . . . . 160**

*Ray Pompilio*

**Winemaker Trial:  
Investigating Sur Lie Aging Treatments . . . . . 164**

Using her experience with sur lie aging, winemaker Aimée Sunseri wanted to learn how different techniques—specifically bâtonnage and dry-ice regimens—would affect the mouthfeel of her wines.

*Stacy Briscoe*



**shelf-confidence** [shelf-kon-fi-duh ns], *n.* a feeling of trust in knowing one's bottle decoration is superior to its peers.

*"We have so much more shelf-confidence now that we're screen printing with Bergin"*

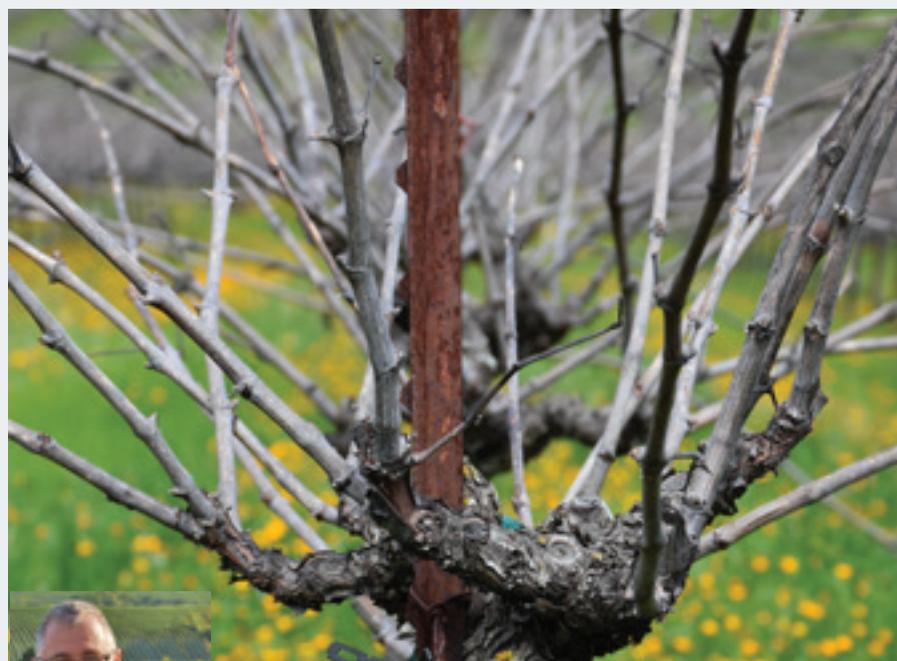
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Visit us at Unified Wine & Grape Symposium, Building A&A Mezzanine at the Cal Expo, booth **A504**, Feb. 4th-6th 2020 to learn more about Bergin Screen Printing and Etching and what we can do for your brand.



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grape growing



Site-specific Pruning Simplified . . 170

Pruning affects the upcoming season and vine's health—but it doesn't need to be complicated to be precise.

Mark Greenspan



From Blaze to Bottle: Smoke Gets in Your Wine . . . . . 176

Smoke from a wildland fire incident does not affect all vineyards equally. Testing fruit and making microfermentations ahead of harvest can help you determine if all is well—and whether steps will need to be taken to address smoke taint or you should just leave fruit in the vineyard and take a loss.

Glenn McGourty

departments

month in review . . . . . 4

news . . . . . 12

advertiser index . . . . . 206

jake lorenzo **Powerless** . . . . . 208

sales & marketing



Larger Wineries Take a Chance on Aluminum Bottles . . . . . 186

Growth in canned wine sales prompt some wineries to innovate with resealable, single-serve versions.

Kerana Todorov

Building Equity for the U.S. Wine Brand . . . . 192

Why the American wine industry is struggling in the modern beverage alcohol marketplace

John Stallcup

Retail Sales Analysis  
Wine Sales Steady as Sauvignon Blanc Grows . . . . . 196

Wines Vines Analytics

technology & business

CFOs Talk Shop:  
Looming Threats, Data Demands and New Solutions . . . . . 198

Panel discusses the hottest topics in the financial world

Erin Kirschenmann



winemaker of the month . . . . . 207

Barry Gnekow, consulting winemaker, Vertical Palate Wine Company, Woodbridge, CA

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

## **Jim Collins**, CFO, JaM Cellars, "Looming Threats, Data Demands and New Solutions," page 198

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"All I see everywhere in the wine press is the problem with Millennials and why we're having problems with them buying our products. I hate to tell you the problem isn't with them: it's with us."

## **Curtis Phillips**, senior technical editor, Wine Business Monthly, "The Case for Dedicated Pumps," page 142

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"The maintenance might be a wash, but with dedicated pumps you're deferring all the pump and hose cleaning and sanitation you have to do several times a day to once every time you drain and press-off a fermenter."

## **Mark Greenspan**, founder, Advanced Viticulture, Inc., "Site-specific Pruning Simplified," page 170

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"All vineyard operations are important, but pruning is just a little more important because pruning affects not only the upcoming growing season's vine balance and productivity, but potentially the longer-term ability of the vine to either build or maintain its health and productivity."

## **Glenn McGourty**, winegrowing and plant science advisor, UC Cooperative Extension Offices, "From Blaze to Bottle: Smoke Gets in Your Wine," page 176

---

"Wine sensory analysis done by our tasting panel, based on guaiacol concentrations, indicated that concentrations below 6  $\mu$ /l were somewhat difficult for everyone to detect smoke flavors. At 10  $\mu$ /l guaiacol or above, there was more agreement that the wine sample had a potential smoke taint issue."

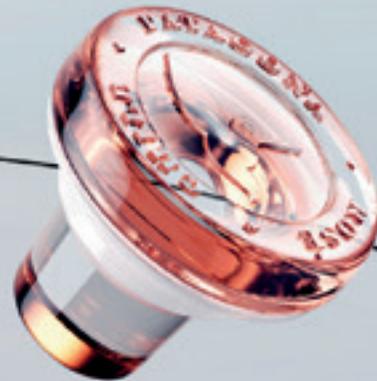
## **Brenda Mercer**, public relations director, Mercer Wine Estates, "Larger Wineries Take a Chance on Aluminum Bottles," page 186

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"They pack easily into ice chests, backpacks, picnic baskets. They are also resealable so can be enjoyed over a period of time. We think they are great for the beach, pool, golf course, hiking, picnics, outdoor concert venues, camping."

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



### E&J Gallo Acquires Pahlmeyer

Modesto-based **E&J Gallo** purchased **Pahlmeyer Winery**; the acquisition includes the Pahlmeyer and Jayson by Pahlmeyer brands. No physical winery was purchased, but Gallo will lease the Pahlmeyers' Waters Ranch on Atlas Peak. The terms of the deal were not disclosed. **Jayson Pahlmeyer** founded Pahlmeyer in 1986. His daughter **Cleo Pahlmeyer** became the family-owned company president in 2017. Cleo Pahlmeyer will continue to run the Wayfarer wine brand and Wayfarer Vineyard.



### Chinese Glass Companies May Face Anti-Dumping Duties

The **U.S. International Trade Commission (ITC)** announced in November there was a "reasonable indication" that the U.S. industry was injured when China glass containers imports were allegedly subsidized and sold in the United States under fair value. As of November, the case was before the **U.S. Department of Commerce**, which will determine whether additional duties should be imposed for the alleged dumping and subsidies. Two U.S. glass makers, **Anchor Glass Container** and **Ardagh Glass**, filed the case.



### Michelin Guide Acquires Robert Parker Wine Advocate

**Michelin Guide** has completed its acquisition of **Robert Parker Wine Advocate** and **RobertParker.com**. The company previously purchased 40 percent of the publication in 2017. **Robert M. Parker Jr.** founded the Wine Advocate in 1978; he is well-known for popularizing the 100-point wine rating system. Parker announced his retirement from the publication in May. **Nicolas Achard** is the new chief executive officer of Robert Parker Wine Advocate.



### Missouri Wine Industry Pioneer James "Jim" Held Dies

**James "Jim" Held** died on Nov. 8 after a long battle with cancer in Hermann, Mo. In 1965, Held and wife **Betty Held** purchased the historic **Stone Hill Winery**, which was first established in 1847. In 1982, **President Ronald Reagan** awarded Stone Hill Winery Missouri's small business of the year. The Helds' eldest son, **Jonathan Held**, is now the winery's president and owner.



### Smithsonian Honors Napa Valley Winemaker Warren Winiarski

In November, Napa Valley winemaker **Warren Winiarski** received the **Smithsonian's** James Smithson Bicentennial Medal for his contribution to winemaking. He was also recognized for his contribution to the Smithsonian's **National Museum of American History's** American Food and Wine History project. The five-decade wine industry veteran has been praised for mentoring other winemakers and for his land-preservation efforts. His personal achievements are many and include placing first in the red wine category during the 1976 Judgement of Paris wine tasting with his 1973 Cabernet Sauvignon from **Stag's Leap Wine Cellars**. Winiarski is the first winemaker to receive the James Smithson Bicentennial Medal.



### Fires Rage in Australia

Dozens of bush fires have scorched through Australia's New South Wales and Queensland, according to news reports, and fire officials have stated that the deadly fires, which have been raging since July, have burned nearly 5 million acres and destroyed hundreds of homes. The **NSW Rural Fire Service** stated in December that 2019 "bush fire season" is one of the most challenging seasons ever. **WBM**

#### Corrections:

In the November Tank Supplier Directory, we inadvertently left out the phone number of Cornerstone Stainless Containers. They can be reached at 425-629-3071.

The December Technical Spotlight incorrectly refers to The Plumed Horse as a "former" Michelin Star restaurant. The restaurant has one Michelin Star.

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# 2020 UNIFIED GUIDE

## 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 2020 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 2019 show, and about 300 responded, the majority of which were included and edited by our editorial team.

#### CONTENTS

**CATEGORY INDEX . . . . .18**

**EXHIBITOR INDEX . . . . .20**

**PRODUCT LISTINGS . . . . .22**

## Category Index

<b>WINERY &gt;</b>	<b>PACKAGING &gt;</b>	<b>SERVICES &gt;</b>
<b>COOPERAGE &gt;</b>	BOTTLES .....58	CONSULTANTS - SERVICES.....95
BARRELS .....22	BOTTLE DECORATING .....60	VINEYARD MANAGEMENT.....95
BUNGS.....27	BOXES AND BAGS .....64	<b>SUPPLIES &gt;</b>
CASKS (OAK).....27	CAPSULES .....64	FERTILIZER AND CHEMICALS.....95
OAK BARREL ALTERNATIVES.....27	CLOSURES.....67	GRAPEVINES / ROOTSTOCK / NURSERIES .....96
OAK TANNINS.....30	DESIGN SERVICES.....70	NETTING .....98
<b>EQUIPMENT &gt;</b>	LABELS .....72	TRELLIS SUPPLIES .....100
AUTOMATIC CONTROL EQUIPMENT.....30	MACHINERY .....74	<b>GENERAL &gt;</b>
BOTTLING LINE.....31	PACKAGING & SHIPPING MATERIAL.....77	ASSOCIATIONS .....101
CENTRIFUGES.....33	PRINTING .....77	EDUCATION .....101
CLEANING / STERILIZATION EQUIPMENT.....33	OTHER PACKAGING .....77	PUBLICATIONS .....110
COMPRESSORS.....34	<b>SERVICES &gt;</b>	SAFETY & MAINTENANCE.....110
CONTROL SYSTEMS .....37	LAB / ANALYTICAL SERVICES.....79	WAREHOUSING / SHIPPING.....111
CONVEYORS & PARTS .....37	MOBILE BOTTLING .....79	<b>FACILITIES &amp; CONSTRUCTION &gt;</b>
COMPRESSORS.....37	MOBILE FILTRATION .....80	ARCHITECTS .....102
CRUSHPAD EQUIPMENT.....38	WINEMAKING SERVICES .....80	CAVES .....102
DISTILLING EQUIPMENT.....40	<b>SUPPLIES &gt;</b>	CONTRACTORS.....102
FERMENTORS .....40	BIOLOGICAL INNOCULANTS .....81	ELECTRICAL .....103
FILTERS / FILTRATION SYSTEMS.....41	CHEMICALS.....81	ENGINEERS.....103
FORKLIFTS.....42	ENZYMES .....81	FLOORING.....104
GAS GENERATORS .....42	FILTERS / FILTRATION SUPPLIES.....81	HVAC / REFRIGERATION.....104
GRAPE INSPECTION .....42	GRAPES / JUICE .....82	WASTE DISPOSAL / WASTEWATER TREATMENT...104
HOSES & FITTINGS .....44	WINEMAKING SUPPLIES .....82	<b>FINANCE, LEGAL &amp; ADMIN. SVCS. &gt;</b>
HUMIDITY CONTROL .....44	YEAST CULTURES & NUTRIENTS .....84	ACCOUNTING SERVICES .....105
LABORATORY EQUIPMENT .....45	TASTING ROOMS .....87	BUSINESS CONSULTANTS.....105
MICRO-OXYGENATION .....49	<b>VINEYARD &gt;</b>	FINANCIAL SERVICES / BANKING / LEASING.....106
PRESSES .....50	<b>EQUIPMENT</b>	INSURANCE.....106
PUMPS.....51	ANIMAL, BIRD AND PEST CONTROL.....88	LEGAL SERVICES.....106
REFRIGERATION / CHILLERS .....52	FROST PREVENTION DEVICES.....89	PERSONNEL SERVICES.....106
TANKS .....53	GRAPE HARVEST .....89	<b>IT SOLUTIONS &gt;</b>
TANK GAUGES .....57	HARVESTING EQUIPMENT.....89	ACCOUNTING SOFTWARE.....106
USED EQUIPMENT .....57	IRRIGATION.....90	DIRECT TO CONSUMER SOFTWARE .....107
VALVES / PIPES / FITTINGS.....57	MACHINERY .....90	HARDWARE.....107
VOLATILE ACIDITY REMOVAL .....58	SOIL TESTING & ANALYSIS.....92	SALES SOFTWARE.....107
OTHER EQUIPMENT .....58	TOOLS .....92	SOFTWARE SUITES .....108
	TRACTORS.....92	VINEYARD SOFTWARE .....108
	VINEYARD PUMPS .....94	WEB SERVICES .....109
	WEATHER MONITORING SYSTEMS .....94	WINE PRODUCTION SOFTWARE .....109
	OTHER EQUIPMENT .....94	

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## Exhibitor Index

AB Biotek	84	ColloPack Solutions	31, 34, 50	Guillaume Grapevine Nursery	96	optek-Danulat, Inc.	48	TerrAvion	95
ABT, Inc. PolyDrain-TrenchFormer	104	Columbia Machine	37	Gusmer Enterprises	28, 87	Orchard & Vineyard Supply	100	Tessenderlo Kerley Inc.	96
Accurate Forklift Inc.	42	Condor Earth	102	H2O Engineering, Inc.	41	Orion Wine Software	108, 109	The Bottle Meister, Inc.	79
ACIC Cork and Closures	67	ConeTech Inc.	80	Hamilton Company	48	Owl Ridge Wine Services	80	The Cavanagh Group	105
Activ8 Commerce	107	ConeTech Inc. / BevZero	80	Hanna Instruments	48	Oxbo International Corp.	89	Thermo Fisher Scientific	48
ADEPTA	101	Continental ContiTech	44	Haskell	103	P & L Specialties	38	Titan IBC, LLC	57
Admeo	45	Cooperages 1912	22	Herrick Grapevines	98	PA Trellising Systems	100	TN Coopers	29
Advanced Viticulture, Inc.	95	Cork Supply	68	Herti	68	Pacific Distributing, Inc.	89	Tom Beard Company	34, 37, 48
Affinity Creative Group	70	Coverplas Nets	98, 100	Holt of California	42	Papé Material Handling	42, 111	Tonnellerie Boutes	24, 25
Afinia Label	72	CPE Systems Inc.	44, 52	HORIBA Scientific	48	Parker Hannifin	42	Tonnellerie d'Aquitaine	25
Agajanian Vineyards & Wine Company	82	Craft Canning	77	ifm efector inc.	37, 57	Payroll Masters	105	Tonnellerie O	25
AgCode Inc.	108	Creative Labels	72	Infinity Foils® Inc.	72	Pellenc America Inc.	38, 51, 92	Tonnellerie Quintessence	25
Agrothermal Systems	88	Creative Oak	28	InnoVint, Inc.	109	Petainer, Inc.	78	Tonnellerie Radoux USA, Inc.	26, 29
AL&L Crop Solutions, Inc.	95	Criveller California	41	INOXPA USA Inc.	52	Phoenix Packaging International Corp.	58	Tonnellerie Tremeaux	26
Algor	53	Crush2Cellar	82	Integrated Structures, Inc.	103	Pioneer Packaging	78	TopNest Designs	88
Allied Grape Growers	101	Décor	62	J Rettenmaier USA LP	28, 81	PolarClad / ConeTech Inc.	55	TracMap	94
Alpine Scientific Inc.	45	Defranceschi		Jackrabbit	88, 89	Polyguard Products, Inc.	52	Trane	104
Altrac	89, 92, 94	a SACMI company	31, 38, 50	JBI Water & Wastewater Equipment Inc.	105	Portocork	70	TranPak Inc.	89
Ancor Flexibles	64, 68	Della Toffola USA	38, 41, 50	Juclas USA	87	Power Dynamics, Inc.	111	Transition Equipment Company	57
American Membrane Corporation	41	Department of Viticulture and Enology, University of California, Davis	101	Kaesar Compressors Inc.	34, 37, 57	Premier Wine Cask, Inc.	30, 55	Trefinos USA	70
Amorim Cork America	68	Diam Closures	68	Key Industrial	30	ProAg	106	Tripack	74
APHOLOS Metal Labels & Closures	68, 72	Dickenson, Peatman & Fogarty	106	KeyKeg - UniKeg	78	Process2Wine	109	tru/tan by Oak Solutions Group	30
Applic'Etains	72	Dixon Sanitary	57	KLIMA	90	Prospero Equipment Corp.	76	Trust Cooperage	26
Arable Labs	94	Donaldson Company, Inc.	110	KRONES Inc.	74	Pumping Solutions	52	Turrentine Brokerage	82
Aran USA	64	Duarte Nursery	96	KURZ	72, 74	Quality Stainless Tanks	55	Unitech Scientific	48, 49
Ardagh Group	58	Dynamax, Inc.	94	L.E. Cooke Supply Co.	100	Quality Wine Barrels Company	24	VA Filtration USA	80
Aries Tech/Elutriate Systems	104	Eco-Management Inc.	95	La Garde	54	Quercus Concepts, Inc.	28	Vacuum Barrier Corporation	32
Aromatica	82	Eichleay, Inc.	103	Labeltronix	73	R & S Supply Company	34, 57	Valentin Thierion Corp.	32, 80
ARS/SWASH™ Sanitizing Equipment	33, 34	Ekos	109	Laffort USA	81, 82, 87	Ranch Systems, Inc.	94	Valley Pipe & Supply Inc.	40
Arthur Engineering Inc.	103	Emerson	30	Lallemand	87	Rapidfil LLC	30	Verallia	60
Astoria Pacific	46	Emerson's Micro Motion & Rosemount Flow	46	Landmark Label	73	Raytec Vision SPA	38	Vineyard Industry Products	100
AstraPouch North America	64	Emmeti USA LLC	31, 37	Lazer Star Lights	89, 94	Redback Boots USA	92	Vineyard Team	101
Astro Pak	34	Enartis USA	82, 84, 95	Le Grand USA	22	Refrigeration Equipment Specialist Co.	52	VinLux Fine Wine Transport	111
A-T Controls, Inc.	37	Eno Scientific LLC	90	Leroi Barrels / Charlois Cooperage USA	22, 24	ReThink Labeling	74	Vinomat, LDA	94
Atlas Copco	34, 42	EP Aeration	105	Lescure Engineers Inc.	103	Rinieri North America	92	VinSense LLC	95
ATPGroup	37, 41, 46	EP Minerals	81	LJ Star Incorporated	54	Rivercap	64	vinSUITE	107
Avery Dennison	72	ErectaStep	110	Lodi Winegrape Commission	101	RLS Equipment Co. Inc.	38, 51, 52	Vintage 99 Label	74
Azmera	105, 108	Etched Images	62, 64	Lucky Clover Packaging	73	Rogers Machinery Co., Inc.	37	Vintner's Vault	33, 40
BAR Architects	102	Etching Expressions	62	M.A. Silva USA	70	RONA Glass	87	vintrace	79, 109
Barnum Mechanical Inc.	103	ETS Laboratories	79	Magorian Mine Services	102	Rosemount Inc.	30	Vinventions	70
Barrels Unlimited Inc.	22	Euro-Machines Inc.	51	Maroon Group LLC, HI&I Division	81	RTS Packaging LLC	77	Watermark Labels	74
Bartlett Winery Products	50	Eurostamp California	72	Martinez Orchards	98	Santa Rosa Stainless Steel	56	Wausau Coated Products Inc.	74
Bedford Technology	88, 100	evOAK by Oak Solutions Group	28	Maselli Measurements, Inc.	42	Saverglass Inc.	58	Weber Scientific	49
Belkorp Ag	92	F Walther Electric Inc.	103	Maspack Packaging USA	32	Saxco International	58	WECO - The Science of Optical Sorting	40
Bergin Screen Printing & Etching	60	Factory Technologies, Inc.	30	Maverick Enterprises Inc.	64	Schaefer Container Systems	78	West Coast Supplies	76, 77, 111
BioFiltro	105	Fermentis, a Business Unit of Lesaffre Yeast Corp.	84	Mazzei Injector Company LLC	49	Schaefer Container Systems North America Inc.	56	Westbridge Agricultural Products	96
Bird Gard LLC	88	Fleet Tracker, Inc.	107	McCrometer, Inc.	90	Scott Laboratories Inc.	29, 38, 41, 64, 70, 81, 87	Western Exterminator Company	88
Bloom	107	Flottweg Separation Technology	33	Mee Industries Inc.	44	Seguin Moreau Napa Cooperage	27, 29	Western Pulp Products Company	77
Börger LLC	51	Fluid Resource Management	105	Meras Water Solutions	80, 95	Sierra View General Contractor	103	Wild Goose Filling	76
Boswell Company	22, 27	FPS Global Partners	31	MG Equipment Co. Inc.	90	Silver State Stainless Inc.	56	Wildeck	90
Bottleprint	60	Free Flow Wines	78	Microworks Wine Software	107, 108	Skolnik Industries Inc.	24	William Frick & Company	108
Bouchard Cooperages	22, 27, 53	Fresno State Viticulture & Enology	101	Midwest Grower Supply Inc	90	Sleever International	64	Wine Business Institute at Sonoma State University & VESTA	102
BrandTech® Scientific Inc.	46	Full Circle Finance Inc.	106	Minox Srl	54	Smart Fog	45	Wine Business Monthly	110
BSG	30, 46, 84	G & D Chillers	52	MISCO Refractometer	48, 53	Sonnikson and Stordahl Construction	103	Wine Country Closures	67
Bucher Vaslin North America	38, 81	G3 Enterprises	28, 72, 79, 94	MKM & Associates	104	Sparflex	67	Wine Grenade	49
Business Impact Inc.	106, 108	Gallo Glass Company	58	Monvera Glass		Spectrum Technologies Inc.	89	WineDirect	107
Butterworth Inc.	53	Gamba USA / Botti Generazioni	27	MOOG Cleaning Systems	34	Squarrel Square Barrels	24	Winejobs.com	106
California Payroll	105	Ganau America	68	MoreWine! Pro	54	Squid Ink Manufacturing, Inc.	64, 76	WinerySeals	57
California Polytechnic State University SLO	101	Garton Tractor Inc.	92, 94	Motion Industries	44	Star Staffing	106	Wines Vines Analytics	110
Canton Cooperage / XtraChêne	22, 28	Garvey Corporation	32	Multi-Color Corporation	73, 74	Steamericas Inc.	34	Winesecrets	41
Canycom USA	90	GEA Group	52	Munckhof Mfg	38	Stölzle Lausitz GmbH	88	Wineshipping	111
Carlsen & Associates	51	Gearmore Inc.	90	Murzan, Inc.	52	Summit Engineering Inc.	104	Winetech LLC	41, 58
Casa Cristal Nursery Inc.	96	Germiflor Lautier	95	National Filter Media Corp.	81	Sunridge Nurseries Inc.	98	WiseConn Engineering	90
Cello & Maudru Construction	102	GF Piping Systems	57	National Winery Insurance	106	T.W. Boswell	24	Wonderful Nurseries LLC	98
Centrisys Corporation	33	Global Package, LLC.	58	Nordby Construction	102	TankNET by Acrolon Technologies Inc.	31	World Cooperage	26
CF Napa Brand Design	70	GLS US	111	Novavine	98	Taylor Lombardo Architects LLP	102	World Wine Bottles & Packaging Solutions	60, 70, 79
Chart Inc.	74	GOfermentor	40	O'Connell Jetting Systems	105	TCW Equipment - The Compleat Winemaker	38, 40	Xüdle	107
Clark Pest Control	88	GrapeConnect	109	Oak Wise	30	Technologia JSC	67	Zalkin	33
ClearWater Tech Ozone Technology	34	Grapes & Bulk Wine	109	Oenodia	58, 80			Zenport Industries	92
Clemens Equipment Inc.	89	Gripple Inc.	100	Oenophilia	87			ZFA Structural Engineers	104
Cloud Company	34	Gromberg Fredrikson & Associates	110	O-I	58				
		Guala Closures North America Inc.	68	Onguard, LLC	54, 55				



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# 2020

## UNIFIED GUIDE

## PRODUCT LISTINGS

### WINERY > COOPERAGE > BARRELS

#### Barrels Unlimited Inc.

A512

Fresno, CA • [www.barrelsunlimited.com](http://www.barrelsunlimited.com)

##### Barrels

**DESCRIPTION:** Barrels Unlimited, Inc. makes new American Oak Barrels from wood that has been air-dried for a minimum of 24 months. We sell several sizes, starting with 5 gallon. We also purchase used barrels and stock barrel accessories such as bungs, spigots and any other items related to barrels or barrel care.



#### Boswell Company

A101

San Rafael, CA ☎ 415-457-3955 • [www.boswellcompany.com](http://www.boswellcompany.com)

##### Eclat - The Gourmet Barrel

**DESCRIPTION:** ECLAT is the fusion of art and technology from visionary cooperage owner Jean Christophe Varron. This award-winning fruit preservation barrel comes from Haute Futaie French oak selections seasoned 24 months minimum. Ceramic radiant heat precisely "cooks" the oak for deep caramelization of wood sugars. Three dynamic toasts for élevage are available: CRL, FUZION and HYDRO.



##### NEW La Fabrique by Eric Millard

**DESCRIPTION:** Based on 30 years' experience at François Freres and Louis Latour, Eric Millard personally creates five new barrels per day for ultra-premium Pinot Noir, Chardonnay and Syrah. Millard partners with Gauthier stave mill, selecting quality oak from the Loire Valley. La Fabrique Eric Millard barrels are Burgundy export or Burgundy traditional style. Limited allocations are available.



##### Tonnellerie Jean-Louis Bossuet

**DESCRIPTION:** One of the last independent coopers, Jean-Louis Bossuet is a stave mill and cooperage expert. His Haute Futaie oak derives from center of France and Loire valley forests. Twenty-four- and 36-month seasoning is available. Each Tonnellerie Bossuet cooper creates his own new barrel from beginning to end, ensuring quality and a consistent profile.



#### Bouchard Cooperages

P2126 & C1124

Napa, CA ☎ 707-257-3582 • [www.bouchardcooperages.com](http://www.bouchardcooperages.com)

##### Premium Oak Barrels

**DESCRIPTION:** Bouchard Cooperages is proud to offer Premium French oak and French Acacia barrels from DAMY, Billon and Maury, as well as Hungarian oak barrels from European coopers and American Oak barrels from master coopers. Each cooperage offers large format barrels 500 L up to 860 L.

#### Canton Cooperage / XtraChêne

P2036

Santa Rosa, CA ☎ 707-843-4407 • [www.cantoncooperage.com](http://www.cantoncooperage.com)

##### NEW Canton FIVE

**DESCRIPTION:** The Canton FIVE has been created by the combination of a particular oak tree's origin, seasoning time of the staves under specific weather conditions and applying a proprietary meticulous toasting. The Canton FIVE brings depth, texture and complexity to high-end red blends with total subtlety that never overshadows the fruit. Freshness and ethereal characteristics of the fruit are preserved by the high antioxidant capacity of the oak. Available only in crafted 225 L.



#### Cooperages 1912

P1900

Napa, CA ☎ 707-255-5900 • [www.cooperages1912.com](http://www.cooperages1912.com)

##### Cooperages 1912

**DESCRIPTION:** Our barrel consultants work directly with winemakers to ensure the proper pairing between wine and barrel. With more than 100 years of expertise in the industry, our team is committed to excellence, innovation and the very best in modern cooperage. Cooperages 1912 represents World Cooperage and TW Boswell.



#### Le Grand USA

A136

Walla Walla, WA ☎ 707-738-7465 • [www.legrandusa.com](http://www.legrandusa.com)

##### NEW 500L Spinning Fermentation Barrel

**DESCRIPTION:** Le Grand offers a French ak 500 L spinning fermentation barrel with a stainless steel rack.



#### Leroi Barrels / Charlois Cooperage USA

P2106

Cloverdale, CA • [www.leroibarrels.com](http://www.leroibarrels.com)

##### NEW American, Eastern European and Hybrid Oak Barrels

**DESCRIPTION:** Charlois Cooperage USA produces American, Eastern European and Hybrid oak barrels. The staves are selected from the finest oak forests, where the trees grow slowly, translating to tight grain wood. The staves are open-air seasoned at the mills for up to 48 months. Our custom toasting processes, available in Traditional, Red or White Selection, soften the tannins, provide spices to complement fruit character and structure, and highlight the winemaker's craft.



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## WINERY > COOPERAGE > BARRELS

### Leroi Barrels / Charlois Cooperage USA P2106

Cloverdale, CA • [www.leroibarrels.com](http://www.leroibarrels.com)

#### NEW Divine by Tonnellerie Leroi

**DESCRIPTION:** Divine by Leroi is an exclusive icon barrel made in very limited quantity by our headmaster cooper. The oak selection starts in the forests of Allier and Tronçais, sourcing "Haute Futaie" trees. Chosen for their ultra-fine grain, these staves are seasoned in Cognac for 36 to 40 months. Leroi's medium-long, deep toast delivers finesse and elegance. Divine by Leroi is made for ultra-luxury wines that require up to 36 months aging.



### Quality Wine Barrels Company B632

Arroyo Grande, CA ☎ 805-481-4737 • [www.qualitywinebarrels.com](http://www.qualitywinebarrels.com)

#### Wine Barrels

**DESCRIPTION:** Quality Wine Barrels Company offers new French oak barrels from FCL France, as well as good quality used wine barrels and racks. Shipping is available in the U.S. and Canada.



### Skolnik Industries Inc. P2153

Chicago, IL ☎ 773-735-0700 • [www.skolnikwine.com](http://www.skolnikwine.com)

#### 80-gallon Stainless Steel, Crevice-Free, Bilge Wine Barrel

**DESCRIPTION:** Skolnik Industries manufactures stainless steel wine barrels in 80 different styles among nine capacity options, ranging from 5 gallons up to 124 gallons in standard and bilge, as well as seamless, crevice-free designs.

### Squarrel Square Barrels B931

Minnetonka, MN ☎ 855-733-2337 • [www.squarrelbarrels.com](http://www.squarrelbarrels.com)

#### NEW Squarrel

**DESCRIPTION:** Designed and developed by master cooper Russ Karasch, the Square Barrel "Squarrel" incorporates leftover stave wood from the production of traditional barrels into 14" staves that fit into 10-, 30- and 60-gallon stainless steel frames. This barrel allows you to mix and match wood types, toast and char levels to create your own barrel. Like a traditional barrel, oxygen passes through the wood. Staves ship in a box.



### T.W. Boswell P1900

Napa, CA ☎ 707-255-5900 • [www.twboswell.com](http://www.twboswell.com)

#### Barrels

**DESCRIPTION:** For more than 100 years the Boswell Family has built a strong foundation of excellence and a passion for quality. Our company is committed to developing groundbreaking technology with an unyielding passion for craftsmanship. Every decision that goes into a T.W. Boswell barrel is based on our mission to transparently craft excellence, time and time again. T.W. Boswell offers three distinct barrel collections: French oak, American oak and European oak.

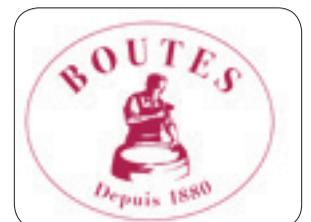


### Tonnellerie Boutes A540

Rodeo, CA ☎ 510-799-1518 • [www.boutes.com](http://www.boutes.com)

#### Grande Reserve

**DESCRIPTION:** The Grande Reserve is a proprietary blend and toast. This barrel is designed to be the most fruit-driven barrel of all. It respects the purity and freshness of the fruit while at the same time brings length, volume and polished tannins. This barrel is for serious wines and is a perfect complement to the New World-style wine. This is the barrel for big tannin wines.



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**Tonnellerie Boutes**

A540

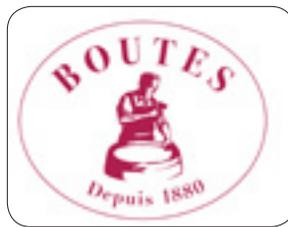
Rodeo, CA ☎ 510-799-1518 • [www.boutes.com](http://www.boutes.com)

**Selection**

**DESCRIPTION:** The Selection is a 36-month, air-dried, tight-grain wood blend. This barrel is best for wines that are going to be aged longer than 16 months. This is our most austere, structured barrel. After 12 to 14 months, wine in this barrel shows structure and length.

**Tradition**

**DESCRIPTION:** This two-year, air-dried barrel is available in any toast level. This barrel is designed to be well-integrated, round, respectful of the fruit of the wine in the nose, as well as the palate. The Tradition gives roundness and volume while allowing the wine to express itself. It brings out the finesse and elegance of the tannins, and ensures the best possible integration of the wood.



**Tonnellerie Quintessence**

P2155

Beychac-et-Caillau, France ☎ 707-935-3452 • [www.tonnelleriequintessence.fr](http://www.tonnelleriequintessence.fr)

**NEW Large-format Fermentation Barrels**

**DESCRIPTION:** Tonnellerie Quintessence's large format fermentation barrels offer winemakers an optimal tool to achieve maximum expressiveness of their wines. The 500 L and 600 L barrels have several options for the fermentation of high-end red wines. Both are provided with a stainless steel top door, which allows quick and easy loading of the vintage.



**Tonnellerie d'Aquitaine**

P2145

Napa, CA ☎ 707-394-8815  
• [www.daquitaine.fr](http://www.daquitaine.fr)

**NEW Barrels**

**DESCRIPTION:** Tonnellerie d'Aquitaine cooperages' select barrel profiles allow winemakers to fine-tune their barrels through grain selection and toast levels to best complement their wine style. New this year is a Chardonnay focused barrel that lifts the fruit and provides richness in the palate.



Tonnellerie d'Aquitaine has the right barrel and alternatives program for all your aging needs.

**Tonnellerie O**

A206

Benicia, CA ☎ 831-818-8157  
• [www.tonnellerieo.com](http://www.tonnellerieo.com)

**NEW The Revolution Barrel**

**DESCRIPTION:** Far enough north to experience less than 60 °F temperatures during the winter but far enough south to have 114 °F temperatures in the summer, Minnesota is where our Revolution Barrel has its origins. Seasoned for five years in the most extreme conditions of any seasoning yard in the world, the Revolution Barrel seeks to push the limits of American oak barrels.



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WINERY > COOPERAGE > BARRELS

## Tonnellerie Radoux USA, Inc. A312

Santa Rosa, CA ☎ 707-284-2888 • [www.radouxcooperage.com](http://www.radouxcooperage.com)

### French, American and Eastern European Barrels

**DESCRIPTION:** In addition to our French cooperage, Radoux's Sonoma County cooperage has been providing high-quality barrels and oak adjuncts to our customers near and far for more than 25 years. Radoux manufactures French, American and Eastern European oak barrels, including 36-month options and puncheons. Radoux has strict protocols in place for optimum oak sourcing, natural aging, sorting by grain and polyphenolic indices (OakScan), toasting regimes and finishing.

### NEW Omega Barrel

**DESCRIPTION:** The Omega barrel benefits from OakScan, which enables the staves to be selected for moderate polyphenolic indices, and staves matured over three years. Radoux developed a specific toast for the Omega barrel to enhance the blend of oak tannins with those of the wine. Tasting reveals that Omega gives emphasis to the fruit, with a balance between roundness, volume, tension and length on the palate. Tannins are soft, expressing freshness, elegance and finesse.



## Tonnellerie Tremeaux P2155

Beaune, France ☎ 707-935-3452  
• [www.tonnellerie-tremeaux.fr](http://www.tonnellerie-tremeaux.fr)

### Tonnellerie Tremeaux

**DESCRIPTION:** Nestled in the heart of Beaune, Tonnellerie Tremeaux is an artisan cooperage anchored in the tradition of the Burgundy region. We patiently craft limited production barrels to respect the fruit and reflect each wine's unique beauty.



## Trust Cooperage B619

Napa, CA ☎ 707-337-4344  
• [www.trustcooperage.com](http://www.trustcooperage.com)

### NEW Scientific Collection

**DESCRIPTION:** Trust introduces our new scientific collection of barrels.



## World Cooperage P1900

Napa, CA ☎ 707-255-5900 • [www.worldcooperage.com](http://www.worldcooperage.com)

### World Cooperage

**DESCRIPTION:** World Cooperage has been building close partnerships with winemakers for many years. With this as our foundation, we are committed to consistent quality for each barrel we craft throughout the diversity of our portfolio. We work with you to build comprehensive barrel programs you can trust, time and time again.



*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](http://www.tonnellerie-tremeaux.fr)**



## WINERY > COOPERAGE > BUNGS

### Boswell Company

A101

San Rafael, CA ☎ 415-457-3955 • [www.boswellcompany.com](http://www.boswellcompany.com)

#### Boswell Company Bungs

**DESCRIPTION:** The Boswell Company offers pure silicone rubber barrel bungs for permanent usage and fermentation. Domed top bungs are taupe-colored, date-stamped and designed to seal bungholes fully without entering the wine. Ergonomic Fat Lip bungs feature “knurls” for ease of handling in wet conditions—available in white, red, green or caramel colors. For fermentation, the Boswell Company offers the two-piece FERM-RITE style unit with four “ventilation” holes.



## WINERY > COOPERAGE > CASKS (OAK)

### Gamba USA / Botti Generazioni

P2211

Napa, CA ☎ 707-696-9005 • [www.bottigamba.com](http://www.bottigamba.com)

#### NEW 1.5 Ton Fork-liftable Oak Fermenter

**DESCRIPTION:** Utilizing an oak tank during fermentation can promote greater yeast activity, color stabilization and longer chain tannins from the oxygen permeability through the wood. The oxygen uptake on fermenting juice is beneficial for better color through anthocyanin stabilization and produces rounder wines through polymerization of tannins. The result is softer tannins and longer-lived wines. This fermenter has a stainless steel bottom door for easy must removal and a lid that seals for wine aging.



### Seguin Moreau Napa Cooperage

C1310

Napa, CA ☎ 707-252-3408 • [www.seguinmoreaunapa.com](http://www.seguinmoreaunapa.com)

#### NEW Galileoak

**DESCRIPTION:** Galileoak is made with 55 mm oak staves. The spherical wood cask rotates and allows a new form of aging on lees.



## WINERY > COOPERAGE > OAK BARREL ALTERNATIVES

### Boswell Company

A101

San Rafael, CA ☎ 415-457-3955 • [www.boswellcompany.com](http://www.boswellcompany.com)

#### VINEA Oak Alternatives

**DESCRIPTION:** VINEA delivers quality tank fans, barrel inserts, segments and chips. Utilization of fire and patented ceramic radiant toasting helps winemakers achieve premium French oak expression at a fraction of new barrel cost. VINEA alternatives are produced from Center of France oak selections seasoned for 36 months. SQ Line from VINEA is an assemblage of oak and toasts with shorter seasoning for greater extraction and impact.



### Bouchard Cooperages

P2126 & C1124

Napa, CA ☎ 707-257-3582 • [www.bouchardcooperages.com](http://www.bouchardcooperages.com)

#### French Oak Alternatives

**DESCRIPTION:** Bouchard Cooperages offers premium French oak adjuncts from Canadell, including staves, dominoes, chips and powder in a variety of toasts. Canadell is a family owned French company that controls its oak from the forest to the final packaging. Well-seasoned, stave-quality French oak is used for all products. Bouchard Cooperages also offers French oak tannins Structure and Excellence from Chene-oelgie.

## Crafting Partnerships

At World Cooperage, we craft premium American and French oak barrels and partner with you to build comprehensive barrel programs you can trust, time and time again.



[WWW.WORLDCOOPERAGE.COM](http://WWW.WORLDCOOPERAGE.COM)



## WINERY > COOPERAGE > OAK BARREL ALTERNATIVES

### Canton Cooperage / XtraChêne

P2036

Santa Rosa, CA ☎ 707-843-4407 • [www.xtrachene.fr](http://www.xtrachene.fr)

#### NEW Master Cooper Fire Toast Staves

**DESCRIPTION:** XtraChêne Master Cooper Fire Toast staves are crafted from barrel-quality French oak that are open-air aged for a minimum of 24 months. The staves are precision toasted on an open-flame oak fire, akin to barrel. These staves deliver complex aromas, texture, volume and length during a progressive extraction for perfect balance and complexity to high-end wines. They are PEFC-certified for forest sustainability, traceability and HACCP management, and are suitable for biological farming, according to the regulation CE 834/2007.



### Creative Oak

A206

Benicia, CA ☎ 831-818-8157 • [www.creativeoak.com](http://www.creativeoak.com)

#### NEW Creative Oak Chips

**DESCRIPTION:** At Creative Oak we have a team of experts committed to quality and innovation. We are pleased to announce the introduction of French Oak Chips. Working with a trusted stave mill partner, from whom we have long sourced barrel staves, we have developed a line of elegant, fast-acting toast profiles, which provide quick impact and closely replicate a new Tonnellerie O French Oak barrel. Our new chips are seasoned for at least 20 months.



### evOAK by Oak Solutions Group

P1901

Napa, CA ☎ 707-255-5900 • [www.oaksolutionsgroup.com](http://www.oaksolutionsgroup.com)

#### evOAK

**DESCRIPTION:** For years, evOAK has set the standard for oak alternatives. Our premium oak products come in a variety of shapes and sizes, offering creative solutions for today's winemakers and distillers. Learn more about each of our distinct evOAK series to find the perfect product to meet your unique needs.



### G3 Enterprises

O60

Modesto, CA ☎ 800-321-8747 • [www.g3enterprises.com](http://www.g3enterprises.com)

#### Phenese

**DESCRIPTION:** The Phenese oak line includes two types of 11 mm tank staves and chips designed for consistent, harmonious results. Phenese Medium Long French oak staves add volume and creamy sensations to the wine. Phenese Supreme French oak staves add length and roundness. Phenese Tradition French oak chips add volume, structure and length. The Phenese Lush Blend of French and American oak is for balanced tannins.



### Gusmer Enterprises

P2120

Fresno, CA ☎ 866-213-1131 • [www.gusmerwine.com](http://www.gusmerwine.com)

#### NEW Arôbois Oak Blocks 47

**DESCRIPTION:** Arôbois Oak has developed a range of oak blocks, "Blocks 47," produced from the highest quality French oak; the wood is of cooperage grade, with natural seasoning and maturation carried out in the open air for more than four years. Available in Balance and Intense: Intense offers sweetness and a round mouthfeel with marked notes of almonds, licorice and cocoa. Balance offers mellow, silky tannins with caramel tones and subtle hints of gingerbread and licorice.



### J Rettenmaier USA LP

P2175

Schoolcraft, MI • [www.jrsusa.com](http://www.jrsusa.com)

#### Best Oak Instant

**DESCRIPTION:** Compressed oak granules offer virtually dust-free dosing, fast dispersion and extraction to the wine. Excellent flowability makes Best Oak Instant suitable for automatic dosing equipment and trouble-free must pump operation.

### Quercus Concepts, Inc.

B619

San Francisco, CA ☎ 707-775-7065

• [www.oakalternatives.com](http://www.oakalternatives.com)

#### NEW Quick Infusion Trial Kits

**DESCRIPTION:** Quercus Concepts now offers quick infusion trial kits with bullet technology to achieve bench top trial results in less than a week.



## Scott Laboratories Inc.

A135

Petaluma, CA ☎ 707-765-6666 • [www.scottlab.com](http://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 oak infusion products undergoes a unique, breakthrough heating process, resulting in a level of accuracy and consistency different than traditional oak infusion products that are toasted, baked or electrically radiated.



## Tonnellerie Radoux USA, Inc.

A312

Santa Rosa, CA ☎ 707-284-2888 • [www.radouxcooperage.com](http://www.radouxcooperage.com)

### NEW Pronektar Barrel Sticks

**DESCRIPTION:** New to Radoux's Pronektar line of oak for oenology, Barrel Stick Sets ("through-the-bung-hole") are available in French and American oak in an easy-to-install and -remove sleeve. Based on our thicker 17 mm staves, the set imparts greater complexity and a more integrated oak profile than the previous oak chains. Each unit equals 12.5 percent new barrel equivalent and can be linked to other stick sets to combine oak origins or toasts for more complex profiles.



## Seguin Moreau Napa Cooperage C1310

Napa, CA ☎ 707-252-3408

• [www.seguinmoreaunapa.com](http://www.seguinmoreaunapa.com)

### NEW Fine Northern Oak Chips

**DESCRIPTION:** Fine Northern Oak's chip range benefits from the oak's extended seasoning and long toasting protocols. The American oak chips feature high levels of vanillin and provide results in shorter periods of time.



Joining the Medium and Intense toasts will be a new blend, FNO oak, gently accented with French oak.

### NEW V18 Sweet

**DESCRIPTION:** Oenostick is a set of cylindrical oak inserts for barrels. The shape enables slow diffusion of oxygen from wood toward wine. V18 Sweet joins the current range of V14, V18 and V22. V18 Sweet lends vanilla and toasty notes to dry red wines, providing roundness and sweetness on the palate.



## TN Coopers P2138

Sonoma, CA ☎ 707-996-5600

• [www.tncoopers.com](http://www.tncoopers.com)

### Wine Barrels

**DESCRIPTION:** TN Coopers offers wine barrels made of French, Romanian, Hungarian and American oak, as well as oak alternatives, including staves, chips, fermentation products, blocks and barrel inserts.

Check your latitude

# LATITUDE SERIES

Designed with long-term aging in mind, the Latitude tank stave series lets you apply a classic winemaking style to varietal-specific, traditional wines. These tank staves provide a balance of flavors and aromas and are of great assistance when used to give certain varietals qualities of finesse and elegance.

INTRODUCING 33° Mendoza

Providing winemakers the sought after characteristics of the bestselling Malbecs.

INTRODUCING 42° Rioja

Tames the high tannins of Mediterranean varietals, and adds vanilla and toast sweetness to create a round wine, full of complexity.

44° Bordeaux

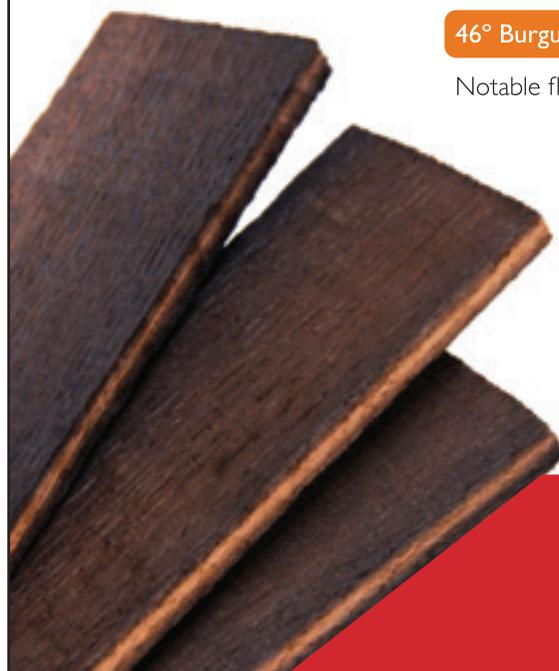
Respects the fruit and provides both an excellent finish and additional volume.

45° Rhone

Remarkably complex, this product adds butterscotch in increasing intensity through a lingering finish.

46° Burgundy

Notable flavors of coffee and toasted bread underscored by creamy texture.



[www.oaksolutionsgroup.com](http://www.oaksolutionsgroup.com)

**eVOAK**  
Forward Thinking Oak Products

## WINERY > COOPERAGE > OAK TANNINS

### BSG

Napa, CA ☎ 707-252-2550 • [www.bsgwine.com](http://www.bsgwine.com)

#### NEW American Oak Tannin

**DESCRIPTION:** BSG provides toasted oak and American oak tannin in two different formats: powdered American oak tannin and liquid American oak tannin.



A502

### Oak Wise

Lodi, CA ☎ 209-224-5353 • [www.oak-wise.com](http://www.oak-wise.com)

#### Premiere CT

**DESCRIPTION:** Premiere CT is a range of Oak Wise concentrated natural aqueous oak tannins. CT will assist in increasing the aromatics of oak characteristics such as toast, spice and the complexity of any beverage. CT will help produce a final product that denotes extended barrel aging.

C1437

### Premier Wine Cask, Inc.

Napa, CA ☎ 707-257-0714 • [www.premierwinecask.com](http://www.premierwinecask.com)

#### Oenotan Sélection

**DESCRIPTION:** Oenotan Sélection is the only water-soluble oak extract available for wine and spirits production. This 100 percent organic, preservative-free product enhances red, white and sweet wine, as well as port and dark spirits. It can be used to bind pyrazines (green flavors), mask drying tannins from older cooperage and bind post-fermentation earthy aromas.



B822

**Enhance, Adjust, & Perfect**  
with Liquid Oak Tannins and  
Malolactic Fermentation Solutions  
from BSG Wine

800.585.5563 | [www.bsgwine.com](http://www.bsgwine.com) | **BSG** Wine | 474 Technology Way  
Napa, CA 94558

### tru/tan by Oak Solutions Group

Napa, CA ☎ 707-255-5900 • [www.oaksolutionsgroup.com](http://www.oaksolutionsgroup.com)

#### tru/tan

**DESCRIPTION:** What makes tru/tan unique is our oak, directly sourced from the same forest regions as premium oak barrels and then precisely toasted through our exclusive process. To create complexity and enhance the quality of your wines, explore our powder and liquid innovative oak tannin blends.



P1901

## WINERY > EQUIPMENT > AUTOMATIC CONTROL EQUIPMENT

### Emerson

St. Louis, MO • [www.emerson.com](http://www.emerson.com)

#### Automation Instrumentation

**DESCRIPTION:** Discover how Emerson solutions can help you tackle your toughest operational challenges and meet your productivity goals. Explore our full portfolio of solutions designed to maximize product quality and repeatability, as well as keep wine batches on spec. Our automation solutions will reduce manual rounds, product changeovers and unexpected downtime so you can achieve operational excellence.

C1401

### Factory Technologies, Inc.

Modesto, CA ☎ 209-248-8420 • [www.factorytechnologies.com](http://www.factorytechnologies.com)

#### Factory Automation and Integration

**DESCRIPTION:** Whether our clients need embedded engineering, thermography, UL508A control panel design and production, or electrical construction management, our industrial automation solutions bring the latest carefully vetted technology to factories of any scale.



B1003

### Key Industrial

Napa, CA ☎ 707-252-1205 • [www.keyindustrial.com](http://www.keyindustrial.com)

#### IZMAG Electromagnetic Flowmeter

**DESCRIPTION:** The Anderson IZMAG electromagnetic flow meter offers unparalleled accuracy and repeatability for fluid handling applications. This meter can be mounted in-line or on a cart with a self-draining orientation. In addition to a wide array of features, the flow meter has a compact overall size, allowing installation into tight-fitting applications without a sacrifice in performance.



A413

### Rapidfil LLC

Paso Robles, CA ☎ 805-234-6304 • [www.rapidfil.com.au](http://www.rapidfil.com.au)

#### NEW Cellar-Mate Tank Head

**DESCRIPTION:** Rapidfil's automated Cellar-Mate will be on display and in operation with the new and improved Tank Head. The Cellar-Mate Tank Head is designed to top tanks and tankers automatically without a spotter. The new press service side of the business is in full operation as well. Rapidfil will take reservations for on-site equipment demonstrations and press servicing.



A112

### Rosemount Inc.

Livermore, CA ☎ 314-553-2000 • [www.rosemount.com](http://www.rosemount.com)

#### Automation Tools

**DESCRIPTION:** Does your winery need accurate, reliable level, temperature or pressure measurements for process or storage tanks? Or are process measurements on moveable skids needed? Rosemount has these solutions and more, as well as tools for reliability, productivity, sustainability and safety.

C1401

## TankNET by Acrolon Technologies Inc. P2134

Sonoma, CA ☎ 707-938-1300 • [www.acrolon.com](http://www.acrolon.com)

### TankNET® Fermentation Controller

**DESCRIPTION:** The TankNET TC-1 delivers precise temperature control with pump-over and aeration automation and real-time Brix monitoring via densitometer and third-party sensors. This versatile and rugged tank controller communicates wirelessly with TankNET software, giving winemakers complete command of their ferments from any web-browser, iOS or Android device.



### TankNET® Fermentation Management

**DESCRIPTION:** This comprehensive platform offers precise temperature control with ferment profiling, intelligent pump-over automation, energy-efficient control of chillers and cellar environments, and flexible alarm notifications. TankNET also seamlessly integrates with building automation systems and winery production software, such as Vintrace, WMDB and others. Accessible from any web-browser, iOS or Android device, TankNET puts winemakers in complete control of their craft from anywhere.



### NEW TankNET® Lite

**DESCRIPTION:** Operating on-premise or in the cloud, the all new TankNET Lite Edge Server is an economical control solution that enables winemakers to securely manage tank temperatures, monitor fermentation rates and receive alarm notifications from anywhere. This new device delivers a true plug-and-play experience that requires no IT expertise or firewall configuration. It communicates with tank controls via power wiring, is accessible from any web-browser, iOS or Android device and easily grows with your business.



### TankNET® Wireless Thermostat

**DESCRIPTION:** The TankNET PL-1 is an easy-to-use, economically priced tank thermostat that provides precise temperature control, Brix and pump-over tracking and wireless networking to TankNET fermentation software. Designed for the rigors of cellar life, the PL-1 reliably manages tank temperatures while capturing and reporting critical fermentation data to TankNET for remote access by winemakers from anywhere. The latest firmware for this controller now supports continuous real-time Brix measurement via densitometer.



## WINERY > EQUIPMENT > BOTTLING LINE

## ColloPack Solutions

C1222 & O60

Napa, CA ☎ 707-258-3940 • [www.collopack.com](http://www.collopack.com)

### NEW Palmer Canning CraftBloc™

**DESCRIPTION:** Palmer Canning's CraftBlo with ProPurge and laminar valve provides flow for unagitated fills and low oxygen pick up (less than 25ppb). It's built with a rotary counter pressure filling, compact monobloc design, stainless steel seamer, automated line control, CO<sub>2</sub> under-lid gassing manifold, 3A sanitary-compliant filler bowl with passivation ASTM A967 and a stainless steel frame, base plate and head. Speeds ranging from 30 cpm to 300 cpm.



## Defranceschi a SACMI company P2250

Mordano, Bologna, Italy ☎ +39 054260811 • [www.sacmi.com](http://www.sacmi.com)

### Labeller

**DESCRIPTION:** Defranceschi offers a range of modular labellers for the wine industry.



## Emmeti USA LLC

C1304

Tampa, FL ☎ 814-466-2183 • [www.emmeti-spa.it](http://www.emmeti-spa.it)

### Bulk Palletizers & Depalletizers

**DESCRIPTION:** Emmeti offers low level and high level bulk and case palletizers, with proven accelerated ROI. Emmeti has equipment for low volume to high volume lines and everything in between.

**EMMETI USA LLC**

### Case Packer

**DESCRIPTION:** Emmeti USA LLC manufactures bulk and case depalletizers, palletizers, case packers, conveyors, partition inserters, carton erectors, automatic waxing equipment, rack and riddle equipment and more. Emmeti's team will engineer the bottling line free of charge. Emmeti offers project management, engineering services, sales and support for one machine or the entire line. Ask about our new AR Vision System monitoring or Emmeti's environmentally friendly tray pack options for club stores.

## FPS Global Partners

B905

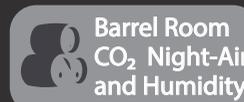
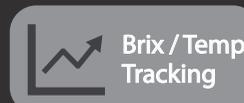
Miami, FL • [www.fpsglobalpartners.com](http://www.fpsglobalpartners.com)

### NEW FPS Centrifuges & Bottling Equipment

**DESCRIPTION:** FPS Global Partners is the North American sales, service and parts supplier for ANDRITZ Frautech Separators and DIPRAN bottling and canning lines, with installs world wide in some of the most recognized facilities in the beverage industry.



## COMPLETE CONTROL FROM ANYWHERE



Visit us today!  
[www.acrolon.com](http://www.acrolon.com)

UNIFIED  
BOOTH  
P2134

**TANKNET**  
TEMPERATURE CONTROL AND  
FERMENTATION MANAGEMENT

## Garvey Corporation

P1542

Blue Anchor, NJ ☎ 609-561-2450 • [www.garvey.com](http://www.garvey.com)

### Infinity Accumulation G Series

**DESCRIPTION:** Garvey's Infinity Accumulation Series uses patented technology to accumulate and single-file even the most unstable of products with unmatched speeds. This loop technology handles products with no back-pressure, no breakage and no label damage—all with minimal noise. Often used as a multi-laning device, buffer or unscrambler. The Infinity series is available in various sizes to fit your throughput requirements.



## Maspack Packaging USA

B1004

Santa Rosa, CA ☎ 707-757-7725 • [www.maspackusa.com](http://www.maspackusa.com)

### NEW Minipal 20

**DESCRIPTION:** The new Minipal 20 is an automatic palletizing system that is equipped with a SCARA 4 axes robotic arm developed and manufactured by Maspack. SCARA, which stands for Selective Compliance Articulated Robot Arm, has its arm rigid in the Z-axis and pliable in the X- and Y-axes. This configuration is designed with a small footprint. It has the capability to handle a variety of case configurations with a production speed of up to 4,000 to 6,000 bottles per hour.

## Vacuum Barrier Corporation

P1844

Woburn, MA ☎ 978-869-0462  
• [www.vacuumbARRIER.com](http://www.vacuumbARRIER.com)

### Nitrodose Liquid Nitrogen Dosing



**DESCRIPTION:** Regardless of your closure preference, Vacuum Barrier's Nitrodose LN2 dosing systems provide a precise drop of LN2 into the headspace of a filled bottle or pre-inert an empty bottle to purge O<sub>2</sub> and extend the shelf life, allowing the product to be consumed with the bouquet, color and flavor intended.

## Valentin Thierion Corp.

B824

American Canyon, CA ☎ 707-819-2848  
• [www.valentinthierion.com](http://www.valentinthierion.com)

### NEW Mobile Disgorging Service



**DESCRIPTION:** Brut Bottling Mobile disgorging service is a turnkey program for traditional method sparkling wine crafted at your winery. We work with you from the start—from tirage through to the disgorging process. We also rent riddling machines with the riddling cage to use at your own facility. Brut Bottling uses all Valentin Thierion equipment made in the Champagne region.

# LIQUID NITROGEN DOSING

regardless of your package or closure preference



SINCE 1958

- Minimize dissolved oxygen
- Extend shelf life
- Purge O<sub>2</sub> from empty bottles
- Purge O<sub>2</sub> from headspace
- Pressurize light-weight aluminum cans

**VACUUM BARRIER VBC CORPORATION**

4 Barten Lane, Woburn, MA 01801  
T 781 933 3570 | F 781 932 9428  
[sales@vacuumbARRIER.com](mailto:sales@vacuumbARRIER.com)

[vacuumbARRIER.com](http://vacuumbARRIER.com)

## Vintner's Vault

L5

Paso Robles, CA ☎ 805-226-8100 • [www.thevintnervault.com](http://www.thevintnervault.com)

### Borelli Bottling Line

**DESCRIPTION:** Borelli Bottling and Enos Labeling lines provide customers a fully automatic bottling solution, no matter the size of their production facility. Borelli lines are reliable, consistent and require little maintenance, with easy operation. Borelli offers output speeds from 500 bph up to 12,000 bph, enabling clients, regardless of size, an easy, headache-free, affordable solution that meets their bottling needs on their specific production schedule.



## Zalkin

B1019

Statham, GA ☎ 706-549-3300 • [www.zalkincapping.com](http://www.zalkincapping.com)

### Capping Machinery

**DESCRIPTION:** Zalkin features a line of single-head cappers that includes the TM3 semi-automatic capper, the TM135 fully automatic capper with cap elevator and the TM300, which can be fitted with single or dual stations to combine multiple functions. Zalkin's full portfolio of cappers, ranging from one to many capping heads, is suitable for all bottle sizes and closure types, including screw-on caps, roll-on aluminum closures, and push-in closures.



## WINERY > EQUIPMENT > CENTRIFUGES

## Centrisys Corporation

B629

Kenosha, WI ☎ 262-748-3467 • [www.centrisys.com](http://www.centrisys.com)

### Centrifuge - Separation Systems THK

**DESCRIPTION:** Centrisys/CNP supports global sustainability through its resource intensification portfolio with applications including water and wastewater equipment and processes. Our systems are simple. They are designed to use less energy, fewer chemicals and less space. Centrisys is a U.S. manufacturer of dewatering centrifuges, sludge thickeners and also provides global service, repair and parts for all centrifuge brands. CNP, a division of Centrisys, designs and supplies nutrient recovery and biosolids treatment optimization systems.

## Flottweg Separation Technology

P1649

Independence, KY ☎ 859-448-3200 • [www.flottweg.com](http://www.flottweg.com)

### Flottweg Centrifuge

**DESCRIPTION:** Flottweg decanters and separators are used in various ways in wineries. The combination can be used for increasing the efficiency and cutting the costs of must clarification, lees processing and wine clarification. Overall, it delivers decisive economic and quality advantages for the wine manufacturer.

## WINERY > EQUIPMENT > CLEANING / STERILIZATION EQUIPMENT

## ARS/SWASH™ Sanitizing Equipment

A407

Paramount, CA ☎ 562-408-4919 • [www.swashequipment.com](http://www.swashequipment.com)

### NEW Moog BRM-C Barrel Washer

**DESCRIPTION:** The Moog BRM is well established as an effective means for high pressure washing of barrels on racks with the bunghole down. In certain wineries, access to the barrels can be difficult. The BRM-C uses the proven hydraulic motor used in the BRM but with a very short, compact handle. Both the BRM and BRM-C require a pressure washer with adequate flow and pressure. The SWASH pressure washer is designed to meet these requirements.



## ARS/SWASH™ Sanitizing Equipment

A407

Paramount, CA ☎ 562-408-4919 • [www.swashequipment.com](http://www.swashequipment.com)

### Ozone-compatible Pressure Washer

**DESCRIPTION:** Both pressure washers and ozone are also widely used for barrel sanitization. With the new SWASH ozone-compatible pressure washer, both can be done at one time. Clean and sanitize in one step. In addition, when pressurizing ozonated water, ozone dissociates into ozone gas, which can remain in the barrel, potentially eliminating the need for sulfur. Over time, ozone gas can be added to maintain sterility.



Clearwater Tech Ozone Solutions

# SMART, SUSTAINABLE OZONE WATER TREATMENT

BOOTH 2031

UNIFIED  
WINE & GRAPE  
SYMPOSIUM  
PRESENTED BY ASBEV & CAWGO



Add the planet's strongest sanitizer to control bacteria, mold, and other microbial contaminants, safely and efficiently.

Leading designer and manufacturer of energy efficient ozone systems since 1986, **ClearWater Tech** provides superior surface sanitation throughout your winery.

#### BENEFITS:

- CONTROLS BACTERIA and MICROBES
- SANITIZES SURFACES
- REDUCES ENERGY COSTS
- REDUCES CHEMICALS
- PRODUCED ON SITE
- NO RESIDUALS OR OFF-TASTES
- SMALL FOOTPRINT



ClearWater Tech CIP Panel-Mount  
Mobile Systems also Available

CALL US TODAY AND JOIN OUR LIST OF WINERY NOTABLE INSTALLATIONS!



**ClearWater Tech** Since 1986

805.549.9724 | 800.262.0203



[wine@cwtozone.com](mailto:wine@cwtozone.com) | [www.wine.cwtozone.com](http://www.wine.cwtozone.com)

## WINERY > EQUIPMENT > CLEANING / STERILIZATION EQUIPMENT

### ARS/SWASH™ Sanitizing Equipment A407

Paramount, CA ☎ 562-408-4919 • [www.swashequipment.com](http://www.swashequipment.com)

#### SWASH™ Steam Wand - Curved

**DESCRIPTION:** The SWASH integrated system of products for steaming barrels was first introduced in the U.S. more than 30 years ago. Over the years, a number of customers have expressed a need for a steam wand that facilitated entry into the barrel when the barrels are in a pyramid stack or on certain barrel racking systems. To address this need, SWASH Sanitizing Equipment has developed and refined a curved steam wand with a right angle handle.



### Astro Pak B1012

Costa Mesa, CA ☎ 888-576-6147 • [www.astropak.com](http://www.astropak.com)

#### Cleaning and Sanitization Services

**DESCRIPTION:** Astro Pak is the leader in providing high-purity chemical cleaning, passivation and surface-finishing services for a wide variety of critical systems and components. Our services leverage decades of experience to deliver the most effective chemistries and techniques, resulting in increased equipment longevity, reduced corrosion-related downtime and regulatory compliance. Our reach spans across a myriad of industries, including biopharmaceutical, food and beverage, aerospace, water treatment, laser and industrial markets.



### ClearWater Tech Ozone Technology P2031

San Luis Obispo, CA ☎ 805-549-9724 • [wine.cwtozone.com](http://wine.cwtozone.com)

#### C1 Mobile Disinfection Cart

**DESCRIPTION:** The C1 mobile disinfection cart delivers ozone-enriched water for surface disinfection. Easy to maneuver around the winery, the cart replaces traditional hot water and harsh chemicals with safe sanitation on contact. The cart also comes standard with a separately controlled ozone gassing feature that offers you greater disinfection options and can be used to gas and preserve stored barrels instead of using sulfur dioxide.



#### Clean-In-Place

**DESCRIPTION:** Providing complete ozone delivery, the Clean-In-Place panel-mount ozone systems come in an all-in-one package. Dissolved ozonated water can be plumbed to multiple points of use throughout the facility, providing superior surface sanitation. The only requirements are a power source, an oxygen concentrator, booster pump and water connections throughout the winery.



### Cloud Company P2111 & O45

San Luis Obispo, CA • [www.cloudinc.com](http://www.cloudinc.com)

#### Tank Cleaners

**DESCRIPTION:** The Cloud-Sellers Model 360 is a durable and reliable tank cleaning machine, combining all of the features needed to handle the most serious tank cleaning problems.

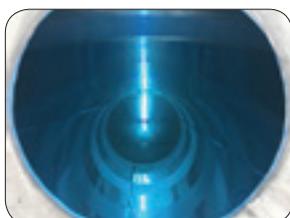


### ColloPack Solutions C1222 & O60

Napa, CA ☎ 707-258-3940 • [www.collopack.com](http://www.collopack.com)

#### Blue Morph UV

**DESCRIPTION:** BlueMorph UV is an innovative technology that utilizes ultraviolet light to efficiently sanitize tanks and barrels. This process reduces water, energy and chemical usage while increasing safety. It is the only waterless, chemical-free tank sanitizing system.



### MOOG Cleaning Systems A212

Worb, CH, Switzerland ☎ +41 318381919 • [www.moog.swiss](http://www.moog.swiss)

#### Barrel Cleaner

**DESCRIPTION:** This handheld unit simultaneously cleans the inside of the barrel and siphons off the dirty water. The built-in high-pressure injector system creates a very strong vacuum, which sucks the barrel empty during and after the cleaning process. There is no need to turn and drain the barrel.



### R & S Supply Company A232

Napa, CA ☎ 800-439-6909 • [www.rssupply.com](http://www.rssupply.com)

#### NEW Keltec Portable Water Heaters

**DESCRIPTION:** Keltec Electric Tankless Portable Water Heaters can provide instant hot water for sterilization anywhere in the winery for washdown, bottling, tank cleaning and more.



### Steamerics Inc. P2237

Inglewood, CA ☎ 310-327-8900 • [www.steam.am](http://www.steam.am)

#### NEW Optima Steamer Pneumatic Conveyor Belt Cleaning Tool

**DESCRIPTION:** The Optima Steamer isn't just for sanitizing and swelling barrels, cleaning floors or sanitizing tanks. The automated conveyor belt tool by the Optima Steamer can clean conveyor belts in place without human labor or drainage. Along with the scientifically designed barrel tool and floor spinner, this pneumatic conveyor belt cleaning tool will bring you ROI on the Optima Steamer in no time.



### Tom Beard Company P2173

Santa Rosa, CA ☎ 707-573-3150 • [www.tombeard.com](http://www.tombeard.com)

#### TBC Combo Washer + Steamer Barrel Washing Machine

**DESCRIPTION:** The TBC Combo Washer + Steamer Barrel Washing Machine is our latest innovation, in both two- and four-barrel capabilities. This machine includes fully adjustable cycle times of barrel washing/steaming, a hot water wash, steam and vacuum pressure cycle, followed by a cold water rinse. Our latest energy-saving machine is ideal for wineries that need to save water, time and labor for barrel washing and sanitization.



## WINERY > EQUIPMENT > COMPRESSORS

### Atlas Copco C1116

Rock Hill, SC ☎ 866-344-4887 • [www.atlascopco.com](http://www.atlascopco.com)

#### ZS VSD+ Oil-free Screw Blower

**DESCRIPTION:** The Atlas Copco oil-free rotary screw ZS VSD+ blower can reduce energy costs up to 30 percent compared to conventional lobe blowers. They are ISO Class 0-certified, have low dBA noise levels and provide full-time reliability.



### Kaeser Compressors Inc. P2037

Sacramento, CA ☎ 877-579-6920 • [www.us.kaeser.com](http://www.us.kaeser.com)

#### AirCenter Packaged Air System

**DESCRIPTION:** Kaeser's AirCenter packages consist of a rotary screw compressor with built-in refrigerated dryer mounted on an integral horizontal receiver tank. AirCenter packages offer "plug and play" convenience compared to an individual-component system, take up less floor space and reduce installation costs. Available in both simplex and duplex configurations, AirCenter package options include a cycling refrigerated dryer, clean air treatment kit and a condensate treatment kit.





## 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 B822 during the Unified Symposium in Sacramento!

Orders placed before March 31<sup>st</sup> 2020 will deliver by August 2020. Please contact us for more information.

Please consult your sales associates: John Schilter or Eric Mercier.

(707) 257-0714 • (800) 227-5625 • [info@premierwinecask.com](mailto:info@premierwinecask.com)

[www.premierwinecask.com](http://www.premierwinecask.com) • 1710 Soscol Avenue, Suite 5, Napa CA 94559

# What if you could eliminate the issues that impact temperature measurement in the fermentation process?

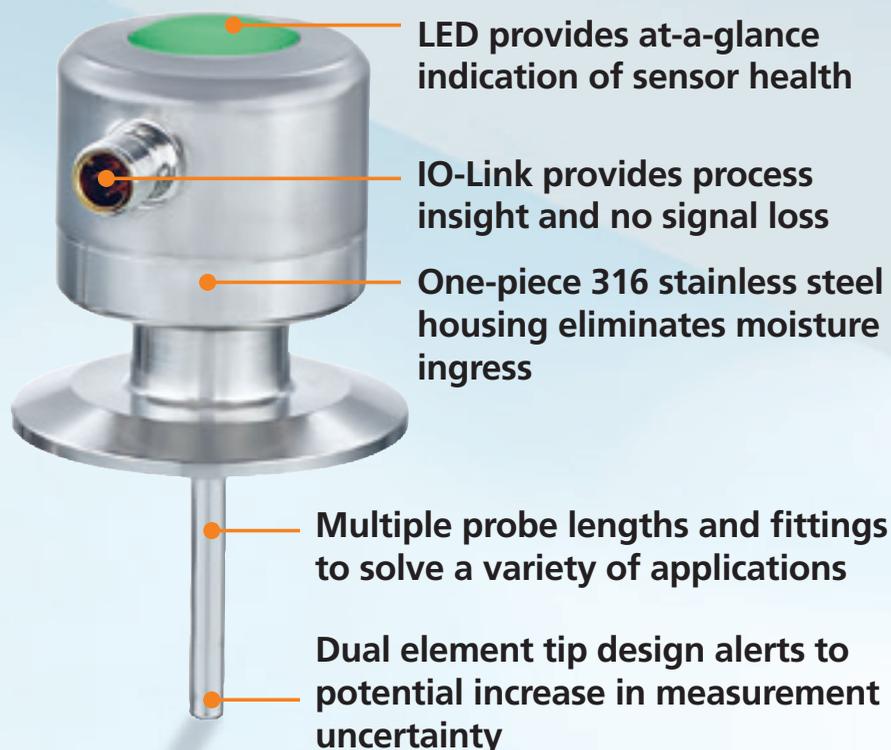


**NEW!** The TCC Temperature Sensor with dual RTD element and integrated electronics are laser-welded in a one-piece stainless-steel housing. This design eliminates challenges with temperature drift caused by ingress or moisture.

**EXTREME TESTING.** Every temperature sensor is tested beyond standard conditions to ensure uncompromised accuracy and reliability.

You can feel confident that the TCC is the temperature sensor that will produce the quality wine you expect!

## TCC Temperature Sensor



Starting List Price: \$355

Learn more, visit [ifm.com/us](http://ifm.com/us)

**ifm** – close to you!

## X-TREME TESTING



Sensors experience hammer tests up to 900g for shock and vibration and are then tested for accuracy and drift.



NIST traceable equipment tests out-of-the-box accuracy vs. technical data specs. The TCC indicates a high level of precise control.



The sensor is subjected to a thermal stress chamber, simulating the CIP cycle process. The TCC survived more than 1000 cycles.

**Visit ifm – Booth P2218**  
**Unified Wine & Grape Symposium**

February 4 - 6, 2020  
Cal Expo • Sacramento, CA

## WINERY > EQUIPMENT > COMPRESSORS

### Kaeser Compressors Inc.

P2037

Sacramento, CA ☎ 877-579-6920 • [www.us.kaeser.com](http://www.us.kaeser.com)

#### Sigma Air Manager 4.0 Master Controller

**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.



### Rogers Machinery Co., Inc.

P2285

Portland, OR ☎ 503-686-4746 • [www.knw-series.com](http://www.knw-series.com)

#### Kobelco KNW Series

**DESCRIPTION:** The Kobelco KNW Series of oil-free rotary screw air compressors is designed, manufactured, assembled and tested in our production facility in Portland, Oregon. If you can't risk product or process contamination, need to improve your plant's energy efficiency or have the need for system or controls customization, partner with Rogers Machinery.

## WINERY > EQUIPMENT > CONTROL SYSTEMS

### A-T Controls, Inc.

C1202

Cincinnati, OH ☎ 513-247-5465 • [www.a-tcontrols.com](http://www.a-tcontrols.com)

#### Series DR Valve: 3-Way Temperature Control

**DESCRIPTION:** TRIAC Series DR: 3-Way Valve is a custom solution from A-T Controls for tank temperature control in the wine industry. This three-way control system was updated in 2019 to eliminate trans-flow with reduced wiring. The Series DR glycol control package features a three-position supply valve paired with our TRIAC electric actuator to control heating, cooling and turn-off. The result is better glycol-controlled temperature and decreased installation costs.



### ATPGroup

L4

Windsor, CA ☎ 707-836-6840 • [www.ATPGroup.com](http://www.ATPGroup.com)

#### Parsec Air Mixing M.I.

**DESCRIPTION:** The award-winning Air Mixing M.I. is designed for the complete automation of red fermentation and is one of the key expansions of Parsec's SAEn 5000 winery automation system. It saves water, power, labor and time, and can be precisely programmed for each application based on the level of extraction required.



### ifm efector inc.

P2218

Malvern, PA • [www.ifm.com/us](http://www.ifm.com/us)

#### IO.Link Digital Communication Technology for Sensors

**DESCRIPTION:** On a tank farm, using IO.Link sensors and IO master blocks, the data from each temperature, level and pressure sensor can be digitally transmitted over EtherNet/IP and displayed in the control room. No crawling or climbing on tanks—sensor parameters can be easily changed via the controller. More importantly, it allows plant operators to access tank information and make adjustments to process operation in real-time, improving wine production.



### Tom Beard Company

P2049

Santa Rosa, CA ☎ 707-975-5356 • [www.vinwizard.com](http://www.vinwizard.com)

#### NEW VinWizard Power Load Reduction Modules

**DESCRIPTION:** Integration between the VinWizard tank temperature control module and refrigeration plant allows wineries to reduce power consumption by up to 40 percent. The range of functions available has increased, with software logic driving existing winery assets more efficiently. Load Scheduling runs the plant at the most cost-efficient timeframes. Smart Load Control directs glycol to the highest priority tanks when winery resources are limited. Pump Control shuts pumps down according to tank demand.



#### NEW VinWizard Pulse Cooling

**DESCRIPTION:** For wineries with glycol flow problems, ice build-up, over-chilling issues or a desire to maximize efficiency of hot and cold glycol, our enhanced IOWiz control modules allow wineries to "pulse" the glycol through jackets. The system opens the valve to fill the jacket and then closes. The glycol remains stationary long enough to extract the correct amount of heat before the jacket is refilled.



## WINERY > EQUIPMENT > CONVEYORS & PARTS

### Columbia Machine

C1232

Vancouver, WA ☎ 360-694-1501 • [www.palletizing.com](http://www.palletizing.com)

#### NEW HL4200 High Level Palletizer

**DESCRIPTION:** The all new HL4200 high level palletizer offers users a compact footprint and high performance. Standard features include a VFD-controlled pacer meter belt, bi-parting apron and Columbia's product manager controls package. These features, combined with the ability to form "layer gaps" side-to-side and front-to-back, make the HL4200 extremely flexible. Ideal for both retrofit and new applications, the HL4200 can palletize up to 60 cases per minute, depending on case size and layer pattern.



### Emmeti USA LLC

C1304

Tampa, FL ☎ 814-466-2183 • [www.emmeti-spa.it](http://www.emmeti-spa.it)

#### Conveyors

**DESCRIPTION:** Emmeti USA LLC manufactures bulk and case depalletizers, palletizers, case packers, conveyors, partition inserters, carton erectors, automatic waxing equipment, rack and riddle equipment and more. Emmeti's team will engineer the bottling line free of charge. Emmeti offers project management, engineering services, sales and support for one machine or the entire line. Ask about our new AR Vision System monitoring or Emmeti's environmentally friendly tray pack options for club stores.

## WINERY > EQUIPMENT > CRUSHPAD EQUIPMENT

### Bucher Vaslin North America

L9

Santa Rosa, CA ☎ 707-823-2883 • [www.bvnorthamerica.com](http://www.bvnorthamerica.com)

#### NEW Delta Densilys Pre-sorting

**DESCRIPTION:** The Delta Densilys sorting table is an extended application product of the original desimetric sorter that allows for pre-sort capabilities by removing MOG, such as leaves, stems, bugs, raisins and unripe berries, prior to destemming and/or optical sorting. The Densilys both optimizes the destemming process, reducing MOG, as well as any optical sorting component. It features a flow rate up to 8 tons per hour.



### Defranceschi a SACMI company

P2250

Mordano, Bologna, Italy ☎ +39-0542608111 • [www.sacmi.com](http://www.sacmi.com)

#### Grape Receiver

**DESCRIPTION:** Defranceschi provides professional products able to guarantee maximum product integrity and respect for organoleptic qualities.



### Della Toffola USA

P2041

Santa Rosa, CA ☎ 707-544-5300 • [www.dellatoffola.us](http://www.dellatoffola.us)

#### Biothermo Cooler Thermovinification System

**DESCRIPTION:** Della Toffola's Biothermo Cooler (BTC) system utilizes thermoflash technology. The system works by rapidly heating must and then cooling it instantaneously in a vacuum chamber. It can be extremely beneficial for color extraction and flavor enhancement, especially for grapes affected by recent fires or rain. Della Toffola offers a whole range of effective solutions adaptable to any customer's specific needs. Models start from 3 tons per hour up to 40 tons per hour.



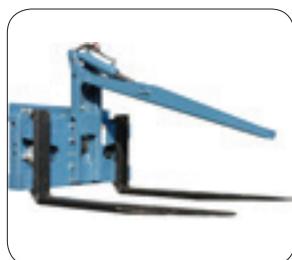
### Munckhof Mfg

P2206

Oliver, BC ☎ 250-498-4426 • [www.munckhof.com](http://www.munckhof.com)

#### NEW Bin Rotator

**DESCRIPTION:** Munckhof Manufacturing introduces its newest forklift-mounted bin rotator attachment for side dumping fruit on the crushpad. The Munckhof design is unique in that it employs a rack-and-pinion, linear turning action, as opposed to the industry standard rotary gear. The machine is built to North American standards and only requires a single hydraulic outlet to operate integrated clamping and turning.



### P & L Specialties

L7

Santa Rosa, CA ☎ 707-573-3141 • [www.pnlspecialties.com](http://www.pnlspecialties.com)

#### Consista-Hopper™

**DESCRIPTION:** The Consista-Hopper provides proven time and labor savings for wineries processing up to 6 tons an hour. A half-ton receiving hopper allows one easy labor-saving bin dump as a gentle helix spreads out full clusters onto the sorting line or into a destemmer for easy processing. With adjustable speed, height and easy cleaning, this portable machine can be adjusted to any line.



### Pellenc America Inc.

L13

Santa Rosa, CA ☎ 707-568-7286 • [www.pellenc.com](http://www.pellenc.com)

#### NEW KLINER Sorter

**DESCRIPTION:** Pellenc's new Kliner Sorter offers high throughput with sorting of up to 60 tons per hour. The Kliner Sorter comes in multiple sizes to fit the size of the winery. All models are available for the 2020 harvest.



### Raytec Vision SPA

P1550

Parma, Italy ☎ +39-0521303427 • [www.raytecvision.com](http://www.raytecvision.com)

#### NEW Dionysos

**DESCRIPTION:** Dionysos is an optical sorting machine specially designed to select top-quality grapes with a capacity of up to 12 tons per hour. It automatically removes all contaminants from the inlet stream to ensure that only sound and ripe grapes turn into wine, with the ability to control the winemaking process and obtain a premium wine.



### RLS Equipment Co. Inc.

A422

Egg Harbor, NJ ☎ 609-965-0074 • [www.rlsequipment.com](http://www.rlsequipment.com)

#### Magitec/Amos

**DESCRIPTION:** The Magitec features a unique feed/basket design, yielding the cleanest destemming action and highest whole-berry count. A square-holed basket and mixing bar allow the fruit to be gently removed from the stem without maceration. Fruit can be crushed only, destemmed only, and destemmed plus crushed. Crushing rollers can be open to 100 mm and adjusted while the machine is in operation. There is a bypass built into the throat of the unit to permit crushing only.



### Scott Laboratories Inc.

A322 & A318

Petaluma, CA ☎ 707-765-6666 • [www.scottlab.com](http://www.scottlab.com)

#### Armbruster Double Rollersorter

**DESCRIPTION:** The Rotovib by Armbruster has evolved to have the option of two rollersorters installed. This additional rollersorter eliminates even more MOG than the standard Rotovib with singleroller sorter. The second rollersorter effectively eliminates the small MOG (seeds, shot berries, rot, etc.) by utilizing a tighter array of rollers, which will allow the very small waste to pass through and the good berries to discharge.



### TCW Equipment - The Compleat Winemaker L21

Santa Rosa, CA ☎ 707-963-9681 • [www.tcwequipment.com](http://www.tcwequipment.com)

#### NEW Gentle Premium Processing Crushpad Bundle

**DESCRIPTION:** This is a crushpad bundle for gentle, high-quality fruit processing. The package includes a Mori receiving hopper, Mori Dinamica destemmer-crusher, Ragazzini Rotho MS3 peristaltic pump and the Mori Basket Press PZ95.



#### NEW TCW Craft Wine Processing Bundle

**DESCRIPTION:** The TCW Craft Wine Processing Bundle is the latest addition to the TCW bundle product line. This craft wine processing bundle is a turnkey, easy-cleaning and straight-forward solution to your processing equipment needs. Mori is a reliable, high-quality Italian manufacturer with renowned workmanship. The processing bundle includes a Mori receiving hopper, a Dinamica 60 destemmer-crusher, a Mori V-Series volumetric must pump and a Mori PZ 80 FL hydraulic basket press.



# Quality Equipment For Quality Production



Pneumatic  
Press

DTX for Tartaric Stabilization  
& pH Reduction

DTMA  
Maceration Accelerator

OMNIA Ceramic  
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**USA**

# ADVANCED WINERY



## AUTOMATED PUNCH

Unattended punch. Set schedule on your smart phone.

## BUILT-IN PRESS

Insert pressing tube and pump out the wine.

## NO CLEANING

No waste water. No environmental permits. Single-use liner, Medical grade BPA-free biodegradable. No contamination. No off-odors. Better quality wine.

## NO INSTALLATION

One ton maximum grape capacity. 4'x4' space. 110VAC.

# \$2500

Complete system



Feb 5-6  
Sacramento CA  
Booth# B829



Feb 20-22  
Irving, TX  
Booth# 703



Feb 27  
St Helena, CA  
Booth# 119



March 11-12  
Lancaster, PA  
Booth# 78

[www.Gofermentor.com](http://www.Gofermentor.com)

877 377 5359 sales@Gofermentor.com

US patent 9,260,682 9,611,452 9,802,805 France 1461410 Australia 2014268161

# 2020 UNIFIED GUIDE

## WINERY > EQUIPMENT > CRUSHPAD EQUIPMENT

### Valley Pipe & Supply Inc.

L17

Fresno, CA ☎ 559-233-0321 • [www.valleypipe.com](http://www.valleypipe.com)

#### Sraml

**DESCRIPTION:** Valley Pipe & Supply will have a line of crushpad equipment from Sraml presses with new control systems and easy-to-clean features that will cut down your clean-up time. Also on display are destemmers from CME and Socma's vibrating design "Cube." Several styles of pumps, filters and custom-made VPS equipment are available to view.

### Vintner's Vault

L5

Paso Robles, CA ☎ 805-226-8100 • [www.thevintnervault.com](http://www.thevintnervault.com)

#### IMMA Stemmer/Crusher

**DESCRIPTION:** IMMA Stemmer/Crushers allow higher quality destemming and handling of fruit with infinite adjustability. Independently driven, variable-speed motors for the case and beater bars allow stemming specific to the varietal, minimizing stems in the must. Cage holes have decreasing diameter and drawn edges for better handling. Beater shaft shoes are adjustable to avoid grape tearing. IMMA offers a "crush/no crush" option, meaning higher productivity and more time saved.



### WECO - The Science of Optical Sorting

P2272

Woodland, CA ☎ 520-666-9190 • [www.wecotek.com](http://www.wecotek.com)

#### WineGrape Tek

**DESCRIPTION:** WECO's Wine Grape Sorter uses the latest ChromaxHD optical sorting technology and advanced algorithms to efficiently remove under- and over-ripe fruit and foreign material (MOG). This offers vastly improved quality with increased throughput at a fraction of the price of alternative methods. The system is also designed to be easy to understand and operate, employing intuitive controls and a touchscreen interface refined over the last 30 years.



## WINERY > EQUIPMENT > DISTILLING EQUIPMENT

### TCW Equipment - The Compleat Winemaker

L21

Santa Rosa, CA ☎ 707-963-9681 • [www.tcwequipment.com](http://www.tcwequipment.com)

#### NEW Distillery Equipment Bundle Package

**DESCRIPTION:** TCW has put together its top three most-purchased products for distilleries. These three tools will help get your spirits to market quickly and efficiently because you don't want to think about your equipment: you just want it to be dependable. The package includes a Mori 6-spout bottle filler, a SimpleSpirits air diaphragm distillery pump and a MiniMax, the closed-loop bottle rinsing station.



## WINERY > EQUIPMENT > FERMENTORS

### GOfermentor

B829

Far Hills, NJ ☎ 877-377-5359 • [www.gofermentor.com](http://www.gofermentor.com)

#### GOfermentor

**DESCRIPTION:** GOfermentor ferments wine in a patented, \$100, single-use plastic liner. No cleaning means a reduction in water waste. Punch is automated, providing exceptional extraction of color and tannins. Unattended operation ensures reproducible operation. The device can handle up to 1 ton grape capacity. No installation is needed. At harvest, the GOfermentor functions as a press: push a button and the wine is pressed out. The complete unit is \$2,500.



## WINERY > EQUIPMENT > FILTERS / FILTRATION SYSTEMS

### American Membrane Corporation

A142

Temple City, CA ☎ 626-344-0361 • [www.americanmembrane.com](http://www.americanmembrane.com)

#### PES Membrane Cartridges

**DESCRIPTION:** American Membrane Corporation offers PES membrane cartridge filters suitable for all of your wine filtration applications.



### ATPGroup

L4

Windsor, CA ☎ 707-836-6840 • [www.ATPGroup.com](http://www.ATPGroup.com)

#### TMCI Padovan Dynamos Cross-Flow Filter System

**DESCRIPTION:** Padovan's Dynamos Cross-Flow is a patented, rotating, high-solid filter with a calibrated back-pulse system that filters both lees and wine. It eliminates the need for filter aids, such as D.E. for lees filtration, and can be used to polish wine that has been racked. Unlike other high-solids cross-flow systems, the Dynamos can run up to 24 hours before cleaning. A range of sizes available for small wineries up to large production facilities.



### Criveller California

L16

Healdsburg, CA ☎ 707-431-2211 • [www.criveller.com](http://www.criveller.com)

#### Cross-Flow Filter

**DESCRIPTION:** Criveller offers a complete line of automatic cross-flow filters with either polypropylene (PP) or polyethersulfone (PES) membranes. The hollow-fiber polymer membranes are highly resistant to chemicals and heat, and are an excellent solution for filtering still or sparkling wine and cider. Both semi-automatic and automatic options are available.



### Della Toffola USA

P2041

Santa Rosa, CA ☎ 707-544-5300 • [www.dellatoffola.us](http://www.dellatoffola.us)

#### OMNIA High Solids Cross-Flow Filters with Ceramic Membranes

**DESCRIPTION:** Della Toffola's High-Solids Cross-Flow Filters' innovative ceramic membrane filtering system obtains the best clarity and provides exceptional recovery rate, with achievable final concentrations of more than 90 percent. The OMNIA series filters can filter juice, float lees and filter the finished wine, eliminating the need for DE within a production facility. The OMNIA combines structural quality, innovative technology and durability to enable an efficient filtering process with excellent results (less than 1 NTU).



### H<sub>2</sub>O Engineering, Inc.

P2115

San Luis Obispo, CA ☎ 805-547-0303 • [www.h2oengineering.com](http://www.h2oengineering.com)

#### Raw Water Filtration

**DESCRIPTION:** H<sub>2</sub>O Engineering specializes in water system solutions tailored to each winery's specific needs. This includes water sampling, system design, equipment supply, system integration, chemical supply and remote diagnostic reporting. Our goal is to streamline and optimize the treatment and management of water resources for our winery clients, ensuring sustainable water utilization.



### Scott Laboratories Inc.

A322 & A318

Petaluma, CA ☎ 707-765-6666 • [www.scottlab.com](http://www.scottlab.com)

#### Exclusive Partner for PALL Oenoflow™

**DESCRIPTION:** Scott Labs offers new machines, as well as all parts, service and technical support for all PALL Oenoflow cross-flow system installations in the North American wine industry. Committed to rapid response times and stock-on-hand for major wear parts, Scott and PALL are eager to uphold the industry-leading legacy that both companies are known for.



#### NEW 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, operation is more hygienic, doesn't create DE waste for landfills and saves on labor.



### Winesecrets

A124

Sebastopol, CA ☎ 707-824-2022 • [www.winesecrets.com](http://www.winesecrets.com)

#### Engineered Filtration Solutions

**DESCRIPTION:** These systems combine the reliability of SUEZ construction with our operational experience to provide cutting-edge capabilities. Winesecrets will be your conduit to the technical expertise of SUEZ Water Technologies & Solutions. We translate their industrial system into winery applications and assure proper installation, commissioning and operability.



#### NEW Test Track

**DESCRIPTION:** It is important to understand the impact of various treatments on a small scale before processing larger volumes in the winery. Test Track allows the winemaker to evaluate the potential in wine bench trials, such as sweet spotting, prior to committing to production-scale processing.

**TEST TRACK**  
Bench Scale Targeted Filtration

### Winetech LLC

L8

Napa, CA ☎ 707-257-2080 • [www.winetech.us](http://www.winetech.us)

#### Cross-Flow Filter

**DESCRIPTION:** Winetech offers mobile cross-flow filtration services for still and sparkling wine. After many membrane trials, our hollow fiber membranes direct the flow through a nominal 0.2 micron membrane, getting the closest to sterile filtration. The membranes create minimal friction, are gentle on the wine and create an almost undetectable temperature increase. Our filtration solution results in a lower environmental impact and less strain on your wine.



#### Lees Filtration (Rotovac)

**DESCRIPTION:** Lees Filtration filters products, including juice, fermented lees and bentonite lees. Constructed entirely of stainless steel, the filter can be effectively sanitized. The internal pump picks up minimal oxygen, providing maximum return. Wine is pulled from within the vacuum's rotating drum, which is coated in DE filtration media, into the base of the machine. The drum rotates, with its vacuum pulling wine slowly through the porous material and into a clean tank.



## WINERY > EQUIPMENT > FORKLIFTS

### Accurate Forklift Inc.

P2018

Santa Rosa, CA ☎ 707-585-3675 • [www.accurateforklift.com](http://www.accurateforklift.com)

#### Cascade

**DESCRIPTION:** Cascade has manufactured a new wine barrel handler that will safely grip two empty barrels side by side—this device is fork-mounted and is designed to easily handle barrels delivered to the winery. This is designed as an employee back saver.

#### UniCarriers Forklift

**DESCRIPTION:** UniCarriers Forklift (previously Nissan Forklift) provides a full line of material handling forklifts (both electric and internal combustion) that is specifically designed for use in the vineyards, production facilities and barrel rooms during bottling, warehousing and shipping.

### Holt of California

L15

West Sacramento, CA ☎ 916-373-4100 • [www.holtlift.com](http://www.holtlift.com)

#### Forklifts

**DESCRIPTION:** Get all your propane and diesel forklift needs at Holt of California—whether you need a bin dumber or rotator, a small 3,000 lbs. forklift or a 36,000 lbs. forklift.

#### Forklifts and Material Handling Equipment

**DESCRIPTION:** Holt of California's lithium-powered electric forklift solutions provide a maintenance-free, long-running, quick-charging electric forklift solution for all applications. Whether you are on the crushpad or in the barrel room, whether you are moving bulk glass or working the bottling line, lithium-powered electric forklifts can handle everything you throw at them.



### Papé Material Handling

P1949

Concord, CA ☎ 707-559-0408 • [www.papemh.com](http://www.papemh.com)

#### Crown Industrial Batteries and OneCharge Lithium Battery

**DESCRIPTION:** Papé Motive Power offers solutions directly to the customer as a dealer for the Crown Industrial Battery and OneCharge Lithium distributor on the West Coast. We provide direct sales, service and rental of the lead acid product with five-year full warranties. The OneCharge Lithium product offers the ability to use the same battery over multiple shifts for less battery handling, maintenance and without battery-spill hazards. We supply both products for all manufacturers.



#### Hyster Forklifts and Material Handling Equipment

**DESCRIPTION:** Papé Material Handling and Hyster equipment offer more than 100 models of electric and propane forklifts, pallet jacks, order picker equipment and stand-up reach forklifts for use in narrow aisle applications. Our forklifts are powered by propane, lithium or lead acid battery or diesel. The new J series electric lift is designed for inclement conditions. The equipment is focused on low maintenance, operator ergonomics and heavy-duty applications.



## WINERY > EQUIPMENT > GAS GENERATORS

### Atlas Copco

C1116

Rock Hill, SC ☎ 866-344-4887 • [www.atlascopco.com](http://www.atlascopco.com)

#### NGP+ Nitrogen Generator

**DESCRIPTION:** Reduce up to 80 percent of your gas costs by generating nitrogen on-site with the Atlas Copco NGP+ Nitrogen Generator with PSA. Carbon molecular sieves guarantee premium nitrogen at the highest purity levels for air factors of 1.8 (95 percent) up to 5.5 (99.999 percent) pure nitrogen. The NGP+ is delivered ready-to-use by connecting to a supply of dry compressed air. It can be integrated with SmartLink to increase reliability, decrease downtime and identify energy optimization.



### Parker Hannifin

B600

Lancaster, NY ☎ 716-706-8584 • [www.parkern2.com/wine](http://www.parkern2.com/wine)

#### Parker WineMaker Series Nitrogen Generator

**DESCRIPTION:** Generating your own nitrogen eliminates the hassles of supplied cylinders, dewars or bulk nitrogen. A Parker WineMaker Series Nitrogen Generator dispels any concerns about lines icing up, running low or running out of nitrogen. A nitrogen blanket reduces the oxygen concentration to less than 0.5 percent and minimizes contact between oxygen and the wine surface during storage (both pre- and post-bottling) and ensures minimal DO pickup.



## WINERY > EQUIPMENT > GRAPE INSPECTION

### Maselli Measurements, Inc.

A510

Stockton, CA ☎ 209-423-1330 • [www.maselli.com](http://www.maselli.com)

#### NEW Maselli CC06 MOG Sampler

**DESCRIPTION:** Maselli has developed a MOG sampler with the capability to automatically control the MOG sampler probe and must probe. The CC06 will deliver the MOG sample for state inspector's analysis and must sample for Brix, pH and TA analysis. The CC06 includes the supporting structure, PLC control panel and MOG probe with optional must probe.

# THIS IS PARKER

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*Preserve quality*



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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.

**ENGINEERING YOUR SUCCESS.**



## WINERY > EQUIPMENT > HOSES & FITTINGS

### Continental ContiTech

B637

Fairlawn, OH ☎ 800-235-4632 • [www.continental-industrial.com](http://www.continental-industrial.com)

#### VINTNER™ Reserve

**DESCRIPTION:** Continental's VINTNER Reserve is primarily for liquid transfer in wineries and for beverage production. It's resistant to conventional cleaning agents and cleaning-in-place processes. The product is 3-A 18-03 Sanitary Certified and FDA/USDA-compliant. The chlorobutyl tube won't impart taste or smell.



### CPE Systems Inc.

B1018

Burnaby, BC ☎ 604-988-7151 • [www.cpesystems.com](http://www.cpesystems.com)

#### ContiTech VINTNER™ Hose with Tri-Clamp Ends

**DESCRIPTION:** ContiTech VINTNER Hose features a special polyester monofilament helix that will not corrode or rust and tends to spring back to shape when crushed. Its chlorobutyl tube meets FDA, USDA and 3A Sanitary Standards requirements. Its smooth cover and tube prevent material and bacteria build-up and can be steam-cleaned (open end) after use.



### Motion Industries

C1118

Tracy, CA ☎ 209-830-8522 • [www.motionindustries.com](http://www.motionindustries.com)

#### Winery Equipment

**DESCRIPTION:** Motion Industries provides MRO parts, service and support up and down the supply chain for winery production and maintenance systems. With 559 branches and 15 distribution



centers, we offer customers access to more than 7.8 million parts to get you from harvest to bottle. Solutions include custom hydraulic hoses, pumps, motors, valves and fittings, screw conveyors, power transmission components, tabletop and mat top conveying chain, pneumatic components, wash-down duty, variable-frequency drives and gearboxes.

## WINERY > EQUIPMENT > HUMIDITY CONTROL

### Mee Industries Inc.

B716

Irwindale, CA • [www.meefog.com](http://www.meefog.com)

#### MeeFog Humidification

**DESCRIPTION:** MeeFog barrel storage humidification drastically reduces the need for topping off barrels during the aging process and aids in maintaining the aging profile for repeatability. Our adiabatic system saves up to 95 percent in energy compared to other systems. Most importantly, you'll see a rapid return on investment for installing a MeeFog System.



**Continental**   
The Future in Motion

POP.



## Smart Fog

P1544

Reno, NV ☎ 800-921-5230 • [www.smartfog.com](http://www.smartfog.com)

### NEW Non-Wetting Industrial Humidifier

**DESCRIPTION:** Smart Fog's new ES100C Non-Wetting Direct Space Industrial Humidifier offers a controlled environment that preserves the barrels and keeps the wine in the barrels. Save on topping costs and enhance wine quality. The all-new antimicrobial technology helps maintain a pathogen-, dust- and mold-free environment. Newly improved machine learning algorithms create a perfect atmosphere with no surface water. Low maintenance, easy and flexible installation are just a few of the key features offered.

WINERY > EQUIPMENT > LABORATORY EQUIPMENT

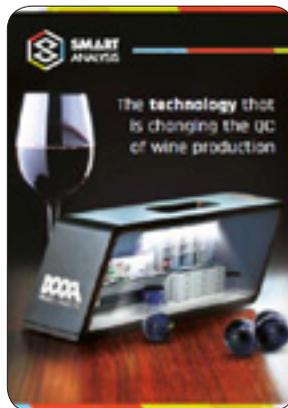
## Admeo

B714

Angwin, CA ☎ 831-524-0017 • [www.admeo.us](http://www.admeo.us)

### NEW Smart Analysis

**DESCRIPTION:** The new Smart Analysis from Admeo is an easy-to-use concept with an optical analyzer that measures a wide range of juice and wine analyses in the cellar lab. The app coaches the user through each analysis; micro-pipetting is eliminated. QR codes are used to upload calibration data in seconds so the analyzer is always updated and ready. Data are stored both on tablet and in the cloud for easy access from anywhere.



## Alpine Scientific Inc.

A224

Davis, CA ☎ 530-756-6082 • [www.alpinescientific.com](http://www.alpinescientific.com)

### NEW bWFT Filterability Tester

**DESCRIPTION:** The b2016 WFT Filterability Tester performs filterability tests automatically. It includes a filtering stage with three filters and three different porosities, allowing reproduction of the same filterability conditions found in the cellar. It fully automates the process and conducts all calculations; data can be printed out or connected to an LIMS.



### Check Stab Cold Stability Instrument

**DESCRIPTION:** The Check Stab Automated Cold Stability Instrument measures tartaric acid stability and calcium saturation, using conductivity measurement at various conditions. It uses a 100 ml sample, automatically dispenses the KHT and displays the result both graphically and numerically.



### Steroglass Flash Autotitrator

**DESCRIPTION:** The Steroglass Flash Titration System measures pH and TA, as well as free and total SO<sub>2</sub>. It comes with a single sample stand or a 16 or 35 position sample changer. It can use as small a sample as 10 ml and can degas the sample for determining titratable acidity. In addition, software is available for storing data on a PC or interfacing with an LIMS system.



# ART.



**Continental Vintner™ Reserve Hose** is created with precision, artistry and the latest technology – just like your wine. Our durable, flexible beverage transfer hose features a smooth, homogeneous inner tube that never imparts taste, odor or color to your wine. So when that cork pops, your liquid art will be the masterpiece it was meant to be. Need a hose as carefully crafted as the wine it's made for? *Continental. We Have an Answer for That.*

[WeHaveAnAnswerForThat.com](http://WeHaveAnAnswerForThat.com)

# BA 400

## LED TECHNOLOGY

Enology Efficiency for your lab

- 400 data points per hour
- 135 positions for samples
- 8 hours walk away time



BioSystems Enzymatic Reagents and Analyzers

[www.admeo.us](http://www.admeo.us)

### Astoria Pacific

B700

Clackamas, OR ☎ 503-657-3101 • [www.astoria-pacific.com](http://www.astoria-pacific.com)

#### NEW rAPID-XT

**DESCRIPTION:** The rAPID-XT is an affordable automated solution for free sulfite analysis, ideal for small, medium and medium-large wineries. This new system offers ease of mind by providing free sulfite data on par with your reference lab of choice. Additionally, the rAPID-XT monitors other tests, such as acetic acid, ammonia, glucose and fructose, L-Malic acid, NOPA and total sulfites.



### ATPGroup

L4

Windsor, CA ☎ 707-836-6840 • [www.ATPGroup.com](http://www.ATPGroup.com)

#### CDR WineLab

**DESCRIPTION:** The CDR WineLab is a photometric, thermo-stated analyzer with solid-state emitters (LED). It is easy to use—no special training needed—and is the ideal solution to bring fast, accurate, economical lab analysis of wine and juice in-house.



### BrandTech® Scientific Inc.

B805

Essex, CT ☎ 888-522-2726 • [www.brandtech.com](http://www.brandtech.com)

#### HandyStep® Touch Repeating Pipette

**DESCRIPTION:** The BRAND HandyStep Touch from BrandTech Scientific, Inc. is the world's first touchscreen repeating pipette for easy, intuitive operation. It features an open design to accommodate all standard repeating pipette tips with automatic size recognition of BRAND PD-Tip II precision dispenser tips. It uses dispensing, auto-dispensing and single-volume pipetting modes with the ability to save up to 10 favorite settings. The auto-dispensing mode features a "learn" function for easy interval programming.



#### Titrette® Bottletop Burette

**DESCRIPTION:** The BRAND Titrette Bottletop Burette from BrandTech Scientific, Inc. is the world's first bottle-top burette to provide titration within ASTM and ISO error limits for Class A glass burettes. It makes routine titrations faster, easier and more accurate—an excellent choice for beverage analysis. Titrette mounts directly on most titrant bottles, eliminating poured transfer, and titrates smoothly for incredibly sensitive, drop-by-drop titrations. An optional RS232 interface directly transfers data to a PC.



### BSG

A502

Napa, CA ☎ 707-252-2550 • [www.bsgwine.com](http://www.bsgwine.com)

#### Megazyme Analysis

**DESCRIPTION:** The Megazyme spectrophotometer comes with programmed analysis to work in conjunction with enzymatic kits to measure glucose/fructose, malic acid, ethanol, yeast assimilable nitrogen (YAN), acetic acid, citric acid and more. If you already have a spectrophotometer, the Megazyme kits are a shelf-stable solution.



### Emerson's Micro Motion & Rosemount Flow

C1204

Livermore, CA ☎ 510-612-1379 • [www.emerson.com](http://www.emerson.com)

#### Flow, Density and Viscosity Meters

**DESCRIPTION:** Emerson's Micro Motion Brix meter is a direct-insertion fork density meter that offers continuous, real-time density and concentration measurement in juice, must and wine applications.



## Analysis system for wine and juice

CDR WineLab® is a true testing laboratory for a wide range of chemical analyses of wine and juice. A self-contained system complete with everything needed to perform quality analysis throughout the winemaking process and make informed strategic decisions to optimize wine production.



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Contact ATP Group at (707) 836-6840, [winelab@atpgroup.com](mailto:winelab@atpgroup.com) or [www.atpgroup.com](http://www.atpgroup.com)

## WINERY > EQUIPMENT > LABORATORY EQUIPMENT

### Hamilton Company

B708

Reno, NV ☎ 800-648-5950 • [www.hamiltoncompany.com](http://www.hamiltoncompany.com)

#### Hamilton Analytical Instrumentation

**DESCRIPTION:** Rather than enduring the costly and time-consuming sampling process, today's leading wineries are gaining greater control over their fermentations with in-tank sensors that measure pH, dissolved oxygen and the potential for sulfide production in real-time. Hamilton sensors are known world-wide for their reliable quality in several industries, from biopharmaceuticals to food production.



### Hanna Instruments

A217

Smithfield, RI ☎ 800-426-6287 • [hannainst.com](http://hannainst.com)

#### edge® Wine pH Meter (Kit)

**DESCRIPTION:** The edge is a digital wine pH meter that includes all the necessary supplies to determine the pH of wine must and juice accurately. Advanced pH electrode diagnostics ensure worry-free measurements. Use it as either a portable bench-top meter or mount it on the wall to save space. The HI2020W allows you to add a conductivity probe and a dissolved oxygen probe to give you full versatility.



#### HI901W Wine Titrator

**DESCRIPTION:** The Wine Titrator is perfect for winemakers who need accurate results, ease-of-use and the ability to expand the system as their analytical needs grow. It comes preloaded with methods for wine analysis and, with Hanna, you get the support you need to run them perfectly in your lab. Titrate for a variety of measurements, including pH, total acidity, free and total sulfur dioxide, formol number, volatile acids, reducing sugars and more.



#### Portable Turbidity and Bentonite Check Meter - HI83749

**DESCRIPTION:** The Portable Turbidity and Bencotest Meter (HI83749) is specially designed for measurement of turbidity in wine. The instrument is based on a state-of-the-art optical system, which guarantees accurate results, assures long-term stability and minimizes stray light and color interference. It also compensates for variations in intensity of the lamp although proper calibration ensures measurements are fully validated, comparable and in compliance with regulatory requirements.



### HORIBA Scientific

P2256

Piscataway, NJ ☎ 732-494-8660 • [www.horiba.com](http://www.horiba.com)

#### Aqualog A-TEEM Autosampler Accessory

**DESCRIPTION:** Aqualog's A-TEEM Molecular Fingerprinting is a new optical technique ideal for comprehensive wine phenolic characterization and analysis, both upstream and downstream. It is a simple, fast, "column-free" spectroscopic technique that simultaneously measures absorbance, transmission and fluorescence of wine and grape samples. It offers benefits over traditional analytical techniques, such as chromatography and mass spec IR. By connecting to the new Fast-01 Autosampler Accessory, the HORIBA Aqualog A-TEEM spectrometer will facilitate routine batch liquid analysis.

## Wine Testing Systems

Autoanalyzers, Reagents, Fast Service, Great Quality

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Contact us [info@unitechscientific.com](mailto:info@unitechscientific.com)

Phone: 562 924-5150



### MISCO Refractometer

C1432

Solon, OH ☎ 440-349-1500 X 210 • [www.misco.com](http://www.misco.com)

#### Refractometers

**DESCRIPTION:** MISCO Handheld Digital and Inline Process Refractometers are used to test the quality of the grapes from vineyard to bottle.

### optek-Danulat, Inc.

B731

Germantown, WI ☎ 262-437-3600 • [www.optek.com](http://www.optek.com)

#### DT9011: Triple-Beam Bench-Top Turbidity Meter

**DESCRIPTION:** The optek DT9011 is a precision bench-top turbidity meter that features an advanced, triple-beam, optical design, measuring forward scatter (11°), side scatter (90°) and direct (0°) light. The turbidity meter effectively measures a broad range of constituents that contribute to turbidity and fine haze. Sampled 250 times during one rotation, followed by advanced data analysis, the turbidity meter's drift-free, factory zero point assures incredible sensitivity and precision.



### Thermo Fisher Scientific

P2129

Sunnyvale, CA ☎ 408-481-4275 • [www.thermoscientific.com](http://www.thermoscientific.com)

#### Gallery™ Discrete Analyzer

**DESCRIPTION:** Designed to increase efficiency for photometric (colorimetric and enzymatic) and electrochemical (pH and conductivity) analysis, the Gallery Discrete Analyzer provides fast, reproducible results in a compact, bench-top design. Its discrete cell technology allows laboratories to measure multiple analytes simultaneously while reducing total analysis and operator time. The analyzer includes a combined sample and reagent disk for maximum capacity of 90 samples and 30 reagents, with the ability to perform up to 200 tests per hour.



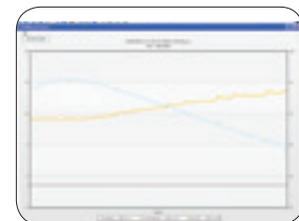
### Tom Beard Company

P2049

Santa Rosa, CA ☎ 707-975-5356 • [www.vinwizard.com](http://www.vinwizard.com)

#### NEW VinWizard Fermentation Probe

**DESCRIPTION:** Tried and tested differential pressure technology is used to calculate the density of the wine in the tank. Integrated into the remotely accessible VinWizard temperature control system, winemakers have online visibility of the rate of change delivered in tabular and chart format. Reduce risk of stuck ferments with timely alarms or drive the ferment by automation of temperature changes and/or pumpovers based on probe readings.



### Unitech Scientific

C1422

Hawaiian Gardens, CA ☎ 562-924-5150 • [www.unitechscientific.com](http://www.unitechscientific.com)

#### ChemWell for Wine Analyzer

**DESCRIPTION:** Unitech Scientific's automated wine analyzer line includes the premier ChemWell for Wine, featuring 200 tests per hour, automatic cuvette washing and optional reagent cooling. The CW package starts at \$27,000. The smaller powerful ChemWell-T for Wine features 100 tests per hour and reagent cooling, starting at \$13,000. Both ChemWells produce 250 results from a 30-test kit; both automate pipetting, calculation and printing. Pricing includes installation, custom wine protocols and on-site training.



#### EnoLyzer

**DESCRIPTION:** Unitech Scientific's spectrophotometer line includes the EnoLyzer semi-automated wine analyzer, featuring pre-programmed enzymatic chemistries, real-time coaching on-screen, calculating and printing results in your units and 60 results from a 30-test kit for as low as \$3,000. The US V-120 Spectrophotometer features select ABS between 340 and 1,000 nm, as low as \$1,550. Also available are UV-VIS and scanning model spectrophotometers with enhanced software. Use any Unitech Scientific reagent kit with these analyzers.



## Unitech Scientific

C1422

Hawaiian Gardens, CA ☎ 562-924-5150 • [www.unitechscientific.com](http://www.unitechscientific.com)

### Unitech Enzymatic Reagent Kits

**DESCRIPTION:** The 30 UniFLEX and UniTAB reagent kits include the very popular glu/fru, malic, acetic, ammonia, NOPA, L-lactic acid, free and total sulfites, phenolics, tartrate stability tests and more. Also available are enzyme and multi-level standards for wine analysis. The same kit is used on specs, EnoLyzer, ChemWell or other analyzers. Three kit sizes are available: 30-, 75- and 250-tests.



## Weber Scientific

C1407

Hamilton, NJ ☎ 609-584-7677 • [www.weberscientific.com](http://www.weberscientific.com)

### NEW LuciPac A3 Sanitation System

**DESCRIPTION:** Only Kikkoman's LuciPac A3 Sanitation System, distributed by Weber Scientific, detects ATP+ADP+AMP with one swab to give you the whole picture. Its patented A3 Technology has been proven to detect residues and microorganisms that others miss. The new Lumitester Smart features an app to continuously monitor multiple data points and centralizes multi-site data with cloud management.



## WINERY > EQUIPMENT > MICRO-OXYGENATION

## Mazzei Injector Company LLC

A226

Bakersfield, CA ☎ 661-363-6500 • [www.mazzei.net](http://www.mazzei.net)

### Wine Pump-over Injector

**DESCRIPTION:** Mazzei Injector Company's wine pump-over injector for macro-oxygenation enhances fermentation, producing consistent sensory profiles and helping stabilize color. The injectors are easy to use (no back flow problems), self-priming, can run dry without problems and are efficient at air transfer (reducing the number of rack and returns required)—all while delivering uniform distribution throughout the liquid. The Mazzei Venturi Injector may also be used to add fining agents and other additives during racking or blending.



## Wine Grenade

P2260

Sausalito, CA • [www.winegrenade.com](http://www.winegrenade.com)

### NEW Barrel OX

**DESCRIPTION:** Wine Grenade's latest product innovation is the Barrel OX micro-oxygenation system for oak barrels and other portable vessels. The Barrel OX manifold allows winemakers to supplement a barrel's natural oxygen transfer rate by dosing oxygen through a semi-permeable membrane. A single Wine Grenade device fitted with the Barrel OX manifold can oxygenate up to 12 barrels simultaneously. Barrel OX is available now on a limited basis.



# Introducing the LuciPac<sup>TM</sup> A<sup>3</sup> Sanitation System



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For more information visit  
[www.weberscientific.com/A3](http://www.weberscientific.com/A3)

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## WINERY > EQUIPMENT > PRESSES

### Bartlett Winery Products

P2136

Wendouree, Australia ☎ +61 3 53393103 • [www.bartlett.net.au](http://www.bartlett.net.au)

#### Wine Press Membrane

**DESCRIPTION:** An increasing number of U.S. wineries rely on custom-made Bartlett Wine Press Membranes for all makes of pneumatic presses. New and improved membrane fabric and greater flex and abrasion properties means your Bartlett Membrane now lasts even longer. Backed with a three-year warranty, all membranes are computer-cut, ensuring accurate sizing for all models.



### ColloPack Solutions

C1222 & O60

Napa, CA ☎ 707-258-3509 • [www.collopack.com](http://www.collopack.com)

#### Diemme

**DESCRIPTION:** The current generation of Diemme press control panels offers a high-resolution color touchscreen with the following features: 30-plus fully customizable programs, standard intelligent programming with no additional hardware, USB export of pressing programs via USB port to CSV file, intelligent filling program to reduce solids, data export to central network and advanced diagnostics page.



### Defranceschi a SACMI company

P2250

Mordano, Bologna, Italy 40027 Italy ☎ +39-0542608111 • [www.sacmi.com](http://www.sacmi.com)

#### Press

**DESCRIPTION:** Defranceschi offers advanced pneumatic press systems with open cylinder, closed and closed with inert gas or cryomaceration



### Della Toffola USA

P2041

Santa Rosa, CA ☎ 707-544-5300 • [www.dellatoffola.us](http://www.dellatoffola.us)

#### Della Toffola Pneumatic Presses with Central Membrane

**DESCRIPTION:** Thanks to their special central-membrane construction, Della Toffola presses offer increased throughputs for the same capacity and considerably shorter pressing times. All the presses are practical and easy-to-use, with programmable automatic control systems based on a digital control panel and a programmable on-board computer. Open-tank versions in models from 12 to 480 hl and closed-tank versions are available from 25 to 700 hl. Nitrogen Press models are also available.



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#### GRAPE PROCESSING SYSTEMS-QUALITY YOU CAN RELY ON

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California: 707-864-5800  
Oregon: 503-776-9118  
Virginia: 540-825-5700

## Euro-Machines Inc.

L23

Fairfield, CA ☎ 707-864-5800 • [www.euromachinesusa.com](http://www.euromachinesusa.com)

### NEW Europress, Model EP1

**DESCRIPTION:** Euro-Machines' newest generation, EP1 (sizes 2-34), is an open press system. "Intelligent Pressing" will automatically reduce or increase pressing times, according to juice flow. It includes the ability to see real-time information on grape liquid content and temperature being pressed, as well as a smartphone-compatible app. A 10-inch touch panel with the option of storing up to 24 customized programs is standard.



## Pellenc America Inc.

L13

Santa Rosa, CA ☎ 707-568-7286 • [www.pellenc.com](http://www.pellenc.com)

### Smart Press

**DESCRIPTION:** Pellenc's new Smart Press offers large screens for faster juice removal and greater capacity. Juice screens swing out of the way, making washing easy. Durable models to fit every size winery from 20 HL up to 600 HL. The control screen is user friendly and capable of custom press cycles. Simple flow tracking allows the press to change cycle automatically when desired to increase efficiency.



## RLS Equipment Co., Inc.

A422

Egg Harbor, NJ ☎ 609-965-0074 • [www.rlsequipment.com](http://www.rlsequipment.com)

### Press Membranes

**DESCRIPTION:** RLS Equipment provides domestically manufactured press membranes, using OEM material. They are available for any make or model press, at substantially lower prices.

## WINERY > EQUIPMENT > PUMPS

## Börger LLC

P2244

Chanhassen, MN • [www.boerger.com](http://www.boerger.com)

### BLUeLine Rotary Lobe Pump

**DESCRIPTION:** The BLUeLine Rotary Lobe Pump is a self-priming, valveless, positive displacement pump that provides low-shear and gentle handling of mash, must, lees, pomace, pump-over, yeast, whole grapes and other highly viscous materials. The BLUeLine pump's Optimum lobe and screw rotors guarantee a pulsation-free operation. The pump is also capable of running dry for a short time without damage. Börger offers lightweight mobile pump carts or customized stationary installations. Pumps are constructed using Maintenance in Place.



## Carlsen & Associates

L10

Healdsburg, CA ☎ 707-431-2000 • [www.carlsenassociates.com](http://www.carlsenassociates.com)

### NEW Carlsen Air Pump with New Flip Feature

**DESCRIPTION:** Carlsen's Air Pump has a new feature: the flip device. It's designed so you can completely invert your air pump to drain the last of your wine, sanitation fluid or rinse water. It's easy to operate, robustly made and now available as a kit for all NDP 40 and 50 air pumps. The device is crafted in all stainless steel, made to our reliable, efficient Carlsen quality.



# CA

## CARLSEN & ASSOCIATES

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### What's Moving Your Wine?

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130 PUMP SYSTEM

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This pump can do it all

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WWW.CARLSENASSOCIATES.COM

## WINERY > EQUIPMENT > PUMPS

### CPE Systems Inc.

Burnaby, BC, Canada ☎ 604-988-7151 • [www.cpesystems.com](http://www.cpesystems.com)

#### C216MD Centrifugal Pump Assembly

**DESCRIPTION:** The CPE C216MD Portable Pump is part of the C-series centrifugal pump family. These are the most common pumps used in microbreweries and craft breweries in North America, as well as in food and beverage production. This model is a workhorse pump that will give you years of excellent service and is built with a stainless steel washdown motor that makes cleaning easier and quicker, reducing the issues caused by spillage.



#### RVN 80 Helicoidal Centrifugal Pump Assembly

**DESCRIPTION:** The RVN is a centrifugal pump fitted with a helicoidal impeller. The RVN is the perfect wine pump, but it can also find its use in breweries, distilleries and other craft food applications. This pump is ideal for pumping liquids with semi-solids, specifically mash and must. The RVN 80 has 3-inch tri-clamp connections and features a 5 HP stainless steel washdown motor.



### GEA Group

Columbia, MD ☎ 844-432-2329 • [www.gea.com](http://www.gea.com)

#### GEA Hilge HYGIA Pumps

**DESCRIPTION:** The GEA Hilge HYGIA is a single-stage end-suction centrifugal pump specifically constructed for use in wine and other beverage industries that require hygiene and flexibility. Mechanical seals are single in-board seals that maintain the optimum position in the liquid. Housings are made of Cr-Ni-Mo rolled steel and have a smooth surface without pores and blowholes. A range of custom connections is available upon request.



### INOXPA USA Inc.

Santa Rosa, CA • [www.inoxpa.com](http://www.inoxpa.com)

#### NEW Inoxpa RVN Helicoidal Pump

**DESCRIPTION:** The Inoxpa RVN Helicoidal pump features a unique helicoidal impeller design that provides gentle must transfers. Due to its unique shape and flow, solid particles pass through the pump without being damaged and without clogging. The design of the pump provides better tannin extraction and less lees formation, achieving higher quality wines. INOXPA is a leader in stainless steel process components and fluid handling equipment. It is distributed exclusively by Scott Laboratories.



### Murzan, Inc.

Norcross, GA ☎ 770-448-0583 • [www.murzan.com](http://www.murzan.com)

#### Pumps and Unloading Systems

**DESCRIPTION:** Murzan, Inc. manufactures a complete range of 3A standard, CIP-capable, USDA, FDA and EHEDG certified sanitary pumps. Murzan pumps transfer viscous product, shear-sensitive product and products containing large and/or fragile particles. Exceptional in suction lift, the line offers the most efficient way of unloading drums and other containers.

### Pumping Solutions

Ontario, CA ☎ 909-930-6600 • [www.apumpstore.com](http://www.apumpstore.com)

#### NEW All Process Pumps

**DESCRIPTION:** Pumping Solutions will show a 2-inch Wilden pump on a cart with the new IPD diaphragm. This wil-flex (santoprene), food-grade material diaphragm has no outer piston, which eliminates the growth of bacteria behind that outer piston, which also makes it easier to clean and maintain and lasts twice as long as the old dome-style diaphragms.

### B1018

### P1818

### B601

### P2292

### P2035



### RLS Equipment Co., Inc.

Egg Harbor, NJ ☎ 609-965-0074 • [www.rlsequipment.com](http://www.rlsequipment.com)

#### Kiesel Pumps

**DESCRIPTION:** Gentle and reliable, the Kiesel Pump can be used to pump whole-cluster, must or fermented must. Kiesel Pumps run at a very low RPM and have larger pockets on the rotor/stator, which allow for gentle moving of the product. It is easy to maintain and clean, and will provide years of trouble-free and reliable service. All electrical controls are UL-approved and installed in the U.S.



### A422

## WINERY > EQUIPMENT > REFRIGERATION / CHILLERS

### G & D Chillers

Eugene, OR • [www.gdchillers.com](http://www.gdchillers.com)

#### Fire and Ice

**DESCRIPTION:** This is the industry standard when it comes to portable chilling and heating. Fire and Ice includes a powder-coated steel frame, 316 stainless steel skin, low-watt density heating element designed for glycol and quick-disconnect glycol connections. Units are also available in chill-only versions.



### P2179

#### Multi Stage Series

**DESCRIPTION:** The innovative Multi Stage Chiller provides all the efficiencies and redundancies that come with chillers outfitted with multiple compressors. It is ideal for applications with varying load requirements.



#### Portable Fan Coils

**DESCRIPTION:** Utilizing the existing glycol chiller infrastructure, G & D's Glycol circulated fan coils are designed and built to your precise cooling requirements. Whether used as a stationary fan in your standard cold room setting or as a portable space cooling solution to take the edge off, G & D's Glycol Circulated Fan Coil allows you to put your chiller to work in multiple ways.



### Polyguard Products, Inc.

Ennis, TX ☎ 214-515-5000 • [www.polyguard.com](http://www.polyguard.com)

#### Cold Service System

**DESCRIPTION:** Polyguard produces systems that protect insulated pipe and ductwork. We've recently introduced the optimal Cold Service System, which includes Dow Styrofoam XPS Insulation. This system is ideal for ammonia refrigeration and other cold pipe applications where long-term performance is critical. In addition to Dow Insulation, it uses Polyguard's patented Reactive Gel corrosion inhibitors, ZeroPerm or Insulrap vapor barriers and can be covered against the weather by our Alumaguard family of exterior claddings.

### C1435

### Refrigeration Equipment Specialist Co.

Tustin, CA ☎ 714-247-1288 • [www.rescoca.com](http://www.rescoca.com)

#### Refrigeration Equipment / Chillers

**DESCRIPTION:** RESCO offers refrigeration chillers, condensing units, compressor racks, unit coolers, air handlers, air-cooled condensers, evap condensers, leak detectors, screw compressors, pressure vessels, desiccant dehumidifiers and heat exchangers for the winery, brewing, cannabis and cold storage industries. The equipment is selected and designed to meet your specific requirements. RESCO represents Century Refrigeration, Zero Zone, SGS Refrigeration (formally Krack Industrial), SGS/Marley, Phillips Refrigeration, Bacharach, Mueller, Delta Tee, M&M, Recold, KE2 and Climate by Design.



### P2142

## WINERY > EQUIPMENT > TANKS

### Algor

P2278

Villa Del Conte, Italy ☎ 323-702-0824 • [www.algorgroup.com](http://www.algorgroup.com)

#### NEW Pressure Top Manhole Cover

**DESCRIPTION:** Algor's brand new top manhole cover handles pressure applications up to 3 bar or 43.5 psi. Sturdy and elegant, this manway comes standard with four clamping points and stainless steel butterfly handles, as well as FDA approved EPDM gaskets. Specs: 400 mm diameter, 80 mm neck height, 8 mm neck thickness. Stainless steel grade AISI304.



#### Sloped Bottom Variable-Capacity Tank

**DESCRIPTION:** The featured FCPT12000B is a 2,000 L (528 gallon) open-top vessel with 8 mm stainless steel rings with a reinforced 5 percent sloped bottom. Rectangular and oval racking doors allow additional access. It also includes cooling jacket, thermometer, adjustable welded legs, sample valve, stainless steel level gauge, floating lid kit, pulley arm system with winch and cable, and 2x2-inch tri-clamp fittings for partial and full outlets. It is stainless steel grade AISI304.



#### NEW Stackable Tanks

**DESCRIPTION:** Algor's brand new stackable system maximizes valuable floor space by allowing winemakers to stack tanks up to 1,000 liters. The stainless steel structure includes forklift pockets for safe transport. The featured FVSPT1000 tank is a 1,000 liter (264 gallon) closed-top vessel with flat bottom and sump, 360° cooling jacket, rectangular door, manhole cover, thermometer, welded legs, wine taster and 2x1.5-inch TC fittings for outlets. It is stainless steel grade AISI304.



### Bouchard Cooperages

P2126 & C1124

Napa, CA ☎ 707-257-3582 • [www.bouchardcooperages.com](http://www.bouchardcooperages.com)

#### Oak and Non-Oak Tanks, Eggs and Amphore

**DESCRIPTION:** Bouchard Cooperages offers Premium Austrian oak ovals, casks, upright tanks and puncheons from Schneckleitner, available in Austrian Weidling oak or Austrian oak blend. Bouchard Cooperages also offers sandstone grés jarres from Vin et Terre in Bordeaux, as well as concrete and cocciopesto eggs from Drunk Turtle in Pisa, and impruneta terracotta amphorae from Montecchio in Tuscany.

### Butterworth Inc.

B1025

Houston, TX ☎ 281-821-7300 • [www.butterworth.com](http://www.butterworth.com)

#### NEW Trolley

**DESCRIPTION:** Butterworth will introduce an improved trolley for easier handling and moving of the Type LT tank cleaning machines. The simpler design provides balanced, secure hose and machine connections, as well as a new filter placement that allows full flow from pump to machine. trolley is customizable for a larger wheel base, larger casters and the ability to connect a series/train for larger diameter tanks.



### MISCO Refractometer

C1432

Solon, OH ☎ 440-349-1500 X 210 • [www.misco.com](http://www.misco.com)

#### Refractometers

**DESCRIPTION:** MISCO Handheld Digital and Inline Process Refractometers are used to test the quality of the grapes from vineyard to bottle.

## THE ULTIMATE SAFEGUARD FOR TANKS ON STANDS.

Lab tested and earthquake proven, ONGUARD'S patented system is proven to dissipate seismic energy in a controlled manner no matter if your liquid storage tanks are on stands or concrete foundations.

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Call (707) 577-7826 to schedule your free trial.

**POLARCLAD**  
 Tank Insulation  
[www.polarcladinsulation.com](http://www.polarcladinsulation.com)

## WINERY > EQUIPMENT > TANKS

### La Garde

B818

Quebec QC, Canada ☎ 800-263-5170 • [www.lagardeinox.com](http://www.lagardeinox.com)

#### La Garde

**DESCRIPTION:** La Garde is a unique family of stainless steel wine tanks with exceptional features. Respecting the sacred winemaking heritage and traditions, La Garde brings together new engineering and technologies to produce tanks of unequalled quality and versatility. The first noticeable distinction about our tanks is their square or rectangular shape, which is thought to optimize the space in any vineyard.



### LJ Star Incorporated

B916

Twinsburg, OH ☎ 330-405-3040 • [www.ljstar.com](http://www.ljstar.com)

#### LumiFlo

**DESCRIPTION:** The LumiFlo LED Light is designed to improve lighting of full-view sight flow indicators in process fluid lines, allowing operators to see color, flow and particles in order to visually inspect product quality, clarity, viscosity and consistency. It uses highly reliable, long-life LEDs for the perfect amount of light and optimal color temperature, providing a clear view of processes. It easily attaches to most in-line full-view sight flow indicators.



### Minox Srl

P1746

Puglia, Italy • [www.minoxsrl.it](http://www.minoxsrl.it)

#### Stainless Steel Fermenter

**DESCRIPTION:** This is a stainless steel fermenter on welded legs. The inclination of the bottom makes it suitable for traditional winemaking with a high-quality standard. The nitrogen system preserves the quality of liquids and avoids oxygen exposure.



### MoreWine! Pro.

L1

Pittsburg, CA ☎ 800-942-2750 • [www.morewinepro.com](http://www.morewinepro.com)

#### Speidel Tanks

**DESCRIPTION:** Speidel wine tanks come with a 25-year warranty against defects in materials or workmanship. They come with a smooth 2R-rated interior surface, which resists the build-up of tartrate residues and allows you to clean your tanks with cold water after cold stabilization. We stock a variety of the best sellers, but you can custom-order any size from 110 L to 120,000 L with any option, like max jackets (rated up to 6 bar).



### Onguard, LLC

P2263

Santa Rosa, CA ☎ 707-508-5758 • [www.onguardgroup.com](http://www.onguardgroup.com)

#### Seismic Anchors

**DESCRIPTION:** The Onguard anchors are welded to the tank around its base and connected to the tank's foundation. During an earthquake, they prevent the tank from overturning by holding it down while dissipating seismic energy through yielding of the anchors. This allows the tank to remain intact and unharmed, thus keeping the contents safely in the tank.



## Onguard, LLC

P2263

Santa Rosa, CA ☎ 707-508-5758 • [www.onguardgroup.com](http://www.onguardgroup.com)

### NEW Tank On Stand Anchor

**DESCRIPTION:** The Onguard Tank On Stand anchors are welded where the tank connects to the stand. During an earthquake, they prevent the tank from overturning by holding it down while dissipating seismic energy through yielding of the anchors. This allows the tank to remain intact and undamaged so it can keep the contents safe inside.



### NEW Tygr Eye

**DESCRIPTION:** Onguard's Tygr Eye is a fully integrated telemetric monitoring system made up of sensors, a scanner and cloud-database. It quickly tells you which Onguard anchors have been triggered by an earthquake and need replacing. Starting in January, Tygr Eye will be standard with all Onguard anchor systems.

## PolarClad / ConeTech Inc.

A336

Santa Rosa, CA ☎ 707-577-7500 • [www.polarcladinsulation.com](http://www.polarcladinsulation.com)

### Vinfoil Tank Mixers

**DESCRIPTION:** PolarClad's Vinfoil Mixer achieves cold stabilization three times faster than the pump method, with an average energy savings of over 80 percent.



## Premier Wine Cask, Inc.

B822

Napa, CA ☎ 707-257-0714 • [www.premierwinecask.com](http://www.premierwinecask.com)

### Ouef de Beaune

**DESCRIPTION:** Concrete fermentors have been used widely in Europe for many years. Concrete provides the benefits of oak and the efficiency of stainless steel. Like oak, concrete breathes and is semi-permeable, concentrating the wine while gently diffusing oxygen without adding oak character. Today, some of the finest wines in America are fermented and stored in concrete tanks.



## Quality Stainless Tanks

B718

Windsor, CA ☎ 707-837-2721 • [www.qualitystainless.com](http://www.qualitystainless.com)

### NEW Quality Stainless Tanks

**DESCRIPTION:** QST will feature two new additions to its large line of in-stock/ready-to-ship wine tanks. We now offer a 1,500-gallon fermentation/storage tank design and a 13,000-gallon storage tank design to add to its inventory of various-sized wine vessels.



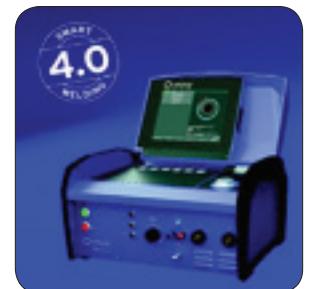
## Sanitary Stainless Welding Inc.

P2011

Fresno, CA ☎ 559-233-7116 • [www.sanitarystainless.com](http://www.sanitarystainless.com)

### NEW Custom Fabrication Services

**DESCRIPTION:** SSWI is committed to producing the best value stainless steel tanks in the industry. We specialize in welding and fabrication of stainless steel tanks, catwalks, wine tanks, grape processing equipment and repair, dimple jacket tanks, tubs, hose racks and custom fabrication requirements. We represent Marzola Grape Crushing and Processing Equipment. We continually look to improve our product quality and processes to drive out waste, resulting in savings.



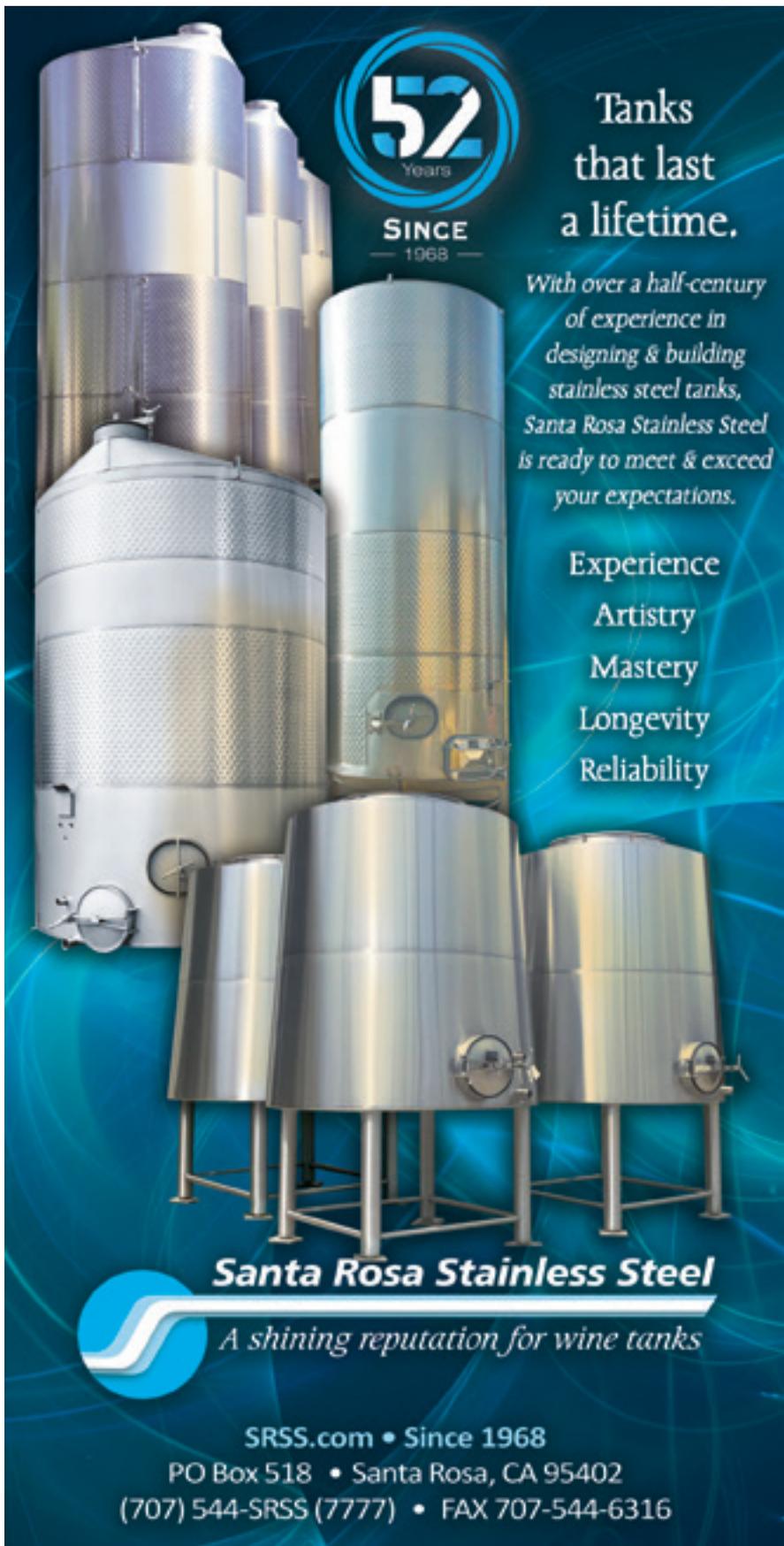
- Specializing in Tank Farm Project Management
- Tanks custom designed, fabricated, and installed tanks up to 700,000 gallons capacity
- Catwalks custom designed, fabricated, and installed to customer specifications
- Receiving hoppers, belt and screw conveyors built and installed
- Complete Marzola product line of screw presses, bladder presses, destemmers and dejuicers



**CONTACT US: 559-233-7116 | [WWW.SANITARYSTAINLESS.COM](http://WWW.SANITARYSTAINLESS.COM)**



## WINERY > EQUIPMENT > TANKS



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Reliability

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(707) 544-SRSS (7777) • FAX 707-544-6316

P1812

### Santa Rosa Stainless Steel

Santa Rosa, CA ☎ 707-544-7777 • [www.srss.com](http://www.srss.com)

#### Stainless Steel Wine Tanks

**DESCRIPTION:** SRSS fabricates stainless steel tanks specifically for the wine industry. Contact us to talk about our portable tanks, the very popular conical wine tanks, square-style tanks, stainless steel barrels, on-site fabrication, repairs and parts. Tanks can be built from 5 gallons to 400,000 gallons.



### Schaefer Container Systems North America Inc. B912

Atlanta, GA ☎ 404-349-4524

• [www.schaefer-container-systems.us](http://www.schaefer-container-systems.us)

#### Portable Stainless Steel Tanks

**DESCRIPTION:** Schaefer Container Systems' Portable Stainless Steel Tank offers a highly flexible design with the ability to conserve space. These tanks can be stacked two high when empty and three high when full. They fit up to 2,500 liters of product in less than 16 square feet of space (assuming the necessary overhead clearance). These tanks are available in jacketed or non-jacketed designs, from inventory, in 500-, 800-, 1,000- and 1,250-liter sizes.



#### Stainless Steel Kegs

**DESCRIPTION:** Schaefer Container Systems offers a wide range of stainless steel tank options available for keging wine. Tanks are available in PLUS KEG, ECO KEG and All-Stainless designs for traditional tap and pressure systems and also as Party-KEG, Smart Draft and Fresh KEG for completely self-contained, portable dispensing systems.



P2137

### Silver State Stainless Inc.

Mound House, NV ☎ 775-246-1180 • [www.silverstatestainless.com](http://www.silverstatestainless.com)

#### Stainless Steel Tanks

**DESCRIPTION:** Silver State Stainless offers stainless steel tanks for the wine, beer, spirits and cannabis industries. These high-quality handmade tanks are fabricated in the U.S., using domestic steel and labor. Sizes range from 200 gallons to 20,000 gallons and are custom-designed to suit the application and customer-requested specifications. Tanks have fixed stainless steel legs, are offered in sanitary ground and polished finishes, and come with a three-year warranty. Stock tanks are now offered at reduced pricing.



## Titan IBC, LLC

P2258

Beatrice, NE ☎ 888-786-8588 • [www.titanibc.com](http://www.titanibc.com)

### Portable Stainless Tanks

**DESCRIPTION:** Titan Wine and Beverage Tanks are excellent for storage, transportation and fermentation. Custom and standard designs built to withstand even the roughest of handling provide decades of performance. A wide variety of sizes allow large and small batches to be stacked in the same footprint for space and process efficiencies. Whether it's stock, custom tanks, accessories or parts, our engineers and technical staff look forward to serving you.



## WinerySeals

P2104

Hayward, CA ☎ 510-732-7010 • [www.wineryseals.com](http://www.wineryseals.com)

### Tank Seals

**DESCRIPTION:** WinerySeals offers more than 140 standard and hard-to-find molded manway gaskets, three standard styles of VCT-inflatable gaskets in high-performance EPDM, as well as custom profiles and all types of sanitary gaskets, ranging from 0.5-inch to 10-inch. Most tank seals are in stock and ready to ship.



## WINERY > EQUIPMENT > TANK GAUGES

## ifm efector inc.

P2218

Malvern, PA • [www.ifm.com/us](http://www.ifm.com/us)

### NEW MVQ Valve Sensor

**DESCRIPTION:** Valve failure may cause process contamination or unplanned stoppages, which affect profitability. The MVQ Smart Valve Sensor is designed to detect a change in operation on quarter-turn valves, eliminating unexpected interruptions. The MVQ monitors the actual position of the valve within a 0.1 degree and senses when the closed position is drifting due to valve seal wear. It can be mounted on any ISO Namur standard valve actuator. A simple installation reduces labor cost.



### PI Series Pressure Transmitter

**DESCRIPTION:** ifm's PI series pressure transmitter provides accurate and reliable tank level measurement in sanitary applications from vacuums up to 363 psi. The two-wire transmitter simplifies wiring and easily retrofits pressure transmitters. The push-button set-up quickly parameterizes and mounts the switch, with no need for a reference gauge. The completely welded 316 stainless steel housing prevents ingress and connects to standard adapters and fittings. The ceramic measuring cell technology ensures accuracy and pressure detection.



## WINERY > EQUIPMENT > USED EQUIPMENT

## Transition Equipment Company

A435

Napa, CA ☎ 707-537-7787 • [www.transitionequipment.com](http://www.transitionequipment.com)

### Used Winery Equipment

**DESCRIPTION:** Transition Equipment Company is an established equipment broker for the wine industry in Northern California.

## WINERY > EQUIPMENT > VALVES / PIPES / FITTINGS

## Dixon Sanitary

P2220

Pewaukee, WI ☎ 800-789-1718 • [www.dixonvalve.com](http://www.dixonvalve.com)

### NEW SJSS Series Sanitary Swivel

**DESCRIPTION:** Dixon Sanitary's new and improved SJSS Series Sanitary Swivel gives flexibility to process hoses to keep them from kinking. They are available in sizes from 1 to 4 inches, come with either clamp or weld connections, silicone or EPDM gaskets and in styles 20 through 70. These are stock products that can usually ship within 24 hours.



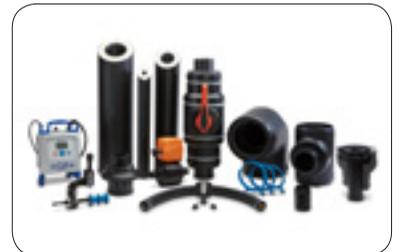
## GF Piping Systems

A202

Irvine, CA ☎ 800-854-4090 • [www.gfps.com](http://www.gfps.com)

### COOL-FIT® PE Plus Pre-insulated Polyethylene Piping System

**DESCRIPTION:** The COOL-FIT PE Plus pre-insulated polyethylene piping system provides cooling for refrigeration and chilled water applications. It offers higher thermal efficiency, reduced maintenance and operational costs and faster installation time than its COOL-FIT predecessor. The system includes pre-insulated pipe, fittings, valves and hoses to convey brine, glycol, ethanol and cooled water in temperatures from 58° F to 140° F (60° C to -50° C). Surfaces are sealed, vapor tight, 100 percent UV-resistant and will not corrode.



## Kaeser Compressors Inc.

P2037

Sacramento, CA ☎ 877-579-6920 • [www.us.kaeser.com](http://www.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. 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.



## R & S Supply Company

A232

Napa, CA ☎ 800-439-6909 • [www.rssupply.com](http://www.rssupply.com)

### NEW Definox Butterfly Valves

**DESCRIPTION:** Definox Sanitary Butterfly Valves are of the highest quality available. They are flawlessly manufactured in France.



## WinerySeals

P2104

Hayward, CA ☎ 510-732-7010 • [www.wineryseals.com](http://www.wineryseals.com)

### Stainless Components

**DESCRIPTION:** WinerySeals is proud to be a distributor of Dixon Sanitary's full line of stainless components for the wine and beverage industry.



## WINERY > EQUIPMENT > VOLATILE ACIDITY REMOVAL

### Winetech LLC

L8

Napa, CA ☎ 707-257-2080 • [www.winetech.us](http://www.winetech.us)

#### VA Adjustment

**DESCRIPTION:** Our mobile VA adjustment services guarantee a minimum VA removal per pass of 30 percent. VA adjustment membranes are used to separate molecules into the permeate stream. The permeate stream is then treated separately, removing the VA without damaging the pigmented retentate. Other filtration systems can adjust VA levels, but our equipment can also guarantee no pH shift. Winetech's system consists of a combination of loose reverse osmosis membranes and ion-exchange columns.



## WINERY > EQUIPMENT > OTHER EQUIPMENT

### Oenodia

P2228 & O40

Napa, CA ☎ 707-666-2049 • [www.oenodia.us](http://www.oenodia.us)

#### STARS® Line

**DESCRIPTION:** Oenodia provides wineries/custom crush facilities with membrane-based equipment for fast, additive-free, 100-percent-guaranteed tartaric stabilization treatment, cross-flow filtration or pH optimization in a single pass to reveal the full aromatic potential of conventional and organic wines. STARS is a clean technology with zero wine loss and low energy consumption, which facilitates tank management and bottling/tirage planning to deliver wine just in time. STARS is exclusively available from Oenodia.



#### NEW STARS® pH

**DESCRIPTION:** STARS pH utilizes unique bi-polar membrane technology to allow you to now optimize pH in a range of 0.1 to 0.5 by running the entire volume of your juice or wine, with zero additives, in a single pass. STARS pH preserves the organic acids' concentration and sustains balance to bring freshness to your wine, enhance its natural acidity and reveal its organoleptic potential.



## WINERY > PACKAGING > BOTTLES

### Ardagh Group

P1716

Napa, CA ☎ 707-200-9350 • [www.ardaghgroup.com](http://www.ardaghgroup.com)

#### NEW Single-Serve Wine Bottles

**DESCRIPTION:** In 2020, Ardagh Group expanded its single-serve portfolio, launching two 375 ml wine bottles. The new Burgundy- and Claret-style bottles, both of which feature a STELVIN finish, complement the existing 375 ml Claret bottle with a cork finish and two 187 ml bottles, which were already part of Ardagh's stock options. These new offerings are now part of Ardagh's extensive wine bottle stock portfolio—all of which are made in the U.S.



### Gallo Glass Company

B638

Modesto, CA ☎ 209-341-4527 • [www.galloglass.com](http://www.galloglass.com)

#### NEW Multi-Bottle Capability

**DESCRIPTION:** For over 60 years, Gallo Glass has invested in producing innovative glass for the wine industry. With the introduction of multi-bottle technology, Gallo Glass offers more flexible, reliable and creative options. Its furnaces embrace a cleaner tomorrow by using oxygen-fired natural gas, which helps meet sustainability goals. As the California wine industry increases in demand, Gallo Glass responds by investing in innovation and sustainable practices.



### Global Package, LLC.

A238

Napa, CA ☎ 707-224-5670 • [www.globalpackage.net](http://www.globalpackage.net)

#### Sommelier Burgundy

**DESCRIPTION:** The Sommelier bottle top innovation has expanded to Burgundy Essencia, which is now available in stock in antique green and flint. The bottle is accented by the top of the bottle, which runs straight up with a slight dent, providing capsule security.



#### NEW Wild Glass

**DESCRIPTION:** Wild Glass is a new category of bottles from Estal Packaging—an exclusive line of bottles made from 100 percent recycled glass. See the new line of bottles, available for the first time at Unified.



### O-I

A147

Perrysburg, OH ☎ 567-336-5400 • [www.glass-catalog.com](http://www.glass-catalog.com)

#### NEW Small Format Wine Bottles

**DESCRIPTION:** O-I presents its collection of single-serve bottles designed to enhance the consumption experience. O-I's team of designers and engineers knows better than anyone how to use the unique attributes of glass to engage consumers at shelf level and make your brand shine.



### Phoenix Packaging International Corp.

B801

Montreal, QC, Canada ☎ 514-487-6660  
• [www.phoenixpackaging.com](http://www.phoenixpackaging.com)

#### Ceramic Bottles

**DESCRIPTION:** Phoenix Packaging offers unique custom and standard ceramic bottles designed to complement your wine and help you stand out from the competition.



### Saverglass Inc.

P1520

Napa, CA ☎ 707-259-2930 • [www.saverglass.com](http://www.saverglass.com)

#### NEW Bordelaise and Bourgogne Grand Cru and Bourgogne Terroir

**DESCRIPTION:** Saverglass is reviving the master craftsmanship and aesthetics of the great classics with its the Heritage Collection, designed to celebrate the true essence of the Grand Crus. Here is a glassmaking tour de force rooted in the meticulous reproduction of the classic features that epitomize traditional bottles. Heritage is a stunning, pure and authentic range sure to delight aesthetes, oenophiles, collectors and sommeliers alike.



### Saxco International

C1332

Concord, CA ☎ 877-641-4003 • [www.saxco.com](http://www.saxco.com)

#### Complete Packaging Solutions

**DESCRIPTION:** Saxco's enhanced product line is designed to solve your complete packaging needs with domestic and international sourcing and stock inventory with competitive pricing. Saxco is focused on specialized services, such as custom product development for both bottles and packages.



# Where is Your Glass Made?



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MODESTO, CA | [galloglass.com](http://galloglass.com)

## WINERY > PACKAGING > BOTTLES

# Creative solutions to inspire.

Sommelier enhances the overall bottle silhouette and aesthetic, at the same time offering real functional benefits. Through its unique neck design, Sommelier incorporates a unique groove allowing for clean cut and easy removal of the capsule whilst also acting as an anti-drip ring.



Global Package

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

## Verallia

P2114

Fairfield, CA ☎ 707-419-7200 • www.us.verallia.com

### NEW Selective Line Stylebook 2020

**DESCRIPTION:** Verallia now features new bottle shapes and designs by two decorating companies: Saga Décor (France) and Verallia Polska (Poland). Divagation spotlights luxuriant, random nature and poetic modernity. Incandescence highlights ecology with a chic and urban aesthetic, or radiant nature.



### NEW Virtual Glass by Verallia

**DESCRIPTION:** Verallia introduces the new version of its app to help customers optimize their development time, time to market and costs. The result of a significant research and development effort, this digital tool makes it possible to create and visualize glass packaging filled, labelled and encapsulated with a realism never before achieved.



## World Wine Bottles & Packaging Solutions

P1506

Napa, CA ☎ 707-339-2102 • www.worldwine-bottles.com

### Bottles

**DESCRIPTION:** World Wine Bottles offers domestic and international glass in many molds. The company also offers printed cases, corks and capsules.



## WINERY > PACKAGING > BOTTLE DECORATING

## Bergin Screen Printing & Etching

A504

Napa, CA ☎ 707-392-7930 • www.berginglass.com

### ACL Screen Print Glass and Etching Decoration

**DESCRIPTION:** Bergin's screen print glass decorations or ACL (Applied Color Labeling) are permanently fused to the glass and feature permanent adhesion; are bubble-, wrinkle-, tear-, scuff- and water-resistant; are easily applied during bottling; have a 360-degree design surface and the ability to print precious metals directly on glass surfaces. Bergin's artisan etched/painted glass decorations offer an alternative to printing large paper wine labels and are ideal for limited runs of large format bottles.



## Bottleprint

P2255

Santa Rosa, CA ☎ 707-385-1905 • www.bottleprint.com

### Screen Printed Labels

**DESCRIPTION:** Bottleprint now offers a new organic ink line with pure colors, high detail and gloss. They meet the highest European environmental standards, including all ISO 9001 and ISO 14001 requirements. The low heat requirement for this ink results in a much smaller carbon footprint and also reduces stress on the structural integrity of your bottles.



# CANNED WINE?

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- WE COME TO YOU WITH OUR EQUIPMENT, OR COME TO US FOR CO-PACKING SOLUTIONS.

# Wine Labels

Make yours a screen print.

Let us show you how.



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**RICHMOND, CA** 877.792.1150  
**NAPA, CA** 707.271.6455

## WINERY > PACKAGING > BOTTLE DECORATING

### Etched Images

Napa, CA • [www.etchedimages.com](http://www.etchedimages.com)

#### Hand Etched Bottle

**DESCRIPTION:** Have a wine label, logo or artwork etched onto your wine bottle and create a memorable and distinct impression. Hand etched and painted wine bottles are produced by skilled artisans using hand-crafted techniques perfected by Etched Images since 1992.



C1339

### Etched Images

Napa, CA • [www.etchedimages.com](http://www.etchedimages.com)

#### NoChip Dip™

**DESCRIPTION:** As the source for North America's most popular dipping wax, no one has more experience at dipping wine bottles and beer growlers than us. We can dip your bottles in any of our 20 available colors, with several different dipping styles, to complement the look of your bottles or label.



C1339



## A FINE WINE DESERVES A FINE CODE

### MULTIPLE WAYS TO MAKE YOUR MARK

Need a way to discreetly mark your bottles for traceability? The SQ-Laser from Squid Ink® provides a high quality, clean option for permanently marking date codes, lot numbers, vintages, and more directly on your wine bottle.

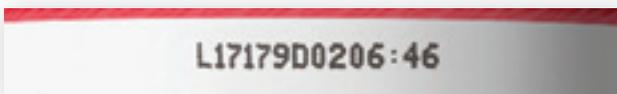
Looking to make your mark with ink jet? The JetStream™ CIJ printer is an excellent solution to print up to 5 lines of durable alphanumeric codes directly on glass or on your wine label.

Don't forget about your shipping cases! Replace costly labels with inexpensive hi-resolution ink jet printing. The CoPilot® 500 prints text, date codes, barcodes, images and more at a fraction of the cost of print and apply labels or preprinted cases.

To learn more please visit [www.squidink.com/wine](http://www.squidink.com/wine) or call **1.800.877.5658**



Laser code on bottle



CIJ code on label



#### SQ-LASER

Laser Coding for Discreet Primary Marking



#### JETSTREAM

CIJ Small Character Coding for Primary Marking



#### COPILOT 500

Hi-Resolution Ink Jet Printing for Secondary Cases



[www.squidink.com](http://www.squidink.com)

1.800.877.5658

### Etching Expressions

B918

San Diego, CA ☎ 866-944-3824  
• [www.etchingx.com](http://www.etchingx.com)

#### Etched Wine Bottle



**DESCRIPTION:** Etching Expressions' deep-etched and hand-painted wine bottles are all hand-crafted by artisans in our California facility. Create custom-etch winery logos and

personalized text for a striking presentation. Great for large-format bottles, personalized products for wine club members, employee recognition gifts or special releases.

### Monvera Glass Décor

B618

Napa, CA ☎ 707-345-1700  
• [www.monvera.com](http://www.monvera.com)



#### Screen Printed Labels

**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 or not available 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.



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INNOVATION

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→ NEAT AND CLEAN AFTER OPENING  
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Tin



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Aluminium



**ROLLTOP**  
Polylamine



**STELVIN®**  
The original wine aluminium closure



**HOODS**  
Tin Polylamine

## WINERY > PACKAGING > BOTTLE DECORATING

### Sleever International

P2231

East Rutherford, NJ ☎ 201-340-2809 • [www.sleever.com](http://www.sleever.com)

#### NEW Ice Club

**DESCRIPTION:** Ice Club, an innovation by Sleever International for the wine and spirits market, was specifically designed to create a visual signature for a new consumption trend, “on ice,” with a visual and touch porcelain effect. Its intense pure white color and silky touch are an evocation of freshness, and are the base of the latest Chandon California Summer edition, adorned with fresh and lively patterns.

#### NEW Metalfest

**DESCRIPTION:** Metalfest, an innovation by Sleever International for the wine and spirits market, reproduces the intensity and brightness of pure metal as an evocation of luxury and sophistication for premium references. The metallic effect can be enriched with colors, holographic effects, luminescent inks for “nightlife editions,” tactile effects and more.

#### NEW Skinsense

**DESCRIPTION:** Skinsense, an innovation by Sleever International for the wine and spirits market, is the alliance of sensorial and visual effects on packaging to create the perfect illusion of textures and materials. It is featured on the Italian sparkling wine Ferrari Ermenegildo Zegna limited edition, as well as on their other Kartell limited edition.



### Squid Ink Manufacturing, Inc.

P2200

Brooklyn Park, MN ☎ 800-877-5658 • [www.squidink.com](http://www.squidink.com)

#### SQ-Laser

**DESCRIPTION:** The SQ-Laser from Squid Ink provides a high-quality, clean option for discreet permanent marking of date codes, vintage and lot numbers directly on your wine bottle or wine bottle label.



## WINERY > PACKAGING > BOXES AND BAGS

### Aran USA

P2283

Greer, SC ☎ 864-479-0023 • [www.aran-us.com](http://www.aran-us.com)

#### Bags for Bag-in-Box Application

**DESCRIPTION:** Aran USA offers wine bag-in-box in sizes from 1 to 20 L for the wine market. We manufacture on-site in our South Carolina facility and can deliver all over U.S. and Canada. Our megaflex material is transparent and specially developed to withstand long distance transportation after filling.

### AstraPouch North America

B719

Rochester, NY ☎ 585-259-9202 • [www.astrapouch.com](http://www.astrapouch.com)

#### 1.5L Sangria Growler Pouch

**DESCRIPTION:** Astrapouch introduces the Sangria Growler. The 1.5 L pouch holds the equivalent of two 750 mL glass bottles and is refillable and reusable. Simply fill through the 1-inch top opening and dispense through the bottom, one-way spigot, which doesn't allow any oxygen in. With the tamper-evident cap, you can safely sell the pouch for home consumption.



#### Slushy Pouch

**DESCRIPTION:** Astrapouch introduces the Slushy Pouch. The 1.5L Slushy Pouch holds the equivalent of two 750 mL glass bottles and can be placed in the freezer and frozen solid. Whether as a take-out pouch from the winery tasting room or as a pre-mixed blend to be frozen at home, the Astrapouch Slushy Pouch squeezes out a perfectly delicious slushy drink through its 1-inch spout.

## WINERY > PACKAGING > CAPSULES

### Amcor Flexibles

A401

American Canyon, CA ☎ 707-257-6481 • [www.amcor.com](http://www.amcor.com)

#### EASYPEEL

**DESCRIPTION:** EASYPEEL is an opening system for aluminum capsules that makes opening wine easier and cleaner. The improved design prevents tearing, over-cutting or removing the entire capsule—all of which can detract from the carefully crafted aesthetics wine brands work to develop.



#### InTact

**DESCRIPTION:** InTact is a connected capsule that integrates an NFC technology and allows consumers to instantly verify product authenticity. InTact helps wine and spirits brands fight counterfeiting and avoid grey market diversion, as well as collect valuable data about, and engage, with consumers through digital technology.



### Etched Images

C1339

Napa, CA • [www.etchedimages.com](http://www.etchedimages.com)

#### Dipping Wax Starter Kit

**DESCRIPTION:** The Dipping Wax Starter Kit includes a 6-quart melting pot and 5 pounds of wax in the color of your choice.



### Maverick Enterprises Inc.

C1308

Ukiah, CA ☎ 707-463-5591 • [www.maverickcaps.com](http://www.maverickcaps.com)

#### NEW Sparkling Domed Tops on Capsules

**DESCRIPTION:** Maverick's new domed and semi-domed tops allow a more prestigious look for your branding needs. Our customer care team is available to answer any questions you may have and determine how best we can help you with a new project.

### Rivercap

A515

Benicia, CA ☎ 707-746-3630 • [www.rivercap.com](http://www.rivercap.com)

#### NEW Easy Opening by Rivercap

**DESCRIPTION:** Wineries want their consumers to enjoy their wine. With this expectation in mind, Rivercap now offers an easy opening feature on its Pure Tin capsules, allowing consumers a safe and smooth cut and wineries to keep their branding on the bottle in the most elegant way.



#### NEW Pure Tin Capsules

**DESCRIPTION:** Seamless and elegant tin capsules by Rivercap are the result of unique craft skills. Made out of Pure Tin ingots and printed with water-based ink, these capsules provide a distinctive and smooth malleability, embracing the bottle for a refined aspect brands are looking to obtain.



### Scott Laboratories Inc.

A322 & A318

Petaluma, CA ☎ 707-765-6666 • [www.scottlab.com](http://www.scottlab.com)

#### Custom and Stock Tin Capsules

**DESCRIPTION:** A leader in the natural cork industry since 1978, Scott Labs rounds out its packaging portfolio with a quality capsule solution from Amcor. Custom and stock tin capsules make it easy to 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.





maverick  
ENTERPRISES, INC  
[www.maverickcaps.com](http://www.maverickcaps.com)



#BeGreen

absolute greenLine

IS AN EXCLUSIVE CAPSULE PRODUCED WITH **WATER-BASED INKS**  
AND **POLYETHYLENE MADE OF 100% RENEWABLE RESOURCES.**

MAVERICK ENTERPRISES, INC. - 751 E Gobbi Street - Ukiah, CA 95482  
email: [marketing@maverickcaps.com](mailto:marketing@maverickcaps.com) - phone: 707-463-5591



Le Muselet Valentin

# ART & CRAFT

THE ICONIC WIREHOOD



  
Sparflex  
*Design & Technology*

[www.lemuseletvalentin.com](http://www.lemuseletvalentin.com)

FOR INFORMATION, PLEASE CONTACT OUR SALES REPRESENTATIVE : [SALES@SPARFLEX.COM](mailto:SALES@SPARFLEX.COM)



## WINERY > PACKAGING > CAPSULES

### Sparflex

A515

Epernay, France ☎ +33 326531111 • [www.sparflex.com](http://www.sparflex.com)

#### NEW Absolute Green Line with Augmented Reality

**DESCRIPTION:** Sustainable and smart packaging are in line with new consumer expectations. That's why Sparflex developed Absolute Green Line foils (produced with bio-based polyethylene made from sugar cane and water-based inks) and augmented reality. Using augmented reality, brands can capture consumer attention and emotion, creating a unique user experience. With just a smartphone and the SnapPress application for scanning the foils, interactive content will be loaded, including tutorials, videos, catalogues, and links to online shops.



#### Creative Digital

**DESCRIPTION:** Creative Digital digital printing technology offers top-quality printing, intense colors and great reproducibility. It gives flexibility and responsiveness for ultra-customized small series. Creative Digital foils and wire hoods can be completely customized and can be printed on the front and back of the foil (with a Peel to Reveal finish), and by incorporating variable data, each foil becomes unique. Creative Digital allows you to forge a special relationship with your client by sending targeted messages.



### Technologia JSC

A144

Sumy, Ukraine ☎ +38-0675481223 • [www.technologia.com.ua](http://www.technologia.com.ua)

#### Polylam, PVC and Sparkling Wine Capsules

**DESCRIPTION:** Technologia JSC offers wine capsules made of PVC and poly laminate. High-quality PVC material helps to achieve perfect thermo-shrinking results. Poly laminate capsules have superb quality, give a premium look to your bottle and are cost-effective compared to tin capsules. Whatever your choice is, the caps will complete the image of your brand. Sparkling capsules with a wide range of decoration allow you to create elegant packaging with modern design.



### Wine Country Closures

A234

Fairfield, CA ☎ 707-863-7755 • [www.winecountryclosures.com](http://www.winecountryclosures.com)

#### Capsules

**DESCRIPTION:** Wine Country Closures offers capsules in poly laminate, tin, PVC, screw caps and wirehoods. We will help you seal and protect your product with precision and elegance. We offer a wide range of stock colors, and we can customize your capsules with embossing, hot foil and rotogravure printing.

## WINERY > PACKAGING > CLOSURES

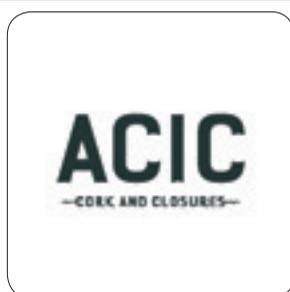
### ACIC Cork and Closures

A506

Napa, CA ☎ 707-290-2671 • [www.acicclosures.com](http://www.acicclosures.com)

#### Corks, Bartops, Capsules & Screw Caps

**DESCRIPTION:** At ACIC, we strive to provide customers in the wine, spirits and food industry with the highest quality standard closures. This goal is achieved through our dedication to customer service and the technical expertise of our team members.



# ACIC

~CORK AND CLOSURES~



NATURAL CORK



WINE & SPIRITS



TRADITIONAL CAPSULES



BACKED BY SCIENCE

## The Perfect Balance

AN AUTHENTIC COMMITMENT TO QUALITY  
WHILE MEETING THE NEEDS OF YOUR BUSINESS



#### ACIC Cork & Closures

255 Lombard Rd. Suite C  
American Canyon, CA 94503  
Tel 707.603.1380 | Fax 707.603.1399  
[acicclosures.com](http://acicclosures.com)

## WINERY > PACKAGING > CLOSURES

### Amcor Flexibles

A401

American Canyon, CA ☎ 707-257-6481 • [www.amcor.com](http://www.amcor.com)

#### STELVIN

**DESCRIPTION:** Amcor's STELVIN, the original wine aluminum closure, was developed more than 50 years ago, and continues to be the market leader and preferred choice for many winemakers. The STELVIN range now also includes STELVIN LUX, the premium version of STELVIN closure, with a completely smooth exterior and sleeker appearance.



### Amorim Cork America

P2127

Napa, CA ☎ 707-224-6000 • [www.amorimca.com](http://www.amorimca.com)

#### Natural Cork

**DESCRIPTION:** Our natural cork stoppers are available in different sizes and washes. The sizes available are 38 mm, 45 mm, 49 mm and 54 mm. The washes available are dark (natural color) and light. These wine corks are 100 percent natural cork and are produced with the highest degree of care and quality.



#### NDtech Cork

**DESCRIPTION:** NDtech is the world's first natural cork with a non-detectable TCA guarantee. NDtech individually tests each wine cork for TCA, using unprecedented fast chromatography technology. Hochschule Geisenheim University and The Australian Wine Research Institute (AWRI) have independently validated the performance of NDtech. A non-detectable TCA guarantee means that if any TCA remains in a cork, it is below the detection threshold of 0.5 nanograms per liter.



#### Neutrocork Premium®

**DESCRIPTION:** ROSA-treated Neutrocork Premium is a micro-agglomerated wine cork stopper made from ROSA-treated cork particles with a non-detectable TCA guarantee (at or below 0.5 ng/L). This latest generation stopper uses a patented ROSA high-tech steam sterilization system, providing even deeper sterilization in the cellular structure of cork.



### APHOLOS Metal Labels & Closures

P1536

Buenos Aires, Argentina ☎ 646-330-4923 • [www.apholos.com](http://www.apholos.com)

#### Metal Closures

**DESCRIPTION:** Apholos custom metal closures can be ordered in different ways, from metal discs for corks to T-stoppers. T-stoppers may be ordered with synthetic or natural cork. Apholos also offers a wide selection of electroplated metal finishes.



#### Sparkling Wine Wirehoods

**DESCRIPTION:** Apholos sparkling wine wirehoods may be stamped or casted. Both alternatives offer great engraving definition, but casted products can also have irregular, 3D-modelled or die-cut shapes. Depending on the specific designs, these products may be applied automatically. Apholos offers a wide selection of electroplating metal finishes for the caps and many wire colors.



### Cork Supply

A522

Benicia, CA ☎ 707-746-0353 • [www.corksupply.com](http://www.corksupply.com)

#### Top-of-the-Bottle

**DESCRIPTION:** Since 2011, we have been developing our individually guaranteed product lines to provide the highest quality with a consistent sensory performance: With the DS100 service, 100 percent of the corks go through a human sensory analysis that rejects any cork with TCA or other off-aromas. A bottle buy-back guarantee is given for premium products.



#### VINC

**DESCRIPTION:** The VINC closure is produced exclusively by Cork Supply, using controlled, high-quality raw material and state-of-the-art molding technologies. In VINC corks, the level of migratory TCA is guaranteed to be less than or equal to 0.5 ng/L in each cork. This technical closure has an excellent mechanical capacity and consistent sensory performance, properties that are fundamental in offering an exemplary sealing capacity.



### Diam Closures

C1112

Modesto, CA ☎ 800-321-8747 • [www.diam-cork.com](http://www.diam-cork.com)

#### Diam Origine

**DESCRIPTION:** Diam Origine is a sustainable and bio-sourced cork that offers consistent performance and reliable permeability from bottle to bottle. Diam Origine provides different OTR (oxygen transmission rate) and OIR (oxygen initial release) options to control wine aging, with ranges from 5, 10 and 30.

### Ganau America

A536

Sonoma, CA • [www.ganauamerica.com](http://www.ganauamerica.com)

#### NEW PHÉNIX

**DESCRIPTION:** Building upon the success of UNIQ, which is widely recognized as the leading sparkling wine closure for both wine aromatics and pressure resistance, Ganau recently unveiled its new sparkling wine cork, PHÉNIX. After several years of testing, Ganau has combined the proven reliability of UNIQ with a high-end, natural disc end. This latest offering allows wineries the opportunity to maintain the traditional cork aesthetic with the added value of UNIQ.



### Guala Closures North America Inc.

A509

Fairfield, CA ☎ 707-425-2277 • [www.gualaclosures.com](http://www.gualaclosures.com)

#### e-WAK

**DESCRIPTION:** e-WAK is a smart aluminum closure for wine. Co-developed with NXP semiconductors and based on NXP's innovative NTAG, the NFC tag and NFC technology is protected within the closure. This technology enables brands to start a one-on-one relationship with their consumers. The Tap on Cap offers consumer engagement, marketing data acquisition, authenticity certification, logistics and track-and-trace, among other data and consumer touch points.

### Herti

A115

Rancho Cordova, CA ☎ 916-260-6959 • [www.hertius.com](http://www.hertius.com)

#### Wine Screw Caps

**DESCRIPTION:** All aluminum screw caps produced by Herti with Saranex or tin liners can be used on wine bottles. Besides the most preferred size of PP30x60 mm BVS for standard wine bottles, the company manufactures other sizes, such as 22x15, 22x30, 25x17, 25x43 and 30x24 mm—smaller sizes often used on airlines and in hotel mini-bars. The screw caps are available in 16 standard stock colors with numerous options for decoration and design.

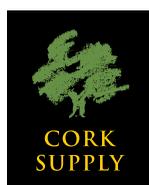


Naturally Created,  
Technically Perfected.



vinc

A new line of guaranteed TCA taint free corks\*



[www.corksupply.com](http://www.corksupply.com)

\*Please see website or Technical Product Specification sheets for details.

## WINERY > PACKAGING > CLOSURES

### M.A. Silva USA

A203

Santa Rosa, CA • [www.masilva.com](http://www.masilva.com)

#### OneyOne Tested Natural Cork

**DESCRIPTION:** MA Silva will continue to showcase the OneyOne cork-testing process—an individual cork-testing method that delivers 100 percent TCA testing and inspection. The fully automated process is based on gas spectroscopy and inspects every single cork one by one to detect any trace of cork taint, leaving no margin for human error. Further individual testing is done in the U.S. offices.

### Portocork

B935

Napa, CA ☎ 707-258-4051 • [www.portocork.com](http://www.portocork.com)

#### NEW COMPAC Sparkling

**DESCRIPTION:** COMPAC is a technical sparkling closure that utilizes super-critical CO<sub>2</sub> to eradicate TCA below quantifiable levels and is offered in two different permeability levels. COMPAC is a certified natural cork stopper with a minimum content of 75 percent cork and utilizes a specific formula of cork granules (ranging from 0.5 to 2 mm) to retain the natural property of the cork's dimensional return and initial oxygen release during bottling.



#### NEW CWINE

**DESCRIPTION:** CWINE is a technical cork closure that utilizes super critical CO<sub>2</sub> to eradicate TCA below quantifiable levels and is offered in 3 different permeability levels. CWINE is a certified natural cork stopper with a minimum content of 75 percent cork and utilizes a specific formula of cork granules (ranging from 0.5 to 2mm) to retain the natural property of the corks dimensional return and initial oxygen release during bottling.



#### Natural Corks

**DESCRIPTION:** Portocork offers a complete range of premium natural cork closures to the wine industry. Our extensive portfolio of products (natural, sparkling, technical and micro-agglomerated) enables us to partner with wineries to build a sustainable cork program that meets their specific quality, marketing, performance and business needs.



### Scott Laboratories Inc.

A322 & A318

Petaluma, CA ☎ 707-765-6666 • [www.scottlab.com](http://www.scottlab.com)

#### NEW Distributor of STELVIN® Closures

**DESCRIPTION:** Scott Labs is excited to announce a new partnership with STELVIN, a leading producer of high-quality wine closures. Whether you specialize in producing reds, whites or Rosé wines, STELVIN closures guarantee consistency and preservation of aroma, flavor and freshness. They are available in a wide range of colors and can be decorated with intricate printing or embossing.



### Trefinos USA

B935

Napa, CA ☎ 707-266-5325 • [www.trefinosusa.com](http://www.trefinosusa.com)

#### COMPAC Sparkling

**DESCRIPTION:** COMPAC is a technical sparkling closure that utilizes super critical CO<sub>2</sub> to eradicate TCA below quantifiable levels and is offered in two different permeability levels. COMPAC is a certified natural cork stopper with a minimum content of 75 percent cork and utilizes a specific formula of cork granules (ranging from 0.5 to 2 mm) to retain the natural property of the cork's dimensional return and initial oxygen release during bottling.



### Vinventions

A522

Zebulon, NC ☎ 919-460-2200 • [www.vinventions.com/en-us](http://www.vinventions.com/en-us)

#### Alplast

**DESCRIPTION:** Alplast high-quality and cost-efficient screw caps are perfect to keep entry-level wines fresh and free from any taint with the convenience of screw caps for opening and resealing. Vinventions offers Alplast screw caps with a variety of liners: efficient EPE+barrier liners, injection-molded Ridotto liner for semi-sparkling wines and premium Tin-Saran liners.



#### Vintop

**DESCRIPTION:** Vinventions' Vintop line of high-performance screw caps closures is created primarily for premium wines, with customized multi-feature cap designs. Vintop offers a full range of design options from traditional off-set to hot-foil printing and top-embossed closures. Vintop screwcaps are offered with a variety of liners: traditional Tin-Saran liners, efficient Saranex liners and the newly developed VinOH liner, a chlorine-free liner responding to increased health and environmental concerns.



#### Nomacorc

**DESCRIPTION:** The Nomacorc Green Line is a new category of closures called PlantCorc, derived from sustainable, renewable sugar cane-based raw materials. Driven by a steadfast commitment to innovation, sustainability and continuous improvement, Nomacorc closures offer bottle-to-bottle consistency, TCA-taint-free guarantees and low-to-zero-carbon footprint with all closures in the portfolio.



### World Wine Bottles & Packaging Solutions

P1506

Napa, CA ☎ 707-339-2102 • [www.worldwinebottles.com](http://www.worldwinebottles.com)

#### Corks

**DESCRIPTION:** World Wine Bottles & Packaging Solutions now offers corks, both natural and synthetic.



## WINERY > PACKAGING > DESIGN SERVICES

### Affinity Creative Group

C1214

Mare Island, CA ☎ 707-558-0744 • [www.affinitycreative.com](http://www.affinitycreative.com)

#### Branding, Packaging Design, Digital Media and Retail Activation

**DESCRIPTION:** Affinity is a collective of strategic and creative experts in branding, packaging design, digital media and retail activation. We deliver the complete brand experience through marketing services custom-tailored for today's brand champions in the wine, spirits, beer and luxury categories. Affinity helps clients of all sizes connect with consumers at the early and essential moments of contact through the strategic use of creativity, captivating storytelling and flawless implementation.



### CF Napa Brand Design

P1534

Napa, CA ☎ 707-265-1891 • [www.cfnapa.com](http://www.cfnapa.com)

#### Winery Branding and Design

**DESCRIPTION:** CF Napa Brand Design specializes in the revitalization and creation of wine, spirits, beer and hard cider brands. With more than 45 years of knowledge, our services include story development, naming and design for brand identities, packaging, custom bottles, marketing materials and websites. CF Napa's clients span the gamut—from growers and producers to retailers, across the U.S. and internationally.

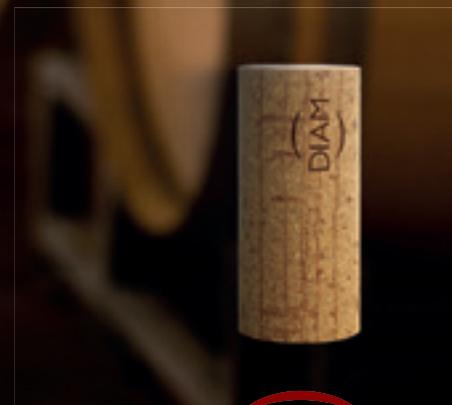


*“You say Diam, I say Yes!”*

In just over ten years, Diam has quickly become the closure of choice for winemakers and winery owners around the world. This is because Diam closures guarantee absolute consistency from one closure to the next which ensures the wine ages in the bottle as intended. Year after year, Diam delivers unbeatable mechanical performance and sensory neutrality\* which, together with controlled permeability, makes it possible for wines to express their unique sensory profiles. By choosing Diam, rest assured that consumers are consistently experiencing your finest work. You Say Diam, I say Yes!

[www.diam-cork.com](http://www.diam-cork.com)

Jean-Claude Mas, Winegrower and Owner, Domaines Paul Mas.



DIAM



The guardian of aromas

## WINERY > PACKAGING > LABELS

### Afinia Label

P2235

Chanhasen, MN ☎ 952-556-1600 • [www.afinialabel.com](http://www.afinialabel.com)

#### L502 Color Label Printer

**DESCRIPTION:** All-steel industrial design, improved toolbox functionality, fast print speeds and durable pigment inks that are BS5609-compliant make the L502 extremely rugged and versatile. It also includes new sensors that allow for greater compatibility with specialty media, such as reflective metallic material. In addition to the roll-fed model, the L502 is also available in a fanfold-compatible version (F502) with the same build quality and feature set.



#### L901 Industrial Color Label Printer

**DESCRIPTION:** The L901 combines industrial design, exceptional image quality and high production speeds with a new ability to service and maintain the printhead "on-the-fly." This makes the L901 perfect for long roll-to-roll jobs or in-line integration with label finishers, applicators, dispensers and more. Producing vibrant full-color prints in high resolution of 1600dpi is now more economical than ever, thanks to five high-capacity 250ml CMYKK ink cartridges that deliver a new ultra-low cost per label.



#### LT5C - CMYK+White Label Printer

**DESCRIPTION:** The LT5C CMYK+White label printer offers professional five-color narrow-format output for a wide variety of markets. Whether it's high-durability labels, freezer and cold-storage labels, food and beverages or household goods—the LT5C from Afinia Label can deliver that and more. This laser toner-based system offers extremely durable prints with regard to UV- and water-resistance. Print with white on uncoated standard or specialty materials, such as clear, foil or dark substrates.



### APHOLOS Metal Labels & Closures

P1536

Buenos Aires, Argentina ☎ 646-330-4923 • [www.apholos.com](http://www.apholos.com)

#### Metal Labels

**DESCRIPTION:** Apholos offers solid or flexible metal labels. They are all custom-made to perfectly fit the bottle. There are almost no limitations in terms of shape and design: They can be irregular, 3D modeled and/or die cut, and are all self-adhesive for easy application. Apholos also offers a wide selection of electroplated metal finishes.



### Applic'Etains

P2236

Nontron, France ☎ +33 553569098  
• [www.appligetains.com](http://www.appligetains.com)

#### NEW "Glow in the Dark" Pewter Label

**DESCRIPTION:** Applic'Etains, manufacturer of pewter labels for luxury packaging, offers labels with different finishes. With our newest technique, we can offer up to four colors on the same label (Silver+3), as well as a matte or glow-in-the-dark effect.



### Avery Dennison

A439

Mentor, OH • [www.label.averydennison.com](http://www.label.averydennison.com)

#### NEW Crush Range

**DESCRIPTION:** For wine and spirits brands that aim to boost shelf appeal while signaling environmental integrity, Avery Dennison introduces a new line of facestocks made of recycled paper and organic waste. To support a transition to a circular economy, converters can choose from facestocks made with 15 percent grape, citrus or barley waste, along with 40 percent FSC-certified recycled paper.



### Creative Labels

P2113

Gilroy, CA ☎ 408-842-0376 • [www.creativelabels.com](http://www.creativelabels.com)

#### In-house Label Printing

**DESCRIPTION:** Creative Labels is now an authorized dealer of the VIP Color Label Solutions product line. Customers have found that they receive premium price points for, and boost sales of, their wines when using custom labels. It's also appropriate for producing custom designs for special events, adding a classy touch to any occasion.



#### Wine Labels

**DESCRIPTION:** Creative Labels has been serving our customers' needs for 40 years. When it comes to wine labels, we have both digital and flexography production, as well as rotary and flatbed foiling options. That means we can tailor your label in an affordable quality option to help you sell your wine.



### Eurostampa California

A103

Napa, CA ☎ 707-927-4848 • [www.eurostampa.com](http://www.eurostampa.com)

#### Labels

**DESCRIPTION:** Eurostampa California provides printing services, including flexo, offset, screen, hot-stamping and embossing for pressure-sensitive, cold glue or shrink sleeve application.

### G3 Enterprises

O60

Modesto, CA ☎ 800-321-8747 • [www.g3enterprises.com](http://www.g3enterprises.com)

#### G3 Enterprises Labels

**DESCRIPTION:** G3 Label, Grigsby Label and Tapp Label come together to offer a wide range of printing capabilities and technologies for quality engineered results. With locations in Napa Valley, El Dorado Hills and the Central Valley, we provide local convenience for our customers. Offerings include flexographic, offset, and digital printing, custom label designs with foiling, G INK technologies, tactile coatings, embossed or debossed elements and textures, and GTREE 100 percent PCW paper. Packaging and design consultations are available.



### Infinity Foils® Inc.

B639

Overland Park, KS ☎ 913-888-7340 • [www.infinityfoils.com](http://www.infinityfoils.com)

#### NEW Infinity Foils Shade Guide

**DESCRIPTION:** Infinity® Foils, Inc's new Shade Guide offers more shades and grades for a wide range of applications. This includes our premier digital foils, which are specially formulated to work with the digital process and developed to create a true metallic effect on wine labels, packaging and other printed materials.



### KURZ

B622

Charlotte, NC ☎ 704-927-3770 • [www.kurzusa.com](http://www.kurzusa.com)

#### NEW Digital Metal®

**DESCRIPTION:** Digital Metal is the combination of digital printing with metallic finishes. The embellishment options are virtually endless, giving you complete design freedom with all the advantages of digital printing. These include variable data, serialization, endless color options and much more. Equipment options include in-line, off-line, roll-to-roll and sheet-fed. KURZ has a solution to fit your manufacturing needs and capabilities. The metallic effects offer unmatched high-gloss finishes.



#### NEW Lumafin

**DESCRIPTION:** KURZ's new Lumafin foil series is an innovative approach to hot and cold foil decoration. The special characteristics of the translucent stamping foils really come into play when applied to printed motifs that are over-stamped with Lumafin. Obtain a distinct new coloring or depth of color that appears as though behind glass or transparent plastic. The pearlescent effect can produce special accents and unusual depth effects to create surprisingly different designs.



## Labeltronix

Anaheim, CA ☎ 800-429-4321 • [www.labeltronix.com](http://www.labeltronix.com)

### Award-winning Flexo Labels

**DESCRIPTION:** Labeltronix flexo-printed labels rely on digital plates to ensure color accuracy, crispness and consistency. The vibrancy of the color and the use of embellishments command customer attention to the labels. Don't take our word for the quality of flexo-printing: Independent judges in the industry have selected Labeltronix flexo-printed labels for national and global awards.

### New Material Collections

**DESCRIPTION:** Experience our vintage collection, which includes traditional, classic label materials designed to convey luxury. These materials excel for wineries that want to demonstrate ageless beauty and timeless quality with their labels. Be contemporary—with a futuristic spin—when you choose a paper from this line of modern materials.

### High Quality Embellishments

**DESCRIPTION:** Silk screen or "high build" printing has been in high demand at Labeltronix, and with the most recently acquired finishing press, the technique can be accomplished even faster. High build printing forces ink through a mesh screen so it can accumulate in specific areas, resulting in a heavy ink deposit with a tactile feel on lettering and images.



C1302



## Landmark Label

Newark, CA ☎ 510-651-5551 • [www.landmarklabel.com](http://www.landmarklabel.com)

### Smart Wine Labels

**DESCRIPTION:** Landmark Label focuses on creating labels with new technology. We offer a wide variety of materials and formats to maximize your product's appeal, cost and time to market, including: Pressure-sensitive wine, spirits and food labels, flexible packaging, QR codes, near field communication, RFID, product identification, authentication, temperature tracking, shrink sleeves, decorations and die cuts.



C1425

## Lucky Clover Packaging

Baltimore, MD ☎ 443-873-0103 • [www.luckycloverpackaging.com](http://www.luckycloverpackaging.com)

### Sleeved Cans and Consumables

**DESCRIPTION:** Lucky Clover Packaging is a one-stop shop for shrink-sleeved aluminum cans and other packaging materials, such as Paktech handles, brite cans and ends in all sizes. With locations in Baltimore and Sacramento, we allow beverage producers across North America to avoid large order minimums from manufacturers and package their beverages for retail in a cost-effective way.



A107

## Multi-Color Corporation

Napa, CA ☎ 707-603-2500 • [www.mcclabel.com](http://www.mcclabel.com)

### NEW Multi-Fraxion™

**DESCRIPTION:** MCC's Multi-Fraxion process imparts movement and special effects onto the surface of a foil-stamped image. Multi-Fraxion can be used to enhance a label design, either to show authentication or as a security feature. MCC offers a library of Multi-Fraxion patterns or can help you create your own custom pattern.

A316

**NEW** Product introduced since Unified 2019

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## WINERY > PACKAGING > LABELS

### Multi-Color Corporation

A316

Napa, CA ☎ 707-603-2500 • [www.mcclabel.com](http://www.mcclabel.com)

#### NEW Soft Touch Lamination

**DESCRIPTION:** MCC's Soft Touch Lamination is a unique printing process that produces an ultra-soft touch finish on a label. Embellishments such as foil, embossing, high-build screens, as well as satin or gloss varnishes, can be applied in conjunction with the Soft Touch process to elevate any label's appearance.

### ReThink Labeling

C1403

Anaheim, CA ☎ 844-556-7300 • [www.rethinklabeling.com](http://www.rethinklabeling.com)

#### NEW Epson ColorWorks C6000 Series Color Label Printers

**DESCRIPTION:** ReThink Labeling with Epson offers the wine industry exceptional on-demand, high-quality label printing at an unparalleled price point. Epson's new C6000 series printers—combined with premium certified wine label materials—deliver superb full-color labels that wineries can personalize for events, special occasions and to impress VIP customers. Print variable data for limited edition runs, test market different labels and easily change back labels for export.



### Tripack

B817

Cincinnati, OH • [www.tripack.net](http://www.tripack.net)

#### Shrink Sleeve Systems and Sleeving Services

**DESCRIPTION:** Tripack shrink sleeve systems range from entry-level speeds of 50 ppm up to integrated high speed systems capable of 800 ppm. Applying full body shrink labels, tamper-evident neck bands or shrink sleeve multi-packs, our turn-key systems include shrink sleeve applicators, shrink tunnels and product handling (conveyor, pucks, timing screws, etc). In addition to our manufacturing, we also provide contract shrink sleeving and fulfillment services for cans, bottles and any other sleeve application.



### Vintage 99 Label

A500

Livermore, CA ☎ 925-294-5270 • [www.vintage99.com](http://www.vintage99.com)

#### Wine and Spirits Labels

**DESCRIPTION:** Started in 1999, Vintage 99 Label Manufacturing is a family owned and operated label printer that specializes in high-quality wine and spirits label production and label design, using digital, flexo and waterless offset printing technologies. Printing facilities are located in Livermore and Santa Rosa, California. Free label consultations and estimates are available.



### Watermark Labels

P1947

Lodi, CA ☎ 209-370-1616 • [www.watermarklabels.com](http://www.watermarklabels.com)

#### Can Labels

**DESCRIPTION:** This label material is designed to appear as if the design is printed directly on a can once applied. This thin material is easy to apply to any style can on a bottling line and holds up well in any type of refrigeration.



NEW Product introduced since Unified 2019

### Wausau Coated Products Inc.

C1305

Wausau, WI ☎ 715-848-2741 • [www.wausaucoated.com](http://www.wausaucoated.com)

#### NEW Castile

**DESCRIPTION:** Wausau Coated Products' new Castile wine label products are custom-engineered for embossing and debossing. New this year are the 154# Castile Bright White Felt and 143# Castile Bright Silver Foil. Embossing these heavy facestocks will give you the depth and intricacy that easily produce 3D designs.

#### NEW 60# Estate Label® #12

**DESCRIPTION:** Wausau Coated Products continues to expand our portfolio of environmentally responsible label products. The 60# Estate Label #12 contains 100 percent post-consumer waste and is FSC-certified, includes wet strength properties and features our H-318 adhesive, making this a top choice when environmentally responsible labeling materials are important for your brand.

#### NEW Celtic Linen, White Valencia and 420 Vellum

**DESCRIPTION:** New label options from Wausau Coated Products include distinctive textures and inclusions. The 70# Celtic Linen has a vintage woven linen pattern while 70# White Valencia has an artistic stucco appearance. Also new to our label options is a label stock for hemp-infused products. Wausau will introduce the trendy 60# 420 Vellum that contains 25 percent hemp.

## WINERY > PACKAGING > MACHINERY

### Chart Inc.

P2199

Fremont, CA ☎ 800-371-3303 • [www.chartdosers.com](http://www.chartdosers.com)

#### CryoDoser FleX® LN2 Dosing System

**DESCRIPTION:** Chart's CryoDoser FleX Liquid Nitrogen Dosing System is the first doser with the ability to serve every dosing application within one unit. With two premium controller options, the Craft Custom and the Pack Premier, the CryoDoser FleX system is the most efficient liquid nitrogen doser.



### Krones Inc.

P1713

Franklin, WI ☎ 414-409-4000 • [www.kronesusa.com](http://www.kronesusa.com)

#### Autocol PS Labeler

**DESCRIPTION:** The Autocol Pressure Sensitive Labeler was designed as a rotary machine and is equipped with a label applicator designed for processing self-adhesive reel-fed labels and decoration to cylindrical or custom-shaped containers. The machine uses precise container positioning with centering bells and container plates, operates by individual transponders for quick access to user interface and can accommodate remote maintenance (optional).



#### NEW CraftMate Can Filler

**DESCRIPTION:** This can filler has a small footprint and compact design and accommodates various can sizes for both still and carbonated products. Volumetric filling for precise fill results in better yields. The machine runs between 80 and 300 cans per minute, depending on can size. Low oxygen pick-up ensures product quality and optimum shelf life, and the servo-driven filler and seamer mean fewer parts and less down time.



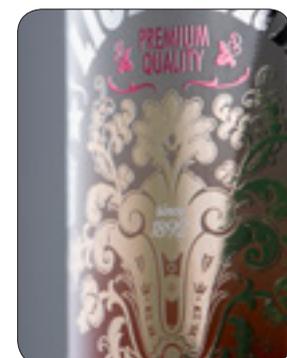
### KURZ

B622

Charlotte, NC ☎ 704-927-3770 • [www.kurzusa.com](http://www.kurzusa.com)

#### NEW KURZ inLINE Foiling®

**DESCRIPTION:** inLINE Foiling is a new process for applying metallic decoration to glass and plastic containers. This process creates brilliant metallization on bottles and tubes without pressure and temperature—in-line and at high speed. These metal effects are created in an efficient manner. We offer the complete solution: machine, foils, printing and tooling.



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**Booth L14**

## WINERY > PACKAGING > MACHINERY

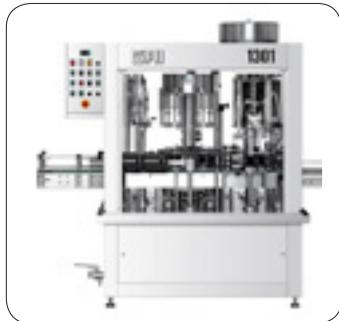
### Prospero Equipment Corp.

L14

Pleasantville, CA ☎ 800-953-3736  
• [www.prosperocorp.biz](http://www.prosperocorp.biz)

#### GAI 1331

**DESCRIPTION:** The new GAI 1331 filler monoblock with rotating closer turret provides the capability to any cork and screw cap from the same turret. It saves space and is less expensive.



### Squid Ink Manufacturing, Inc.

P2200

Brooklyn Park, MN ☎ 800-877-5658 • [www.squidink.com](http://www.squidink.com)

#### NEW CoPilot Max

**DESCRIPTION:** Squid Ink's CoPilot Max printing system is designed to print high-resolution characters on porous surfaces. With up to 2.8 feet of print height per printhead and the ability to run up to two printheads from a single controller, the CoPilot Max offers a versatile, cost-effective solution for coding and marking on primary and secondary wine cases. The CoPilot Max also features an active cartridge ink system, allowing users to tilt and rotate the printhead.



### West Coast Supplies

A121

Rancho Cordova, CA ☎ 800-466-6675 • [www.westcoastsupplies.com](http://www.westcoastsupplies.com)

#### NEW Low-profile Stretch Wrap Machine

**DESCRIPTION:** Our new low-profile stretch wrap machine saves space with a smaller footprint, is accessible from ramps on all sides, has variable pre-stretch for film savings and can be loaded with ease using a pallet jack.



#### Robot Stretch Wrapper

**DESCRIPTION:** Our Robot stretch wrapper is portable and can wrap any size pallet. Ideal for dock loading, it offers safer load securement and features variable pre-stretch and cube technology for film and labor savings.



### Wild Goose Filling

B915

Louisville, CO ☎ 720-406-7442 • [www.WildGooseFilling.com](http://www.WildGooseFilling.com)

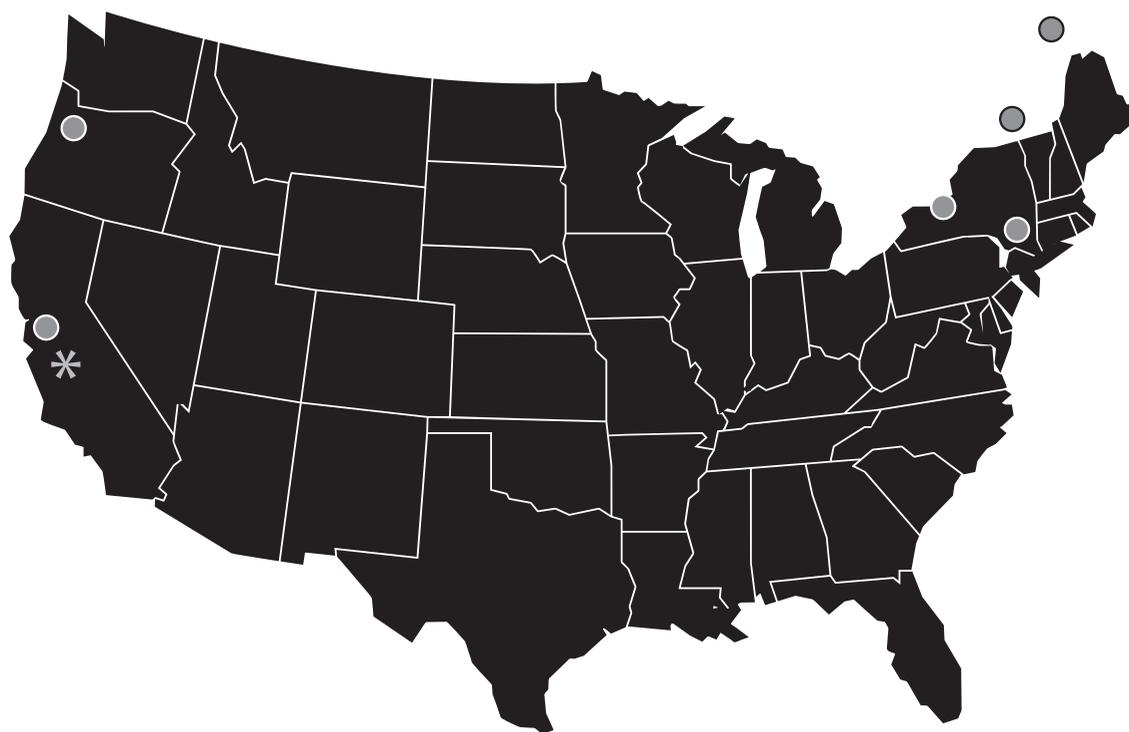
#### Evolution Series Canning Systems

**DESCRIPTION:** Wild Goose's upgradeable Evolution Series canning lines grow as your demand grows, offering an easy entry to precision automatic canning. Modular configurations support you from your earliest production stages to higher speed canning. Start canning with any Evolution system and upgrade as desired, from 15 up to 50 cans per minute. From integrated nitro-dosing to can size flexibility, the Evolution Series provides the solutions wineries need to package premium still and sparkling products in cans.



# SERVING YOUR NEEDS

Since 1946, we have been manufacturing bottling and labeling machines with passion and constant innovation. Our machines—running from 15 up to 350 bpm—can be found in the world's best wineries, and an international network ensures an impeccable post-sales experience. One of our fastest-growing markets is the United States, where for over 40 years we have partnered with Prospero. Now we are consolidating our presence here with seven service centers across North America as well as the Gai America branch in California (\*), founded in 2016, to guarantee the highest level of support for our clients.



**GAI AMERICA INC.**  
149 GROBRIC CT, SUITE D - FAIRFIELD CA 94534  
TEL. +1 707 862 2323 - [CONTACT@GAI-AMERICA.COM](mailto:CONTACT@GAI-AMERICA.COM)  
[WWW.GAI-AMERICA.COM](http://WWW.GAI-AMERICA.COM)

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A M E R I C A

## WINERY > PACKAGING > PACKAGING & SHIPPING MATERIAL

### RTS Packaging LLC

C1230

Atlanta, GA ☎ 800-558-6984 • [www.rtspackaging.com](http://www.rtspackaging.com)

#### DTC UpStanding Wine Pack

**DESCRIPTION:** The patented UpStanding Wine Pack is an award-winning wine bottle shipper designed to provide weight-bearing protection regardless of the orientation of the carton during the shipping process. Designed specifically for direct-to-consumer (DTC) and e-commerce shipments, this product is comprised of four, 100 percent recyclable components that provide both side-to-side and top-to-bottom protection. This product is currently available in four-pack, six-pack, nine-pack, 12-pack and 15-pack shippers out of Northern California. Kitting and customization are also available.



### West Coast Supplies

A121

Rancho Cordova, CA ☎ 800-466-6675  
• [www.westcoastsupplies.com](http://www.westcoastsupplies.com)

#### Wine Shippers

**DESCRIPTION:** Secure all sizes of wine bottles with pulp or foam shippers available at our warehouse in discounted bulk for order and delivery. Preventative and interchangeable inserts assist in gentle transportation of bottles and glasses.



### Western Pulp Products Company

B823

Corvallis, OR ☎ 800-547-3407 • [www.westernpulp.com](http://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 and are manufactured in the U.S.

## WINERY > PACKAGING > PRINTING

### RTS Packaging LLC

C1230

Atlanta, GA ☎ 800-558-6984 • [www.rtspackaging.com](http://www.rtspackaging.com)

#### Billboard Point-of-Purchase Display Card

**DESCRIPTION:** The Billboard Point-of-Purchase Display Card partition pack is a fully assembled partition that contains a single, high-quality graphic strip that is removed and attached to the back of a cut corrugated shipping case provide an instant point-of-purchase display. This innovation is designed to turn partitioned shipping cases into standalone display systems. This product is currently available nationwide.



## WINERY > PACKAGING > OTHER PACKAGING

### Craft Canning

A140

Portland, OR ☎ 971-231-5497 • [craftcanning.com](http://craftcanning.com)

#### Canning

**DESCRIPTION:** Craft Canning + Bottling offers mobile canning in Oregon, Washington and Colorado. In addition to mobile services, Craft offers co-packing operations in Oregon and Washington.



## SUSTAINABLE ALTERNATIVE PACKAGING SOLUTIONS FOR WINE-ON-TAP & WINE-IN-A-CAN

*Let your wine shine!*



**FREE FLOW**

**QUALITY FOCUSED & WINE SPECIFIC**

**KEG LEASING, FILLING & LOGISTICS SERVICES**

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## WINERY > PACKAGING > OTHER PACKAGING

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100%  
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- Patented Pressure Release Valve (PRV) = safety
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P2110

### Free Flow Wines

Sonoma, CA ☎ 415-626-1215 • www.freeflowwines.com

#### Kepping and Canning Services

**DESCRIPTION:** Free Flow Wines, the leader in sustainable alternative wine packaging, provides quality wine-on-tap and wine-in-can services for wineries. Turnkey kepping and logistics services include 100 percent reusable stainless steel kegs, fully-automated filling equipment, COLA compliance, wine-specific QC, bulk wine storage and marketing support. Complete canning services offer flexible pack-off configurations and a fully automated high-speed line to accommodate custom projects of all sizes. Free Flow's production facilities are in Sonoma, CA and Bayonne, NJ.



P2043

### KeyKeg - UniKeg

Chicago, IL • www.keykeg.com

#### KeyKeg® and UniKeg®

**DESCRIPTION:** OneCircle is the company behind the KeyKeg and UniKeg sustainable PET packaging. Our unique lightweight kegs combine groundbreaking research and development with advanced production methods in partnership with wineries around the world. The result is two complete families of sustainable kegs that stand out in the market due to their innovation, quality, convenience, safety and sustainability.



C1404

### Petainer, Inc.

Miami, FL ☎ 512-210-9387 • www.petainer.com

#### Petainer Kegs

**DESCRIPTION:** Petainer Kegs are one-way kegs designed for drink producers as a more cost-effective and sustainable alternative to traditional stainless steel kegs. Our kegs provide a low-cost way of entering new domestic and international markets. Ours are the only PET kegs with reusable the top and bottom chimes. Petainer kegs are available in 10 L, 15 L, 20 L and 30 L and arrive pre-purged, sterile and ready to fill.



B1011

### Pioneer Packaging

Kent, WA ☎ 800-248-3269 • www.pioneernorthwest.com

#### Dolium One-Way PET Keg

**DESCRIPTION:** Pioneer Packaging is the West Coast distributor for Dolium One-Way PET kegs with stocking locations in CA, OR and WA. Dolium kegs come with standard American Sankey D fittings and are sterile, ready to fill, purged and pressurized to 1 bar with either CO<sub>2</sub> or Nitrogen. Kegs also come with a built-in safety pressure release valve and are 100 percent recyclable. Currently produced in Belgium, Dolium is working to establish U.S. production by the end of 2020.



B912

### Schaefer Container Systems

Atlanta, GA ☎ 404-349-4524 • www.schaefercontainers.com

#### Cellar Kegs

**DESCRIPTION:** Schaefer Container offers a wide selection of high-quality topping kegs for the wine industry. These kegs are available in a variety of sizes and configurations. All kegs are equipped with a tri-clamp fitting on top of either 2-inch or 4-inch sizes. Select sizes, 15-gallons and 100-liters are also available with a 1.5-inch tri-clamp bottom fitting. The full product range includes kegs of 5-, 7.75-, 15.5-gallons and 100-liter capacity.



## World Wine Bottles & Packaging Solutions

P1506

Napa, CA ☎ 707-339-2102 • [www.worldwinebottles.com](http://www.worldwinebottles.com)

### Cartons

**DESCRIPTION:** Printed cartons can help your brand differentiate from others. Box printing is done domestically and overseas at competitive pricing.



## WINERY > SERVICES > LAB / ANALYTICAL SERVICES

## ETS Laboratories

A201

St. Helena, CA • [www.etslabs.com](http://www.etslabs.com)

### NEW ETS Smoke Database

**DESCRIPTION:** ETS Laboratories is building a database of "baseline" levels for smoke markers in grapes and wines. This database will allow us to define, for the main varieties, normal levels of aromatic markers in grapes NOT exposed to smoke and wines made from those grapes. We will use this information to interpret results in samples possibly impacted by smoke in the future. Any wines you can contribute in support of this research are greatly appreciated.

### NEW NMR (Nuclear Magnetic Resonance)

**DESCRIPTION:** ETS Laboratories is announcing its recently installed Bruker 400 megahertz NMR (Nuclear Magnetic Resonance) system. This will allow quantitative analysis of compounds not amenable to other analytical techniques, in addition to varietal and origin screening using Proton Nuclear Magnetic Resonance (1 H-NMR), using the Bruker Wine Screener application. Accurate and reliable authenticity databases that covers the Americas will be built in cooperation with our vast pool of clients and Bruker Biospin.

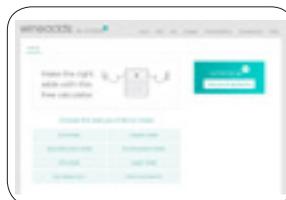
## vintrace

C1307

Sonoma, CA ☎ 888-240-4860 • [www.vintrace.com](http://www.vintrace.com)

### NEW WineAdds.com by Vintrace

**DESCRIPTION:** Additions, reductions, bench trials, solutions... by vintrace is here to help. Working with your current wine panel metrics, this free online and app-based solution helps winemakers calculate adds and adjustments to reach critical targets for optimal wine chemistry based on style.



## WINERY > SERVICES > MOBILE BOTTLING

## G3 Enterprises

O60

Modesto, CA ☎ 800-321-8747 • [www.g3enterprises.com/alternative-packaging](http://www.g3enterprises.com/alternative-packaging)

### NEW G3 Enterprises Petainerkeg™

**DESCRIPTION:** G3 Enterprises offers a new simple turnkey solution to making wine on-tap programs easier and more convenient. Petainerkeg can be filled in the new North Coast facility, Central Valley or on-site at the winery via our mobile filler. Services include: COLA applications, quality control and lab services, tanker-to-tote transportation, warehousing and finished goods transportation. Equipment and consultations are available.



## The Bottle Meister, Inc.

A426

San Luis Obispo, CA ☎ 805-541-8411 • [www.thebottlemeister.com](http://www.thebottlemeister.com)

### Mobile Wine Bottling and Velcorin Dosing

**DESCRIPTION:** The Bottle Meister is a premier mobile wine bottling and mobile Velcorin dosing service available for wineries in California.



# VA FILTRATION

WINE FILTRATION SPECIALISTS  
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## WHATS NEW FOR 2020

### Smoke Taint Reduction Breakthrough

our new process reduces free and bound smoke compounds  
extremely gentle processing  
minimum desirable aromatic loss  
free trials available

### Dynamic Crossflow - In-line Protein Stabilization

filter to 'bottle ready' straight off bentonite  
no need to settle tank  
no oxidation and no crossflow action

### Liqui-Silc™ - Silicon Carbide Crossflow Systems

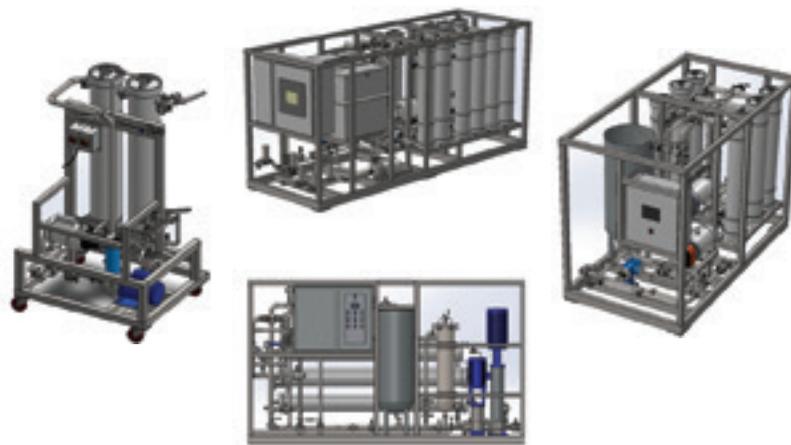
highest flux rated membrane available  
no thermal shock  
replacement elements available for ceramic oxide systems  
extreme chemical resistance

### Ceramic Hollow Fiber Crossflow Technology

compact, full auto systems  
easy to use  
high chemical Resistance

### Rental Cross-Flow Systems

200 gph & 400 gph models available  
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### Other Services offered:

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[www.vafiltration.com](http://www.vafiltration.com)



## WINERY > SERVICES > MOBILE BOTTLING

### Valentin Thierion Corp.

B824

American Canyon, CA ☎ 707-819-2848 • [www.valentinthierion.com](http://www.valentinthierion.com)

#### NEW Winery Equipment Maintenance

**DESCRIPTION:** Valentin Thierion Corp. introduces its new technical service department for winery equipment. Our technical manager comes from Epernay and has more than 20 years of experience in labeller and disgorging machines. We can troubleshoot, repair and overhaul all your sparkling or non-sparkling wine-related equipment going from presses to the labeller. We are also proud to service AMOS equipment in California. We are available 24/7 during harvest and for your disgorging production emergencies.



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- Removal of free and bound compounds

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Controlled brand available

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## WINERY > SERVICES > MOBILE FILTRATION

### Oenodia

P2228 & O40

Napa, CA ☎ 707-666-2049 • [www.oenodia.us](http://www.oenodia.us)

#### STARS® Mobile Service (SMS)

**DESCRIPTION:** Oenodia's STARS Mobile Service offers a fast, reliable, precise and customized on-demand service to stabilize (STARS Stab), micro-filter (STARS XF) and/or optimize pH (STARS pH) of your wines with our STARS line, based on patented electro dialysis technology. STARS Mobile Service delivers STARS to medium and/or small boutique wineries for just in time bottling/tirage. Units are also available for trials.



### VA Filtration USA

B914

American Canyon, CA ☎ 707-333-4028 • [www.vafiltration.com](http://www.vafiltration.com)

#### NEW Liqui-Silc

**DESCRIPTION:** Liqui-Silc (Silicon Carbide membranes) is a new membrane option for the purposes of wine filtration. The benefits of silicon carbide over regular ceramic are the higher flux rate due to substrate porosity as well as the thermal shock resistance of the material. Thermal shock resistance allows for faster cleaning times with less water and the ability of the element to tolerate 150° F temperature increases.



## WINERY > SERVICES > WINEMAKING SERVICES

### ConeTech Inc.

A336

Santa Rosa, CA ☎ 707-577-7500 • [www.conetech.com](http://www.conetech.com)

#### Smoke Taint Removal Process

**DESCRIPTION:** ConeTech presents its smoke taint removal process, showing examples and providing information on a comprehensive approach to removal and analytics.

### ConeTech Inc. / BevZero

A336

Santa Rosa, CA ☎ 707-577-7500 • [www.conetech.com](http://www.conetech.com)

#### Low/No Alcohol Product Development

**DESCRIPTION:** ConeTech/BevZero creates high-quality low and no alcohol wine, beer and cider for branding and infusion purposes.

### Meras Water Solutions

P2227

Modesto, CA ☎ 209-900-4500 • [www.meras.com](http://www.meras.com)

#### Production Sanitation Products and Services

**DESCRIPTION:** Meras Water Solutions production sanitation maintenance programs provide cleaners and biocides for your clean in place (CIP) system, preventing harmful bacteria and increasing water efficiency. Whether cleaning a wine tank or filter station, Meras offers water technology programs to maintain an effective food safety program for your winery.



### Owl Ridge Wine Services

P1750

Sebastopol, CA ☎ 707-823-0149 • [www.owlridgewines.com](http://www.owlridgewines.com)

#### Private Label, Bottling, Custom Crush

**DESCRIPTION:** Owl Ridge Wine Services provides premium custom crush and bottling. Looking to fill a gap in your bottled wine portfolio? We have a wide-ranging private label program. Our friendly, professional staff will be happy to help.



## WINERY > SUPPLIES > BIOLOGICAL INNOCULANTS

### Bucher Vaslin North America

L9

Santa Rosa, CA ☎ 707-823-2883 • [www.bvnorthamerica.com](http://www.bvnorthamerica.com)

#### NEW Lamothe Abiet Excellence Bio-Nature

**DESCRIPTION:** Excellence Bio-Nature is a bioprotection product that involves exercising early control of the natural flora present on grapes. As opposed to adding sulfur, which destroys the natural flora, we use Bio-Nature—a pure *Metschnikowia pulcherrima* (a non-*Saccharomyces* yeast)—to prevent the growth of undesirable microorganisms and promote healthy fermentation.



## WINERY > SUPPLIES > CHEMICALS

### Scott Laboratories Inc.

A322 & A318

Petaluma, CA ☎ 707-765-6666 • [www.scottlab.com](http://www.scottlab.com)

#### NEW Velcorin® DT Touch Cold Sterilization Dosing Technology

**DESCRIPTION:** With Velcorin, Scott Labs offers both a highly effective solution for the cold sterilization of your wine as well as a state-of-the-art dosing technology with the Velcorin DT Touch Dosing Unit. Velcorin technology is 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.



## WINERY > SUPPLIES > ENZYMES

### Laffort USA

P1749

Petaluma, CA ☎ 707-775-4530 • [www.laffortusa.com](http://www.laffortusa.com)

#### NEW Lafazym Thiols+

**DESCRIPTION:** Pectinase enzymes that extract aromatic precursors from juice before fermentation. Secondary activities act with yeast to improve biotransformation of thiol precursors.



### Maroon Group LLC, HI&I Division

A143

Boca Raton, FL ☎ 561-995-0070 • [www.marroongroupiii.com](http://www.marroongroupiii.com)

#### NEW VinoTaste® Pro

**DESCRIPTION:** VinoTaste ProFaster provides clarification of grapes for wine processing. It creates improved mouthfeel and perceived structure in red wines, increases the release of fruit flavor compounds in white wines, breaks down glucan caused by Botrytis, and improves clarification and filtration after alcoholic fermentation.

#### NEW Vinozym® FCE-G

**DESCRIPTION:** Vinozym FCE-G benefits the color and flavor in premium white wines. It enhances the release of fruit flavors and aromas, increases the quality of free-run juices at crush, improves yields and reduces turbidity.

#### NEW Vinozym® Vintage FCE

**DESCRIPTION:** Vinozym enhances color and flavor in premium red wine. It improves color extraction and stability; refines body and mouthfeel, to release soft tannins from the pectin matrix; increases quality of free-run juice, and liberates aroma and flavor compounds from the bound matrix.

## WINERY > SUPPLIES > FILTERS / FILTRATION SUPPLIES

### EP Minerals

B1015

Reno, NV ☎ 775-824-7600 • [www.epminerals.com](http://www.epminerals.com)

#### Transcend Filter Media

**DESCRIPTION:** Transcend is the exclusive, engineered filter media derived from diatomaceous earth (DE) but with no detectable crystalline silica. Dramatically reduce employee crystalline silica exposure with \$0 capital cost. Its performance is comparable to EP Minerals' Celatom DE filter media and is a drop-in replacement for conventional DE filter media.



### J Rettenmaier USA LP

P2175

Schoolcraft, MI • [www.jrsusa.com](http://www.jrsusa.com)

#### Vitacel

**DESCRIPTION:** Vitacel is a natural, safer and more efficient filter aid for wine filtration.

### National Filter Media Corp.

A236

Salt Lake City, UT • [www.nfm-filter.com](http://www.nfm-filter.com)

#### Filtration

**DESCRIPTION:** National Filter Media Corp. specializes in replacement filter press cloths for all OEM equipment, as well as replacement roto-vac drum filter cloths and drain grids. In addition, National Filter Media repairs and re-screens Velo filter screens, Padovan filter screens and all other OEM pressure filter screens. There are many replacement parts that National Filter Media can supply for all the OEM filtration equipment as well.



### Scott Laboratories Inc.

A322 & A318

Petaluma, CA ☎ 707-765-6666 • [www.scottlab.com](http://www.scottlab.com)

#### Seitz® ZD Filter Modules

**DESCRIPTION:** Seitz ZD (Zero Diatomaceous Earth) filter modules are 100 percent cellulose (biodegradable and free of DE and Perlite) with higher microbial retention and lower colloidal retention than traditional filter modules. Extremely gentle on wine, ZD modules help preserve color, flavor and mouthfeel. They can be regenerated and reused, allowing for higher throughput and more savings in terms of time and money.



UNIFIED  
SYMPOSIUM  
BOOTH  
P1750

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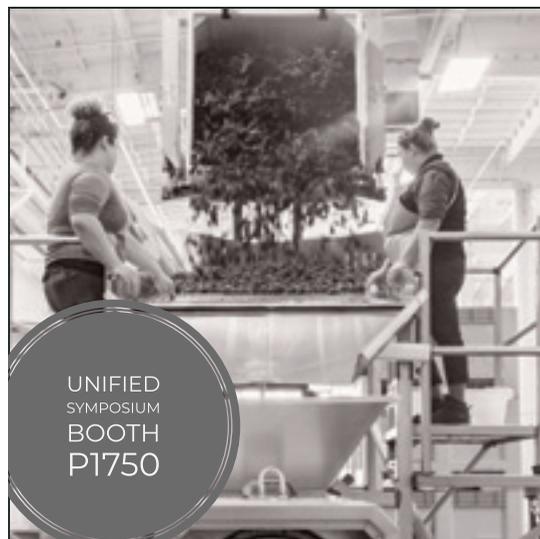
## WINERY > SUPPLIES > GRAPES / JUICE

### Agajanian Vineyards & Wine Company C1317

Napa, CA ☎ 707-252-4800 • [www.agajanian.com](http://www.agajanian.com)

#### Winegrape Services

**DESCRIPTION:** Agajanian Vineyards & Wine Company is the premier winegrape merchant and premium bulk wine negociant in the U.S., providing grower relations and wine production services to medium to small wineries that produce premium to luxury wines. Our mission is to be the go-to source for our clients and for the new growth of premium and luxury brands. Our experienced staff sources winegrapes predominantly from California, Oregon and Washington State.



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### Turrentine Brokerage

C1122

Novato, CA ☎ 415-209-9463 • [www.turrentinebrokerage.com](http://www.turrentinebrokerage.com)

#### Strategic Sourcing

**DESCRIPTION:** Since 1973, Turrentine Brokerage has been California's leading broker. Turrentine Brokerage knows the needs, the brands, the sources, the people and the trends to make wine business supply and demand dynamics work for you. Team Turrentine's business is based on client satisfaction, long-term relationships and repeat business.



## WINERY > SUPPLIES > WINEMAKING SUPPLIES

### Aromatica

C1412

Santa Barbara, CA ☎ 949-436-0318 • [www.aromatica.io](http://www.aromatica.io)

#### NEW Aromatica Wine Spirits

**DESCRIPTION:** Aromatica Wine Spirits are 175-proof wine spirits additions with unique aromatic qualities derived from capturing vapors during primary fermentation. Aromatica products can be used during blending to improve wine style and quality.

### Crush2Cellar

A133

Newberg, OR ☎ 503-537-1151 • [www.crush2cellar.com](http://www.crush2cellar.com)

#### NEW Crush2Cellar Online Winery Supply

**DESCRIPTION:** Crush2Cellar is your online premium winery supply store (also with a physical location in Newberg, OR), featuring all of the brands you know and trust, including Lallemand, Laffort, Gusmer and others. Crush2Cellar proudly stocks all cellar equipment, including yeast, nutrients, cleaning supplies, tanks, fittings, valves—and much more.



### Enartis USA

P2044

Windsor, CA ☎ 707-838-6312 • [www.enartis.com/en-us/](http://www.enartis.com/en-us/)

#### Zenith®

**DESCRIPTION:** The Zenith range, developed by Enartis, solves all challenges associated with wine tartrate stabilization. Potassium polyaspartate-based Zenith inhibits formation and growth of potassium bitartrate crystals, thus preventing their precipitation in bottle. Zenith is effective for tartrate stability with a long-lasting stabilizing effect, no negative impact on color and is respectful of wine sensory characteristics. It's environmentally sustainable, filterable and suitable for all wines: Zenith is the easy and fast solution for wine tartrate stability.



### Laffort USA

P1749

Petaluma, CA ☎ 707-775-4530 • [www.laffortusa.com](http://www.laffortusa.com)

#### NEW Powerlees Rouge

**DESCRIPTION:** Inactivated yeast and beta-glucanase enzymes that boost the extraction of mannoproteins and peptides give increased fruit expression and smoother texture for early-to-market red wines.



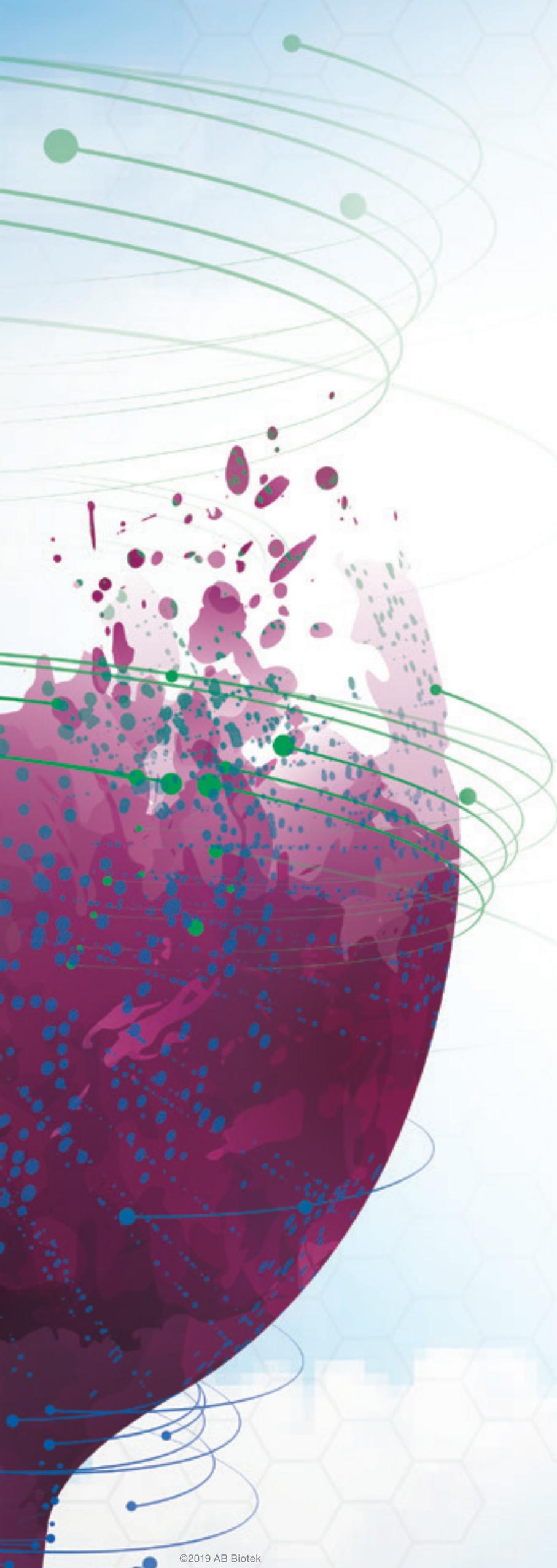
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 [www.enartis.com](http://www.enartis.com)

## enartis

### AB Biotek

P1944

St. Louis, MO ☎ 314-392-0800 • [www.abbiotek.com](http://www.abbiotek.com)

#### Pinnacle and Maurivin Wine Yeast

**DESCRIPTION:** AB Biotek contributes to the success of our customers through the delivery of superior technical service and fermentation expertise, combined with quality yeast and technology solutions. We have commercial-scale yeast production capabilities, as well as research and development laboratories that provide yeast and fermentation diagnostics in locations around the globe. Our product portfolio, led by the Pinnacle line-up of wine yeast options, also supplies the brewing, distilling, biofuel and nutrition industries.



### BSG

A502

Napa, CA ☎ 707-252-2550 • [www.bsgwine.com](http://www.bsgwine.com)

#### Pinnacle Yeast

**DESCRIPTION:** The Pinnacle yeast line-up includes Fructo and Fructo Select yeast for any problematic lots or stuck ferments. Fructo Select has an ethanol tolerance of 19 percent.



### Enartis USA

P2044

Windsor, CA ☎ 707-838-6312 • [www.enartis.com/en-us/](http://www.enartis.com/en-us/)

#### NEW EnartisFerm ES U42

**DESCRIPTION:** EnartisFerm ES U42, a yeast ideal for fermentation at low temperatures, is a blend of a cryophilic strain of *Saccharomyces uvarum* and a strain of *Saccharomyces cerevisiae ex ph. r. bayanus*. Recommended for reds, whites and Rosés, wines fermented with EnartisFerm ES U42 are characterized by increased complex primary aromas of rose, red fruit and spices. It's a very high producer of glycerol, producing wines with lower alcohol and higher natural acidity.



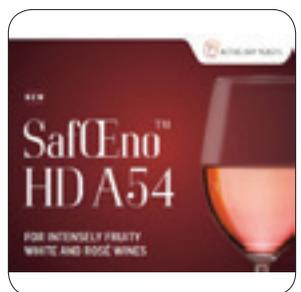
### Fermentis, a Business Unit of Lesaffre Yeast Corp.

P2159

Milwaukee, WI ☎ 414-615-3300 • [www.fermentis.com](http://www.fermentis.com)

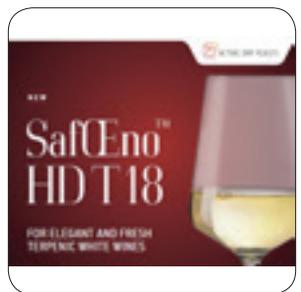
#### NEW SafCeno HD A54

**DESCRIPTION:** This active dry yeast offers expressive fermentative floral and fruity characters, higher alcohols and their corresponding acetate esters while keeping a clean fermentation profile for light, young wines. Considering its low SO<sub>2</sub> production, SafCeno HD A54 is particularly suitable for low SO<sub>2</sub> content wines and favors malolactic fermentations. It will help winemakers add value to their young and non-varietal wines.



#### NEW SafCeno HD T18

**DESCRIPTION:** This active yeast increases the aromatic potential of terpenic varieties (such as Muscat, Viognier, Gewürztraminer, Riesling and Pinot Gris) thanks to terpenols and B-damascenone release supported by a balanced production of acetate and ethyl esters, which strengthens the wines' complexity. It particularly enhances fresh floral and citrus fruit notes. Its clean fermentation profile, combined with its aromatic properties, makes it a great tool for making fresh varietal and complex white wines.



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# EVERY WINE HAS A STORY...



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At Gusmer, we know that every wine has a story and that every winemaker can make their own mark within the industry. That's why for over 90 years, Gusmer has offered a full range of innovative enological tools that enable your creative expression through unique and interesting wines. Equipment, analytical instruments and processing aids brought to you from leading suppliers in the wine industry, all backed by strong Gusmer technical support. The options for expression have never been greater and the tools have never been better – so go ahead, express yourself and create your own story.

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## WINERY > SUPPLIES > YEAST CULTURES & NUTRIENTS

### Gusmer Enterprises

Fresno, CA ☎ 866-213-1131 • [www.gusmerwine.com](http://www.gusmerwine.com)

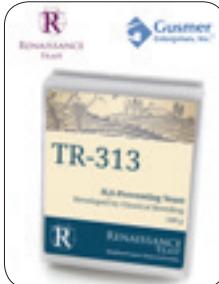
#### NEW Chr. Hansen Viniflora® Jazz

**DESCRIPTION:** Chr. Hansen Viniflora JAZZ is a direct vessel starter (DVS) strain that eliminates the rehydration step. JAZZ is a strain of *Saccharomyces cerevisiae* isolated from South African Shiraz must. The strain was selected for its ability to achieve a fast and reliable alcoholic fermentation, mainly in Rosé and red wines. JAZZ has a good tolerance to alcohol, low production of sulfites and an aromatic profile of spicy fruitiness.

#### NEW Renaissance Yeast TR-313

**DESCRIPTION:** Renaissance Yeast TR-313 is a thiol-releasing strain with a clean, aromatic profile that complements varietal wines. Renaissance Yeast is the exclusive developer of a novel, patented H<sub>2</sub>S-preventing technology that is the result of a natural trait that increases sulfur and nitrogen utilization efficiency during fermentation, thus preventing hydrogen sulfide formation. TR-313 is specifically bred to enhance a wine's aromatic potential. It's ideal for varietals including Sauvignon Blanc, Riesling, Chenin Blanc and Semillon.

P2120



### Juclas USA

Napa, CA ☎ 707-259-1877 • [www.vason.com](http://www.vason.com)

#### NEW X-PRO

**DESCRIPTION:** VasonGroup just released the X-PRO line, a family of four inactivated yeasts with different applications thanks to the patented inactivation technique developed by our R&D division. X-PRO PROTECTION has great reductive capacity with specific action against wine oxidation; X-PRO IDENTITY WHITE and X-PRO IDENTITY RED create a balanced environment for aging with a stabilizing effect in the wine; X-PRO FINESSE was created specifically for sparkling wines, improving finesse and duration of the perlage.



P2241

### Laffort USA

Petaluma, CA ☎ 707-775-4530 • [www.laffortusa.com](http://www.laffortusa.com)

#### NEW Zymaflore Egide

**DESCRIPTION:** This non-*Saccharomyces* yeast is used for bioprotection of fruit from harvest to fermentation, restricting the growth of other microflora. Simply sprinkle Zymaflore Egide dry onto fruit.



P1749

### Lallemand

Petaluma, CA ☎ 707-765-6666 • [www.lallemandwine.com](http://www.lallemandwine.com)

#### NEW Lalvin Persy

**DESCRIPTION:** Lalvin Persy is a new yeast for sulfur compound management in red wine. In collaboration with the INRA and SupAgro in Montpellier, France, Lallemand selected Lalvin Persy yeast for its ability to avoid SO<sub>2</sub> and H<sub>2</sub>S production while exhibiting excellent fermentation performance, alcohol tolerance and good compatibility with ML bacteria. Lalvin Persy reliably ferments red varieties such as Syrah, Tempranillo and Pinot Noir, complementing their varietal character, freshness and aroma persistency.

#### NEW Sauvy

**DESCRIPTION:** Sauvy provides optimal expression of thiols. Sauvy yeast was selected for its unique metabolism and enzymatic activities that result in the high potential to uptake and release volatile thiols, especially 4MMP. Sauvy is well suited for the production of intense and fresh aromatic white wines. Varieties such as Sauvignon Blanc show typical varietal flavor profiles described as boxwood, gooseberry, passion fruit and citrus when fermented with Sauvy. Sauvy also provides a refreshing, crisp mouthfeel.



A323



### Scott Laboratories Inc.

Petaluma, CA ☎ 707-765-6666 • [www.scottlab.com](http://www.scottlab.com)

#### NEW Flavia™

**DESCRIPTION:** Flavia is a pure culture of *Metschnikowia pulcherrima* that, when used in sequential inoculation with compatible selected *Saccharomyces cerevisiae* yeast, will enhance the production of varietal thiols and terpenes in white and Rosé wines. These compounds are present in grapes in their non-odiferous form and, once revealed, are expressed as citrus and floral notes in a finished wine.

#### NEW Glutastar™

**DESCRIPTION:** Glutastar is a new natural specific inactivated yeast with guaranteed glutathione level, dedicated to the protection of white and Rosé wines against oxidation. The unique properties of Glutastar provide efficient protection against browning and aroma oxidation, enhanced aromatic expression, freshness and a longer preservation of thiols and esters. The addition of Glutastar contributes not only to enhanced aromatic intensity, but also increased mouthfeel perception and wine thickness.

A322 & A318



## WINERY > TASTING ROOMS

### Oenophilia

Hillsborough, NC ☎ 800-899-6366 • [www.oenowholesale.com](http://www.oenowholesale.com)

#### NEW Vino Vent Glass Cover and Coaster

**DESCRIPTION:** The Vino Vent Glass Cover and Coaster gently and firmly grips your wine glass rim while letting the wine breathe. It acts as a shield to keep bugs and other debris out. It is easy to clean, extremely durable and made with food-grade silicone. Vino Vent is available in seven colors and can be customized, as well as used as a drink marker and coaster.



C1409

### RONA Glass

Pembroke, MA • [www.rona.sk](http://www.rona.sk)

#### NEW Orbital 54 Wine

**DESCRIPTION:** The Orbital 54 is featured in RONA's new Orbital collection, which combines the lightweight feel of handmade glass with the durability of glass made by machine. Orbital 54 provides timeless brilliance and clarity with lead-free crystal and features a seamless pulled stem. The large opening of the lightweight bowl is ideal for the enjoyment of red wines. Orbital 54 is available now.



#### NEW Premium Three Red Wine

**DESCRIPTION:** Premium Three Red Wine is featured in the new RONA Premium Three collection. The cylindrical bowled glass features a widened base, tapered rim and slender pulled stem. RONA Premium products are individually mouth-blown and hand-crafted in Slovakia, and are made with 100 percent lead-free crystal.



#### Prestige 45 Wine

**DESCRIPTION:** Prestige 45 is made with lead-free crystal for lasting brilliance and clarity and features a seamless pulled stem. The wide, laser-finished rim guides wine smoothly to the back of the mouth, providing drinkers with a taste of the full-flavor spectrum. Prestige 45 features a wide-hipped bowl, which allows wines to breathe, improving flavor and aroma in varietals of all ages.



B933

NEW Product introduced since Unified 2019

## WINERY > TASTING ROOMS

### Stölzle Lausitz GmbH

A137

Weisswasser, Germany ☎ +49 35762680 • [www.stoelzle-lausitz.com](http://www.stoelzle-lausitz.com)

#### Power

**DESCRIPTION:** A flat goblet bottom, an imperceptible curve to the stem and a long drawn-out funnel are the distinctive features of the Power range, which consists of a red wine, a white wine, a Champagne glass and two tumblers. The bulging waist ensures optimum ventilation thanks to the large contact surface between wine and air. The walls of the goblet form an extremely long, straight line and lead the wine's bouquet directly to the nose.



### TopNest Designs

P2201

Tiburon, CA ☎ 707-695-1306 • [www.topnestdesigns.com](http://www.topnestdesigns.com)

#### NEW Black Vinaer

**DESCRIPTION:** A sophisticated and professional tool for wine lovers, the Vinaer seven-function wine aerator decants and aerates instantly as you pour from the bottle. The aerating chambers were designed specifically for the viscosity of wine (not water, like most aerators), providing a slow pour for measured tastings. It's easy to clean: simply rinse. An air-tight lid can be laser engraved with your logo with a 24-piece minimum order. It's available in black and stainless.



#### NEW Oak Barrel Watch

**DESCRIPTION:** The perfect gift for wine lovers everywhere, these hand-crafted wooden watches are made from up-cycled French and Austrian oak barrels. Complex and elegant, these timepieces come in multiple band styles and watch faces, each one logoed with a grape leaf and stamped on the back with a mark of authenticity. Customization of gift box and watch face is available for a minimum order.



#### NEW Vortex Somm

**DESCRIPTION:** The Vortex Somm aerating wine dispenser allows wine to pass through a "rain filter," which aerates and releases the bouquet on its way into the decanting vessel beneath. Simply slide up the specially-designed, gravity-fed stainless steel valve, and a glass of wine is served within seconds. Made of durable Borosilicate glass, stainless steel or silicone, its capacity is 1 L. Logo customization is available on stainless steel with a 12-piece minimum order.



## VINEYARD > EQUIPMENT > ANIMAL, BIRD AND PEST CONTROL

### Agrothermal Systems

P2296

Napa, CA ☎ 707-307-3969 • [www.agrothermalsystems.com](http://www.agrothermalsystems.com)

#### Agrothermal XT

**DESCRIPTION:** Agrothermal invented and patented heat technology for pest management, plant health and environmental stewardship for our agriculture partners. The practice of "Thermaculture" has been perfected in vineyards nationally and globally as attested by PCAs, viticulturists, winemakers and business leaders. Expand your toolbox of viable IPM protocols, elongate resistance trend and achieve ROI in spades. Differentiate your vineyard and wines and increase customer awareness by promoting your use of alternatives to pesticides.



### Bird Gard LLC

P1615

Sisters, OR ☎ 541-549-0205 • [www.birdgard.com](http://www.birdgard.com)

#### NEW Super Pro AMP USB

**DESCRIPTION:** The new Bird Gard Super Pro AMP USB has been completely re-engineered for expanded fidelity and dynamic range to effectively repel the most difficult bird species. The most powerful bird repeller available, the new generation Super Pro AMP protects a 1,200 foot diameter area or about 25 acres. Bird Gard is the only bird control with an unconditional one-year complete satisfaction, money-back guarantee. If you are not completely satisfied, we will buy everything back.



### Clark Pest Control

B729

Lodi, CA • [www.clarkpest.com](http://www.clarkpest.com)

#### Pest Control

**DESCRIPTION:** Since 1950, Clark Pest Control has provided the finest pest control and turf and ornamental care. Originally founded by World War II veteran Charlie Clark, after the war, the company grew to become the thriving business it is today, with 23 locations that serve residents and businesses throughout California and Northwestern Nevada.



### Jackrabbit

P2189

Ripon, CA ☎ 209-599-6118 • [www.jackrabbit.bz](http://www.jackrabbit.bz)

#### CO-Jack Rodent Control System

**DESCRIPTION:** The CO-Jack Rodent Control System uses carbon monoxide to manage burrowing rodents. The unit can be towed behind a quad/rtv or pick-up. A small gasoline engine under load generates carbon monoxide-rich exhaust. Mineral oil is dripped into the exhaust to produce a bright white smoke. The white smoke enables the user to identify connected openings. An entire network can be treated with one probe; four networks can be treated at once.



### Western Exterminator Company

A130

Anaheim, CA ☎ 714-517-9000 • [www.westernexterminator.com](http://www.westernexterminator.com)

#### Pest Control Services/Pest Management

**DESCRIPTION:** For nearly a century, Western Exterminator Company has provided complete termite and pest control services you can trust. Whether it's for your home or business, call the experts at Western for nuisance pests, rodents, termites, bed bug or bird control solutions.



### Bedford Technology

P2286

Worthington, MN ☎ 507-372-5558 • [www.plasticboards.com](http://www.plasticboards.com)

#### SmarterFence

**DESCRIPTION:** Bedford Technology's SmarterFence is made from structural, recycled HDPE plastic lumber. This ranch rail fencing system comes in 2-, 3- or 4-rail configurations and features an installation gapping tool. The fencing system is offered in black, brown, chestnut and white and offers a 50-year limited warranty. The fence was created for vineyards, agricultural applications and animal containment, and was designed to withstand animal impact and extreme weather conditions.



## VINEYARD > EQUIPMENT > FROST PREVENTION DEVICES

### Altrac

B1026

Castro Valley, CA ☎ 510-248-4141 • [www.altrac.io](http://www.altrac.io)

#### Wind Machine Station

**DESCRIPTION:** The Altrac device enables you to control wind machines from your phone. View air temperature, battery voltage, engine RPM and fuel level from your home. Remotely adjust start and stop temperatures and shut down multiple machines with one click. Receive SMS text messages about engine or battery failure. Save fuel and minimize frost surveillance labor costs. There are no annual subscription fees; the price includes 10 years of cellular data.



### Clemens Equipment Inc.

L18

Woodland, CA ☎ 530-406-0577 • [www.clemens-america.com](http://www.clemens-america.com)

#### NEW AgroFrost

**DESCRIPTION:** AgroFrost Units provide frost protection by blowing hot air up to 70 yards around the unit. Different models are available, including stationary or towed units.

### Jackrabbit Frost Protection

P2189

Ripon, CA ☎ 209-599-6118 • [www.jackrabbit.bz](http://www.jackrabbit.bz)

#### Cold Air Drain

**DESCRIPTION:** Cold Air Drains are utilized for frost protection in low-lying areas where cold air accumulates. The machines expel the accumulated cold air up into the inversion layer where it mixes with warmer air and dissipates. The most popular model covers 6 to 9 acres, depending on topography. Power options include tractor pto, gasoline, propane and electric. We also offer microclimate mapping to determine placement of Cold Air Drains and utilization of passive measures.



### Pacific Distributing, Inc.

P2005

Woodlake, CA ☎ 559-564-3114 • [www.orchard-rite.com](http://www.orchard-rite.com)

#### Orchard-Rite® Wind Machines

**DESCRIPTION:** Orchard-Rite Wind Machines offer frost protection for mature vines and new stock by bringing warmer air from the inversion layer down to the fruit when the danger of frost threatens. Portable models are easily moved for spot protection, adjust for varying protection patterns and can be moved out of sight in the vineyard. Remotely monitor and control wind machines from anywhere in the world with ORCell, which connects machines via cellular network and the internet.



### Spectrum Technologies Inc. P1715

Aurora, IL ☎ 800-248-8873 • [www.specmeters.com](http://www.specmeters.com)

#### Color Frost Alert

**DESCRIPTION:** Protect your vineyard with the Color Frost Alert. An LED light changes color and flash frequency to indicate frost conditions, visible up to 2 miles away.



## VINEYARD > EQUIPMENT > GRAPE HARVEST

### TranPak Inc.

B907

Fresno, CA ☎ 559-435-0100 • [www.tranpak.com](http://www.tranpak.com)

#### Macro-24 Solid Bin

**DESCRIPTION:** Macro-24 Solid Bins are durable, lightweight and versatile plastic bins that are ideal for handling grapes in the vineyards. Smooth edges inside and out help maintain cleanliness and prevent damage to the grapes.



## VINEYARD > EQUIPMENT > HARVESTING EQUIPMENT

### Lazer Star Lights

O35

Paso Robles, CA ☎ 805-226-8200 • [www.lazerstarlights.com](http://www.lazerstarlights.com)

#### NEW HL-B2 Night Harvest Tower

**DESCRIPTION:** Lazer Star Lights new HL-B2 Night Harvest Tower offers up to 120,000 Lumen output, pulling 32.1 amps at 13.8 volts. The tower is designed to attach to Category 2 or 3 mounting pins on a standard 3-point hitch and plugs into your tractor's stock charging system. It stands at 8-foot 4-inches tall by 10-feet wide when fully expanded. It comes stock in a safety yellow, powder coat finish with detachable storage base and forklift pick-up points.



### Oxbo International Corp.

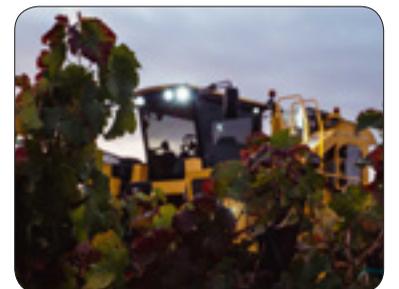
L11

Lynden, WA ☎ 360-354-1500 • [www.oxbocorp.com](http://www.oxbocorp.com)

#### NEW Oxbo 6030

**DESCRIPTION:** Oxbo announced the new Oxbo 6030. The front wheels of the Oxbo 6030 power unit can turn 95 degrees for maneuverability and is designed to handle difficult terrain. The 6030 can be configured with PremiumSort for straight-to-tank quality fruit and with different fruit conveyance options. The 6030 features technology, such as the YieldTracker, for mapping yield, and FleetCommand for managing performance.

Every Oxbo is backed by Oxbo's network to provide local parts and service.



# THE NEW 6030

## OXBO

Introduced at

Unified
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WiVi

## VINEYARD > EQUIPMENT > IRRIGATION

### Eno Scientific LLC

Hillsborough, NC ☎ 910-778-2660 • [www.enoscientific.com](http://www.enoscientific.com)

#### Well Sounder 2010 PRO

**DESCRIPTION:** The Well Sounder 2010 PRO is a portable, no-contact water level indicator. This sensor utilizes low-frequency sound waves to provide real-time water levels in irrigation wells. The system eliminates the need to lower dipper tapes or transducers into the well to get valuable level data. The sensor is battery-powered and handheld. It comes with a carrying case and is ready to go out of the box.



#### NEW Well Watch 700

**DESCRIPTION:** The Well Watch 700 is a sonic water level meter for monitoring groundwater levels in irrigation wells. This system provides real time levels without entering the well casing by utilizing low frequency sound waves. Each system includes a built-in data logger, pump control capabilities, flow meter inputs, and is compatible with any existing telemetry system for remote monitoring. Enable your irrigation system to use, manage and conserve your most valuable resource—water.



### McCrometer, Inc.

Hemet, CA ☎ 951-652-6811 • [www.mccrometer.com](http://www.mccrometer.com)

#### NEW FS200 Flow Straightener

**DESCRIPTION:** The FS200 flow straightener alleviates turbulence in pipelines caused by obstructions, like elbows and Ts, a common problem in flow measurement. Its patented design works for larger line sizes and prevents the need for large pipeline cut-outs for product entry during installation—an engineering feat that allows for complete sealing after installation. The FS200 virtually eliminates the downstream and upstream straight-pipe runs typically required in existing flow meter applications.



#### McPropeller

**DESCRIPTION:** McPropeller is McCrometer's original propeller meter, offering ±2 percent accuracy of reading guaranteed throughout full range and ±1 percent over reduced range, as calibrated in our NIST-traceable test facilities. It offers repeatability of 0.25 percent or better. The McPropeller offers the option for a mechanical register, digital register and telemetry unit as well. Manufactured with durable materials like high-impact plastic and stainless steel, the McPropeller maintains accuracy throughout the life of the meter.



### Wildeye

Fresno, CA ☎ 559-290-7915 • [www.mywildeye.com](http://www.mywildeye.com)

#### Wildeye Farm and Irrigation Monitoring

**DESCRIPTION:** With Wildeye, connectivity on the farm is easy, affordable, accurate and dependable. Attach to soil moisture sensors, flow meters, level monitors or temperature and weather monitors. Information from these devices is sent via reliable AT&T cellular signal to your phone, tablet or desktop. Track information on Wildeye's easy-to-read, easy-to-customize dashboard, and you'll know what's happening in your fields anytime, anywhere.



### WiseConn Engineering

Fresno, CA ☎ 559-326-7613 • [www.wiseconn.com](http://www.wiseconn.com)

#### NEW DropControl Mobile App

**DESCRIPTION:** The all new DropControl Mobile App now gives growers the ability to monitor and control their farm from the palm of their hands. The app will let growers schedule irrigations and control blocks while also displaying weather and soil moisture variables from the field in real-time. The app also sends notifications directly to growers about irrigations starting or stopping, various sensor alerts and all DropControl-related news. It is available for Apple and Android products.



B1002

### WiseConn Engineering

Fresno, CA ☎ 559-326-7613 • [www.wiseconn.com](http://www.wiseconn.com)

#### RF-X1 Monitoring and Control Node

**DESCRIPTION:** The RF-X1 node is the ultimate universal node for monitoring and control on the farm. Its various inputs and outputs allow for the node to start and stop pumps, open and close valves, read flow meters and pressure before or after the filter station, read weather stations, monitor soil moisture probes and more. The robust communication system of the node and network allows for fast real-time data reporting to the cloud.



P2257

## VINEYARD > EQUIPMENT > MACHINERY

### Canycom USA

Tukwila, WA ☎ 425-450-0381 • [www.canycomsales.com](http://www.canycomsales.com)

#### Canycom CMX2402

**DESCRIPTION:** Canycom CMX2402 Riding Brush Mower is designed for cutting tall grass, weeds and light brush. The mower has a low center of gravity and works great on slopes. The four-wheel hydrostatic drive with hand and foot control make it simple to operate. The GX690 Honda engine and shaft drive make this a very strong machine. It also includes a heavy-duty quick-change blade system with swing-away blades.



P2197

### Gearmore Inc.

Chino, CA ☎ 909-548-4848 • [www.gearmore.com](http://www.gearmore.com)

#### NEW 2 Row Venturi Air Sprayer

**DESCRIPTION:** The Gearmore 3-point hitch, 2 Row Venturi Air Sprayer covers two complete rows at one time, cutting spray time in half and reducing labor, fuel, wear and tear on your tractor/sprayer.



P1502

### KLIMA

Blenheim, Marlborough, New Zealand ☎ 642-150-2773 • [www.klima.co.nz](http://www.klima.co.nz)

#### Pruning Automation

**DESCRIPTION:** Klima is a tractor-mounted, automated cane pruning system. It's designed to reduce cane-pruning workforce by 50 percent while increasing quality. The Klima pruning system was developed 10 years ago and is now used extensively by leading vineyards all over the world.



B827

### MG Equipment Co. Inc.

Sonoma, CA ☎ 707-996-2605 • [www.mgeweb.com](http://www.mgeweb.com)

#### NEW Fischer Mulchgeräte

**DESCRIPTION:** Fischer Mulchgeräte produces a wide range of vineyard and orchard deck mowers that can be fitted with in-row cutting heads. The variable width mowers and tool carriers are also available with a wide range of attachments. New this year are the Twister in-row weed cutting heads. They are ideal for organic and sustainable vineyard practices.



B929

### Midwest Grower Supply Inc

Stanberry, MO ☎ 661-747-7905 • [www.vmech.com](http://www.vmech.com)

#### Vmech

**DESCRIPTION:** We supply mechanical pruning, brushing, suckering, leaf removal and shoot-thinning equipment. New for 2020: We've partnered with Clemens to offer leaf pulling attachments to our tool carrier.



B1000



UNIFIED WINE SYMPOSIUM

OUTDOOR VINEYARD EQUIPMENT

BOOTH #35

LAZER STAR  
NIGHT HARVEST LED TOWER\*

NOW OFFERED IN 2 VERSIONS

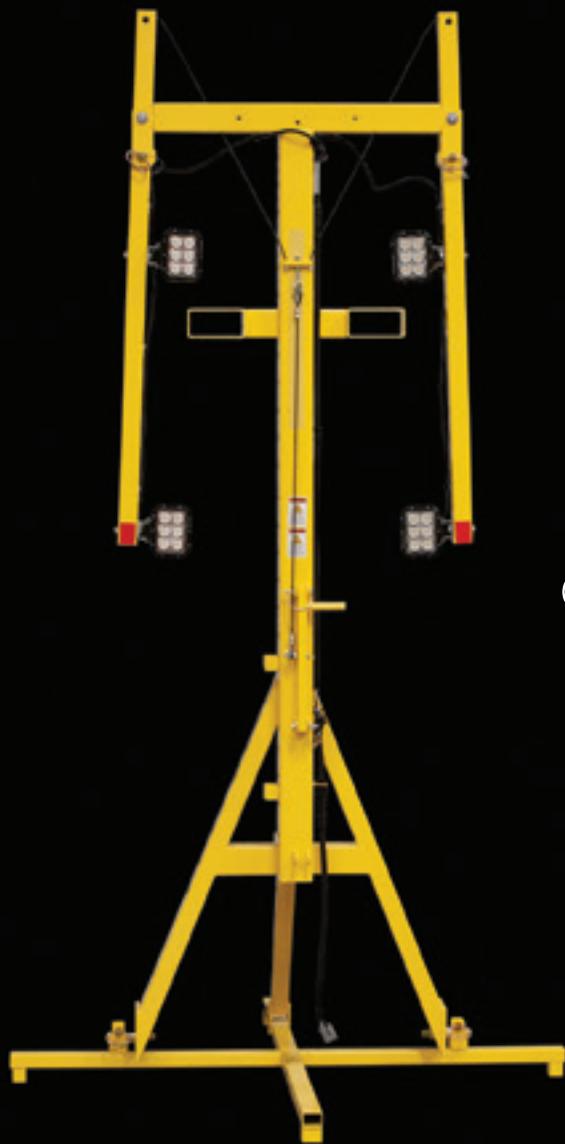
LED Technology  
up to 105,000  
Raw Lumens

Powered Directly  
Through the Stock  
Electrical System

Operate without Added  
Manpower/Tractor

Attaches to  
Cat. 2, 3 Point Hitch

Includes  
Detachable Base



HLB2 - FIXED

V.1 - ADJUSTABLE

MADE IN THE USA

\*Patent Pending

## VINEYARD > EQUIPMENT > MACHINERY

### Pellenc America Inc.

L13

Santa Rosa, CA ☎ 707-568-7286 • [www.pellenc.com](http://www.pellenc.com)

#### NEW Klima

**DESCRIPTION:** Pellenc is now carrying the Klima second-generation pruner designed for cane pruned vineyards. The heavy duty Klima removes canes from the trellis and mulches into sawdust-size material, which is left in the vineyard. The Klima can be used in vineyards already in production by adding retrofits onto the trellis. It is an important new tool for labor and cost saving in cane-pruned vineyards.



### Rinieri North America

P2281 & O5

Lehi, UT ☎ 801-400-8397 • [www.orchardandvineyard.com](http://www.orchardandvineyard.com)

#### Bio-Dynamic Cultivator

**DESCRIPTION:** The new Bio-Dynamic product line is designed for fast weeding in vineyards and orchards with a working speed up to 7 mph.



## VINEYARD > EQUIPMENT > SOIL TESTING & ANALYSIS

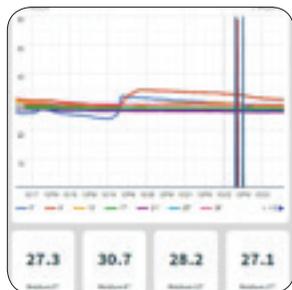
### Altrac

B1026

Castro Valley, CA ☎ 510-248-4141 • [www.altrac.io](http://www.altrac.io)

#### NEW Altrac Moisture Sensor

**DESCRIPTION:** The Altrac Moisture Sensor application enables you to leverage the solar panel, battery and telemetry signal from the wind machine to power a moisture/salinity probe. This provides a cost-effective way to monitor vineyard soil characteristics. Add a pressure sensor to see how drip irrigation activity affects moisture levels at different depths. There are no annual subscription fees. Altrac supports Sentek and Enviropro sensors.



## VINEYARD > EQUIPMENT > TOOLS

### Redback Boots USA

B634

Escondido, CA ☎ 760-746-9632 • [www.redbackboots.com](http://www.redbackboots.com)

#### NEW Bonsall 6-inch Slip On

**DESCRIPTION:** Redback's Original Claret Brown Slip On boot features full-grain supple leather and a long-wearing TPU outsole for the durable construction. Available in men's and women's sizes 2 through 16.



### Zenport Industries

B825

Sherwood, OR ☎ 503-524-7289 • [www.zenportindustries.com](http://www.zenportindustries.com)

#### NEW EP108 Cordless Pruner

**DESCRIPTION:** The Zenport Cordless ePruner EP108 small battery powered electric pruner features a 0.5-inch cut. A full battery charge will complete 4,000 continuous pruning cuts. This pruner is light, weighing in at 1.5 pounds per 0.6kg. The razor-sharp cutting blade is made of high-quality SK5 Japanese steel.



#### EP2 Battery-powered Pruner

**DESCRIPTION:** The Zenport EP2-778 Medium ePruner and SCA2 ePruner battery-powered electric pruners last 14 hours and make 17,000 1.25-inch cuts. They feature EZ connect Black 9-PIN connectors with a highly visible orange cord. Replacement parts, blades and service are available.



#### ZenTapener Tying Tool

**DESCRIPTION:** The Zenport Tapener ZL100 large vine tying tape tool is MAX HTB-2-compatible. Whether your task is in a nursery securing high-value standards or in a vineyard ensuring security for valuable vines and trees, Zenport tapener guns and accessories give plants that desirable uniform appearance. One tapener does the work of three people tying by hand.



## VINEYARD > EQUIPMENT > TRACTORS

### Belkorp Ag

L19

Modesto, CA ☎ 209-353-4572 • [www.belkorpag.com](http://www.belkorpag.com)

#### NEW 2020 5G Specialty Vineyard Tractor

**DESCRIPTION:** The John Deere 5G Specialty Vineyard Tractor line is built narrow for work in tight spaces, with an operating width as small as 42.8 inches. With engine power that ranges between 75 and 100 horsepower and an available four-wheel drive, you can choose a configuration that meets the demands of your operation.

#### 3D Series Compact Utility Tractor

**DESCRIPTION:** The John Deere 3D Series of compact utility tractors is designed with towing and hauling in mind. The small-frame tractors work well in tight spaces and have engine power, ranging between 25 and 43 horsepower. The standard 3-point rear hitch and front loader system provide attachment points for a wide variety of implements.

### Garton Tractor Inc.

L12

Santa Rosa, CA ☎ 707-586-1790 • [www.gartontractor.com](http://www.gartontractor.com)

#### NEW New Holland

**DESCRIPTION:** New Holland is an industry leader in narrow tractors and is still the only manufacturer to offer a self-propelled grape harvester that works alongside your tractors. With a large range in horsepower, overall width and cab or ROPS options, there is sure to be a T4F or T4V tractor to suit the needs of your vineyard or orchard.



**Zenport Industries**  
**Vineyard Tools**  
Pruning | Grafting | Tying | Harvest

**Battery Powered Pruning Shears**

- 1.25-inch and 1.5-inch cutting capacity models
- 15,000 pruning cuts per battery charge
- Includes lithium battery, harness, holster and carrying case

**Grafting Tools**

**Harvest Shears**

Tying Tools & Supplies  
[www.zenportindustries.com](http://www.zenportindustries.com) | 503-524-7289

# THE MOST INTELLIGENT MACHINE FOR YOUR VINEYARD.



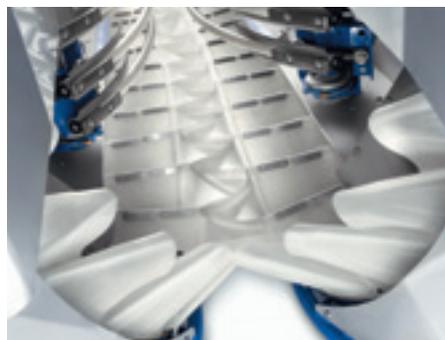
## MORE POWER, COMFORT, AND VERSATILITY WITH THE UNDISPUTABLE HARVEST QUALITY BRAUD PROVIDES.



Powered by FPT Industrial common rail electronic engines, BRAUD harvesters give you improved output and economy. With a choice of four or six cylinders, the engines deliver more power and torque with 35% fuel savings on average.



The BRAUD SDC system is recognized as the best picking system in the industry. Each shaking rod is independently hinged for perfect control of the shaking action, with maximum flexibility for gentle picking.



The proven NORIA system, with its poly-urethane baskets, ensures the most gentle treatment of the vines and harvested crop, without ground losses.



The BRAUD harvester cab is fully suspended and sound-proofed for a smoother, more comfortable ride. The pressurized cabs with heat and air-conditioning offer optimum comfort and protection during harvest, spraying and other operations.



Turlock, CA  
(209) 632-3931

Santa Rosa, CA  
(707) 586-1790

Fairfield, CA  
(707) 425-9545

Stockton, CA  
(209) 948-5401

Ukiah, CA  
(707) 468-5880

Quality People Quality Products® | [GartonTractor.com](http://GartonTractor.com) | 1-877-TRACTOR

## VINEYARD > EQUIPMENT > TRACTORS

### Garton Tractor, Inc.

L12

Santa Rosa, CA ☎ 707-586-1790 • [www.gartontractor.com](http://www.gartontractor.com)

#### NEW Kubota

**DESCRIPTION:** Kubota specialty tractors offer maneuverability for work in narrow locations and low-clearance or high-clearance applications. The tractor features Kubota M Series Narrow Power Crawler, which ensures greater traction and sure-footed climbing in vineyards and other hilly terrain.



### Lazer Star Lights

O35

Paso Robles, CA ☎ 805-226-8200 • [www.lazerstarlights.com](http://www.lazerstarlights.com)

#### NEW LXh 20/30 Watt LED Utility Light

**DESCRIPTION:** Lazer Star Lights introduces their newest product developed for utility and agriculture applications. It's offered in 20- and 30-watt LED technology and packaged in dual, 4- and 6-light housings. Lights range from 9,000 to 18,000 Lumen per light. It's designed in a rugged housing with 20, 40 or 60 degree beam options. Lights are IP67 watertight and come with a limited lifetime warranty.



## VINEYARD > EQUIPMENT > VINEYARD PUMPS

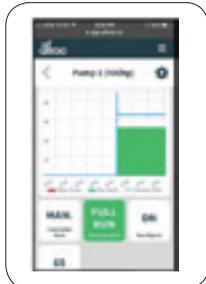
### Altrac

B1026

Castro Valley, CA ☎ 510-248-4141 • [www.altrac.io](http://www.altrac.io)

#### NEW Altrac Pump Station

**DESCRIPTION:** The Altrac device enables you to control pumps from your phone. Use the scheduling app to define watering periods and take advantage of utility time-of-use rates. Receive SMS text messages to confirm equipment is on or off. Combine the controller with a pressure sensor or flow meter to aggregate irrigation data. Two years of data are available for reporting. There are no annual subscription fees; pricing includes 10 years of cellular data.



## VINEYARD > EQUIPMENT > WEATHER MONITORING SYSTEMS

### Arable Labs

B903

San Francisco, CA ☎ 510-992-4095 • [www.arable.com](http://www.arable.com)

#### NEW Arable Mark 2

**DESCRIPTION:** The Arable Mark 2 is an all-in-one weather and plant health monitor that enables growers to track real-time vine performance through NDVI (Kc), PRI (photosynthetic light use efficiency), red edge chlorophyll index (leaf N content) and midday leaf water potential. The Mark 2 is solar-powered and transmits data to the cloud cellularly via LTE-M. Arable's web and mobile platform synthesizes climate, plant and soil data to produce actionable insights on natural resource management.



### Ranch Systems, Inc.

P2007

Novato, CA ☎ 877-399-2770 • [www.ranchsystems.com](http://www.ranchsystems.com)

#### NEW Ranch Systems WS-PRO Weather Station

**DESCRIPTION:** Ranch Systems introduces its Professional-Grade Weather Station (WS-PRO), a new style of station that delivers the connection consolidation of composite-style stations with the flexibility of individual sensors. Locating the individual sensors where they are most advantageous provides vineyard managers the flexibility they have been looking for. The WS-PRO package includes higher quality individual sensor options for the key elements of a weather station. These sensors provide a professional grade-solution for vineyard climate monitoring needs.



## VINEYARD > EQUIPMENT > OTHER EQUIPMENT

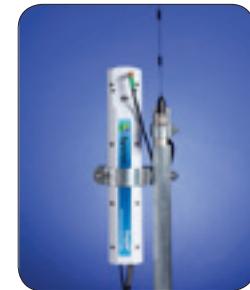
### Dynamax, Inc.

P2185

Houston, TX ☎ 281-564-5100 • [www.dynamax.com](http://www.dynamax.com)

#### SapIP Wireless Logger

**DESCRIPTION:** The SapIP wireless data logging system from Dynamax, Inc., complete with sap flow sensors, can be used to measure plant water use in real-time. The SapIP gateway can monitor up to 25 SapIP nodes with two sap flow sensors each. The nodes can be located up to 5,000 feet away from the gateway module. Data are collected and analyzed through the Dynamax website for easy monitoring and data download.



### G3 Enterprises

O60

Modesto, CA ☎ 800-321-8747 • [www.g3enterprises.com/transportation](http://www.g3enterprises.com/transportation)

#### G3 Enterprises

**DESCRIPTION:** G3 ag hauling operations offers boutique services tailored to meet the hauling needs of small- and mid-sized producers and vintners throughout California with specialized equipment and dedicated staff. Equipment includes half-ton and 2-ton bins for premium grapes, small trucks for hauling and compartmentalized tankers. 6-ton gondolas are available upon request.

### Garton Tractor Inc.

L12

Santa Rosa, CA ☎ 707-586-1790 • [www.gartontractor.com](http://www.gartontractor.com)

#### NEW Takeuchi

**DESCRIPTION:** Takeuchi excavators and track loaders are essential for tight-access vineyard development and maintenance. The TL6R features a radial lift loader design and meets all current emission standards.



### TracMap

P2108

Salinas, CA ☎ 831-287-4338 • [www.tracmap.com](http://www.tracmap.com)

#### TracMap Job Management

**DESCRIPTION:** TracMap solves three problems for spray operations by stopping errors by drivers, providing supervisors with a live view of what is happening and capturing what spray happened for audit and future planning. It does this by placing a screen in the cab linked to a cloud-based job management system.



### Vinomatos, LDA

B902

Seica, Ourem, Portugal ☎ +35 1249534999 • [www.vinomatos.com](http://www.vinomatos.com)

#### NEW Oliva Planting Machine

**DESCRIPTION:** The Oliva Planting Machine is a GPS-guided planting machine with sub-inch precision. Specifically designed for the vineyard, it performs alignment and planting at the same time, including the stake, the plant with localized irrigation, the central metal post, the drip line and the trellis metal wires. The machine can disperse liquid or solid fertilizer. It can also plant all types of fruit trees. Our services are now available in California.



## VINEYARD > SERVICES > CONSULTANTS - SERVICES

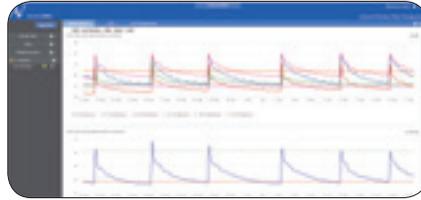
### Advanced Viticulture, Inc.

C1311

Windsor, CA ☎ 707-838-3805 • [www.advancedvit.com](http://www.advancedvit.com)

#### Advanced Viticulture Water Management Portal

**DESCRIPTION:** Advanced Viticulture has partnered with Naviz Analytics to develop AV's new data integration portal for water management. Assembling data streams for numerous sources and data types, information is easily available to add precision to vineyard water management. Soil and plant moisture status, visual assessments and observations are brought together in an intuitive manner. Drill down or look at broad history. Compare one year to another. This portal will improve your understanding.



### AL&L Crop Solutions, Inc.

P2014

Vacaville, CA ☎ 530-387-3270 • [www.allcropsolutions.com](http://www.allcropsolutions.com)

#### Grapevine Disease Testing

**DESCRIPTION:** AL&L Crop Solutions provides diagnosis and testing for grapevine diseases, using a wide array of technologies and offering comprehensive and accurate test results. Various viral and fungal panels are available and can be personalized for individual testing needs.



### Eco-Management Inc.

B626

Petaluma, CA ☎ 707-769-1213 • [www.eco-management.com](http://www.eco-management.com)

#### Eco-Management Consults

**DESCRIPTION:** Eco-Management consults with vineyard managers to manage natural areas and native plant communities surrounding their vineyards. Goals include erosion control, disease and pest reduction, and soil improvement.



### VinSense LLC

P2284

West Lafayette, IN ☎ 765-231-5343 • [www.vinsense.net](http://www.vinsense.net)

#### Vines

**DESCRIPTION:** VinSense is a decision support software system for agricultural crop production. This technology enables producers, field managers and winemakers to make better crop management decisions to improve production volume, uniformity and quality, and increase profitability and long-term sustainability.



## VINEYARD > SERVICES > VINEYARD MANAGEMENT

### Meras Water Solutions

P2227

Modesto, CA ☎ 209-900-4500 • [www.meras.com](http://www.meras.com)

#### Reservoir and Micro-irrigation Treatment

**DESCRIPTION:** Meras Water Solutions treats heavily bio-fouled reservoir and irrigation systems. Our multi-phase programs control algae, biological growth and mineral build-up in your reservoir and micro-irrigation systems. Our water treatment technology reduces emitter/micro sprinkler plugging and increases uniform delivery of water into your vineyard. We keep you in compliance with sustainable vineyard practices. Our maintenance programs provide routine water testing, distribution uniformity measurements and organically approved products.

### TerrAvion

B732

San Leandro, CA ☎ 925-399-8796 • [www.terravion.com](http://www.terravion.com)

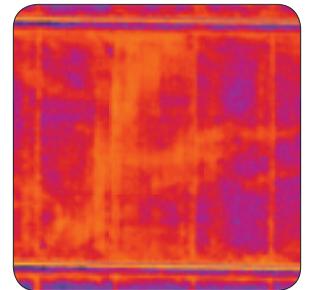
#### Overview

**DESCRIPTION:** TerrAvion helps vineyards take a high-tech approach with the largest cloud-based aerial imaging service for agriculture, enabling precision agronomy and sustainability. Every week in the 2020 growing season, TerrAvion will capture row-level imagery and deliver it overnight with their vineyard-focus subscriptions. Unlike satellite, TerrAvion data is detailed enough to do precision agronomy, and unlike drones, TerrAvion is cost-effective for a professional agronomy program. TerrAvion imagery can integrate with many software platforms.



#### NEW Subscription Aerial Imagery

**DESCRIPTION:** TerrAvion imagery data powers digital agronomy at scale. For 2020, TerrAvion has upgraded its aerial image subscription services with our highest resolution to date (less than 10 cm/px), offering new imagery layers and a straightforward flight schedule optimized for your vineyards to reliably deliver usable data whenever you need it. New for 2020 is a synthetic color and pansharpened thermal, the best-in-class water management solution available. Our open API is integrated with many agronomic platforms.



## VINEYARD > SUPPLIES > FERTILIZER AND CHEMICALS

### Enartis USA

P2044

Windsor, CA ☎ 707-838-6312 • [www.enartis.com/en-us/](http://www.enartis.com/en-us/)

#### BluVite

**DESCRIPTION:** BluVite, a vineyard fertilizer, is a proprietary blend of minerals and yeast hydrolysates. BluVite helps facilitate the biological mechanisms that reactivate the unique vineyard soil microbiome, stimulating root growth. With this, improvements in vine growth and grape maturity have been measured, including more uniform canopy growth and improved cluster development. It is then possible to sustainably stabilize the soil ecosystem and increase target growth parameters, as well as the quality and quantity of grapes produced.



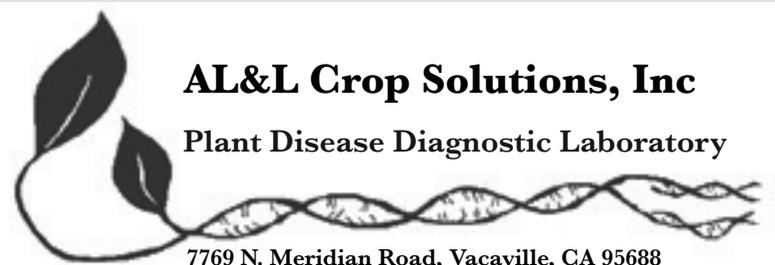
### Germiflor Lautier

P2265

Mazamet, France ☎ +33 563610659 • [www.germiflor.com](http://www.germiflor.com)

#### Germiflor Fertilizer

**DESCRIPTION:** Germiflor, a French family company since 1885, makes organic vegetal fertilizer with a vegan label and Omri certification.



**Providing Testing and Diagnosis for Grapevine Diseases**

Learn more at [www.allcropsolutions.com](http://www.allcropsolutions.com)

Email: [info@allcropsolutions.com](mailto:info@allcropsolutions.com)

Phone: (530) 387-3270, Fax: (707) 693-3050

## VINEYARD > SUPPLIES > FERTILIZER AND CHEMICALS

### Tessengerlo Kerley Inc.

P2253

Phoenix, AZ ☎ 800-525-2803 • [www.cropvitality.com](http://www.cropvitality.com)

#### KTS®, K-Row 23®, CaTs®, MagThio®

**DESCRIPTION:** The family of Crop Vitality sulphur-based liquid fertilizers, soil amendments and nitrogen stabilizers help your crop reach maximum potential while using fertilizers, water and other resources more efficiently.



**CASA CRISTAL**  
NURSERY

*Partnering with growers of table, wine, and raisin grapes since 1990.*

Our family has been growing grapes and making wine in California for three generations. We understand the importance of a dependable supply of healthy, true-to-type vines. Casa Cristal Nursery offers a wide selection of varieties including 2010 Protocols and an innovative array of customizable support services, but excellent relationships with growers are the heart of our business.

We stand by our vines and our growers, because we're not just growing grapes. *We're building lasting relationships.*

VISIT US AT  
BOOTH  
#P1946

**Unified**  
WINE & GRAPE  
SYMPOSIUM  
PRESENTED BY ASEV & CAWG

**WE ARE HERE TO HELP YOU GROW.**

**CASACRISTAL.COM | 661.792.6468**

### Westbridge Agricultural Products

C1208

Vista, CA ☎ 800-876-2767 • [www.westbridge.com](http://www.westbridge.com)

#### Botector®

**DESCRIPTION:** Botector is an organic biofungicide that works through competitive exclusion to prevent Botrytis in grapes. Beneficial microorganisms in Botector out-compete the pathogen for space and nutrients, creating a protective barrier between the plant and potential disease. Botector is approved for certified organic crop production.

#### Organic TRIGRR®

**DESCRIPTION:** Organic TRIGRR is a liquid auxiliary soil and plant substance containing natural plant extracts. The product works in synergy with Organic BioLink nutritional products to enhance nutrient and water uptake and improve crop quality, yield and overall plant vigor. It is approved for certified organic crop production.

#### SUPPRESS® Herbicide EC

**DESCRIPTION:** SUPPRESS Herbicide EC is a broad-spectrum contact herbicide for post-emergent, non-selective weed control for use in and around all agricultural food and non-food crops. The formulation is a non-volatile, emulsifiable concentrate that provides rapid weed control in a variety of weeds. SUPPRESS Herbicide EC is an effective tool for preventing weed resistance when rotated with conventional herbicides.

## VINEYARD > SUPPLIES > GRAPEVINES / ROOTSTOCK / NURSERIES

### Casa Cristal Nursery Inc.

P1946

Delano, CA ☎ 661-792-6468 • [www.casacristal.com](http://www.casacristal.com)

#### Grapevines

**DESCRIPTION:** Casa Cristal Nursery has been partnering with growers of wine and raisin grapes since 1990. We offer a wide selection of 2010 Protocol varieties available as potted and bare-root grapevines, which are sustainably cultivated within a rigorous quality control program and subjected to frequent virus testing. We also provide an array of customizable services, including soil mapping, planting and post-planting assistance.

### Duarte Nursery

P1842

Hughson, CA ☎ 1-800-GRAFTED • [www.duartenursery.com](http://www.duartenursery.com)

#### Grapevines

**DESCRIPTION:** Duarte Nursery provides custom-grafted, containerized vines in large format Ubervine (35 inches) and MagnumVines (24 inches) and the standard "Big Pot" vine (12 inches). As part of the vine program, Duarte Nursery offers customers the opportunity to examine and test mother blocks prior to grafting, as well as access to testing history. All commercial vine customers receive guidance from a field representative to assist with planting and after planting instructions and care.

#### Ubervines

**DESCRIPTION:** Duarte Nursery in Hughson, California provides custom-grafted, containerized vines in large format uber and magnum vines, as well as the standard "big pot" vine. Duarte Nursery offers customers the opportunity to examine and test mother blocks prior to grafting and open access to testing history. All commercial vine customers receive guidance from a Duarte Nursery field representative to assist with clone and rootstock selection, planting and after planting instructions and care.



### Guillaume Grapevine Nursery

C1212

Knights Landing, CA ☎ 530-735-6821 • [www.guillaumenurseries.com](http://www.guillaumenurseries.com)

#### Grafted Grapevines

**DESCRIPTION:** Guillaume Grapevine Nursery offers grafted grapevines, potted and dormant bare-rooted vines, as well as own-rooted vines and rootings for the wine industry, with a strong focus on quality and sanitary standards.



**MEMO**

**DATE:** October 21, 2019  
**TO:** Concerned Grape Growers  
**FROM:** Rick Burnes, President

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

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

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

Sincerely,

Rick Burnes  
President  
Sunridge Nurseries Inc.

Andrew Jones - Wine Grape Sales Manager - 805-234-4920 - andrew@sridge.net  
Julian Clymer - Northern California Vineyard Representative - 707-974-2642 - julian@sridge.net  
Sebastian Traviesa - Pacific NW, East Coast, Canada and Mexico Vineyard Representative - 707-975-3646 - sebastian@sridge.net  
Kevin Payne - San Joaquin Valley Vineyard Representative - 530-320-8223 - kevin@sridge.net



## VINEYARD > SUPPLIES > GRAPEVINES / ROOTSTOCK / NURSERIES

### Herrick Grapevines

A433

St. Helena, CA ☎ 707-967-8000 • [www.herrickgrapevines.com](http://www.herrickgrapevines.com)

#### Grapevines

**DESCRIPTION:** Herrick Grapevines offers custom-grafted grapevines, including ENTAV-certified, FPS-certified and Protocol 2010 vines. A list of dormant and green vines for 2020 is currently available.



### Martinez Orchards

A110

Winters, CA ☎ 707-696-9709 • [www.martinezorchards.com](http://www.martinezorchards.com)

#### Grapevine Nursery

**DESCRIPTION:** Martinez Orchards provides dormant grafted grapevines, dormant rootings and greenhouse-grown grapevines to the wine industry. All internal source material is Protocol 2010 certified and is virus tested on an annual basis. In addition, we offer custom propagation services, cold storage and new customer discounts with no minimum order quantities.



### Novavine

P2100

Santa Rosa, CA ☎ 707-539-5678 • [www.novavine.com](http://www.novavine.com)

#### Dormant Field-finished Bench Grafts

**DESCRIPTION:** Our dormant grapevines are one-year-old plants, grafted using Protocol 2010 material in our Sonoma County production facility and grown for a season in our Yolo County field nursery. Our Class 1 soils ensure healthy, well-developed root systems. The field nursery is mechanically planted and harvested, and drip-irrigated.



#### Green Potted Bench Graft

**DESCRIPTION:** These bench-grafted vines are planted in special Novavine tubettes using a custom potting medium that includes a mycorrhizal mix to ensure healthy robust plants with strong, well-developed roots. These green potted vines offer exceptional performance in the field.



#### Olive Trees

**DESCRIPTION:** Novavine grows more than 40 varieties of olive trees in multiple formats. We offer 7-inch, 2-gallon and 15-gallon pots, plus 24-inch boxes. We specialize in custom propagation but also try to keep some inventory on hand.

### Sunridge Nurseries Inc.

P2149

Bakersfield, CA ☎ 661-363-8463 • [www.sunridgenurseries.com](http://www.sunridgenurseries.com)

#### Protocol 2010 Plant Material

**DESCRIPTION:** Sunridge Nurseries offers a wide selection of Protocol 2010 plant material from our Cuyama Ranch. Established in 2012, the ranch now has over 240 acres of Protocol 2010 material, making it the largest certified increase block in the world. The isolated property is 12 miles from any other grapevine and is retested annually above and beyond CDFA standards to a 99 percent confidence ratio, ensuring the cleanest material possible.

### Wonderful Nurseries LLC

C1130

Wasco, CA ☎ 661-758-4777 • [www.wonderfulnurseries.com](http://www.wonderfulnurseries.com)

#### Wonderful Nurseries

**DESCRIPTION:** It's always growing season at Wonderful Nurseries, where we continue to expand our production, improve our service and maintain our reputation through industry leading innovations and a commitment to environmental sustainability. Wonderful Nurseries is dedicated to providing the cleanest possible products and best selection of certified grapevines to our grower partners.



*Plants You Can Trust*

ENTAV-INRA Licensee  
2010 Protocol Material Available  
Proprietary Selections  
Strict Material Testing Protocol  
Potted And Bare-Rooted Vines  
Rootings, Ownrooted And Grafted Vines  
Custom Grafting

[www.guillaumenurseries.com](http://www.guillaumenurseries.com)  
Knights Landing, CA  
Office: (530)-735-6821 – Sales: (530)-379-5007

## VINEYARD > SUPPLIES > NETTING

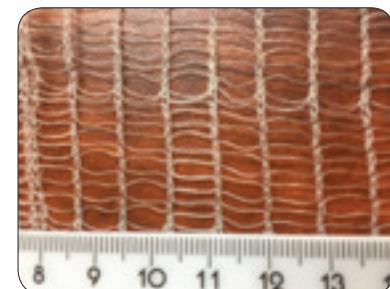
### Coverplas Nets

P2117

Melborne, Australia • [www.coverplas.com](http://www.coverplas.com)

#### NEW Crystaloch Netting

**DESCRIPTION:** Crystaloch translucent permanent side panel net is made from colorless yarns. Crystaloch lets more light through than conventional nets, providing protection against birds, smaller insects (e.g., yellow jackets) and wildlife with its 0.08-inch by 0.4-inch rectangle mesh. Reduced handling minimizes application and retrieval costs and eliminates storage. Crystaloch comes in widths up to 48 inches and lengths up to 1,650 feet, with a 10-year pro rata UV warranty included.



# Wonderful nurseries™

Visit Us at the  
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Booth #1520

## THE INDUSTRY STANDARD STARTS HERE

Wonderful Nurseries prides itself in the value of innovation and quality like few others. It's what drives us every day, from our two state-of-the-art testing labs enabling 100% scion testing for internal mother blocks, to our \$25 million advanced technology greenhouse facility with specialized growing systems. At the same time, we collaborate with universities, regulatory agencies and forward-thinking firms committed to the highest principles of research. Our extraordinary staff and processes make us the most trusted name in the industry, with every possible safeguard assuring you of "Growers First." Others may talk about meeting the highest standards, but at Wonderful Nurseries, we set them.

### ALWAYS RAISING THE BAR AT WONDERFUL NURSERIES



### SERVING YOUR VINE, ALMOND AND PISTACHIO TREE NEEDS



[WonderfulNurseries.com](https://www.wonderfulnurseries.com) 661.758.4777

P.O. Box 279, 27920 McCombs Ave., Wasco, California 93280

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## VINEYARD > SUPPLIES > NETTING

### Coverplas Nets

Melbourne, Australia • [www.coverplas.com](http://www.coverplas.com)

#### Duragard Net

**DESCRIPTION:** Duragard is a heavyweight side panel netting designed for permanent installation on the vines. Duragard provides good fruit quality by providing excellent resistance to hail, birds, larger insects (e.g., bees and wasps) and wildlife. Reinforced eyelets on both selvages provide strong anchoring points to the wires. Labor costs and application logistic hassles are greatly reduced, and storage is eliminated. A 10-year pro rata UV warranty provides a valuable return on investment.



#### Tuffgard Net

**DESCRIPTION:** Tuffgard over-row heavy drape netting is designed specifically to provide complete protection against sunburn, birds, fine insects (bugs, bees and wasps) and hail damage. It reduces insect damage to vines. Solid reinforced selvages provide strong anchoring to fasten nets under the canopy. The 1/5-inch mesh provides durability, prevents unravelling and provides high tear resistance. Nets are available up to 16.5 feet in width and up to 990 feet in length, with a 10-year pro rata UV warranty included.



### Orchard & Vineyard Supply

Yakima, WA ☎ 509-453-9983 • [www.ovs.com](http://www.ovs.com)

#### Vineyard Bee Netting

**DESCRIPTION:** Orchard & Vineyard Supply bee netting is made specifically to protect winegrapes from damage by bees and wasps. Bee netting also provides shading to keep fruit cool while diffusing sunlight. Standard width is 17 feet, but the bee netting can be made in custom widths for large orders. It is UV-stabilized for durability and reusability.



#### Vineyard Shade Cloth

**DESCRIPTION:** Orchard & Vineyard Supply vineyard shade cloth protects winegrapes from excess solar radiation to optimize both crop yield and quality. The shade cloth is available in a range of colors and widths, and is UV-stabilized for durability. The product is available at our Lodi and Paso Robles, California locations and can be shipped anywhere in the U.S.



## VINEYARD > SUPPLIES > TRELLIS SUPPLIES

### Bedford Technology

Worthington, MN ☎ 507-372-5558 • [www.plasticboards.com](http://www.plasticboards.com)

#### HDPE Trellising

**DESCRIPTION:** Bedford Technology's HDPE trellis stakes are made from structural recycled plastic lumber. Reinforced with fiberglass strand, the stakes are designed to hold up even under immense weight and wind. The stakes will not rot or deteriorate, and come in a wide variety of colors and widths to match your current trellis configuration.



#### HDPE Vineyard Stakes and Posts

**DESCRIPTION:** Bedford Technology's HDPE vineyard posts and stakes are made from recycled plastic. These posts do not rot or deteriorate and can stand up in strong winds and extreme weather. They are offered in a wide variety of colors and come in sizes from 1 3/8-inch to 6-inch rounds and are also offered in a stadium post.



P2117

P2229

P2286

### Gripple Inc.

Aurora, IL ☎ 866-474-7753 • [www.gripple.com/us](http://www.gripple.com/us)

#### NEW GP90 Joiner

**DESCRIPTION:** Gripple's new GP90 joins vineyard and orchard wires in a perpendicular join to a boundary, a cable or bar in under one minute. It eliminates tying and knotting of T-joins and other complex joining method, making it fast and easy to create overhead structures for cloth/net support, crop/down wires or fruit canopies. The GP90 is strong, with a 1,320-lb. line-load in case of wind lift or heavy crop weight.



P2103

### L.E. Cooke Supply Co.

Visalia, CA ☎ 559-732-9146 • [www.lecooke.com](http://www.lecooke.com)

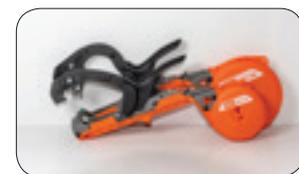
#### Brown Vineyard Tie Tape

**DESCRIPTION:** The Miracle Garden Tie produced by L.E. Cooke is known for its elasticity and strength. At the request of vineyard owners, this 8-mile Brown tape has been created.



#### MAX Tapener HT-RS

**DESCRIPTION:** An addition to the MAX Tapener product line is the new, smaller, slimmer HT-RS Tapener designed for use in tight quarters for tying vines and nursery stock.



B927

### Orchard & Vineyard Supply

Yakima, WA ☎ 509-453-9983 • [www.ovs.com](http://www.ovs.com)

#### Trellis Components

**DESCRIPTION:** Orchard & Vineyard Supply offers a full range of winegrape trellis components, including end posts, anchors, line posts, training stakes, wires and clips. We manufacture cross-arms to fit your exact vine training and canopy management needs. Vineyard stakes come in a range of roll form profiles and can be notched in any configuration. Available at all our Washington, Oregon, California and New York locations, and for delivery nationwide.



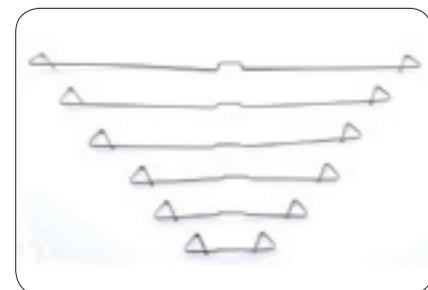
P2229

### PA Trellising Systems

Charlottesville, VA ☎ 434-227-7013 • [www.patrellising.com](http://www.patrellising.com)

#### NEW Cross-arms

**DESCRIPTION:** PA Trellising Systems' newest cross-arm can be installed through a wrap-around technique that fits securely in our outside hooks. Quick installation and less material lead to reduced costs without sacrificing the ability to mechanize. This arm is designed for single wire positioning. For multiple options, see our standard click lock x-arm



C1441

### Vineyard Industry Products

Healdsburg, CA ☎ 707-837-5410 • [www.vinbiz.com](http://www.vinbiz.com)

#### Trellising Supplies

**DESCRIPTION:** Vineyard Industry Products is a family-owned and -operated company celebrating its 40-year anniversary this year. Currently with three stores in California, Windsor, Paso Robles and Los Alamos, with nationwide distribution, Vineyard Industry Products carries a complete line of vineyard trellising systems and supplies.



B901

## GENERAL > ASSOCIATIONS

### ADEPTA

P2144

Paris, France ☎ +33 144180890 • [www.adepta.com](http://www.adepta.com)

#### ADEPTA

**DESCRIPTION:** Through its 242 members, ADEPTA is an association in which the French experts of the agro-industry meet and join to gain creativity and efficiency. The technical solutions proposed by our members cover all the needs of the major agri-food chains, from upstream to downstream (inputs, processes and equipment).



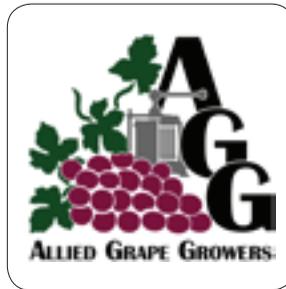
### Allied Grape Growers

P1532

Fresno, CA ☎ 559-276-7021 • [www.alliedgrapegrowers.org](http://www.alliedgrapegrowers.org)

#### Grower Grape Marketing Services

**DESCRIPTION:** AGG is the leader in understanding supply-side 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 properly plan for their growing supply needs. AGG provides year-round services to our growers with regard to viticultural expertise, market updates and more. We maintain year-round communication and relationships with our buyers and work to help them adjust to their ever-changing supply needs.



### Lodi Winegrape Commission C1341

Lodi, CA ☎ 209-367-4727 • [www.lodiwine.com](http://www.lodiwine.com)

#### Winegrapes

**DESCRIPTION:** The Lodi Winegrape Commission represents over 700 growers farm over 100 varieties of winegrapes. From Albariño to Zinfandel, the Lodi region ships grapes and wine all over California, the United States and the world.



### Vineyard Team

P2000

Atascadero, CA ☎ 805-466-2288 • [www.vineyardteam.org](http://www.vineyardteam.org)

#### SIP Certified

**DESCRIPTION:** Arising from growers' interest to educate and guide themselves toward sustainable winegrowing practices, Vineyard Team has become an internationally recognized leader in the sustainability movement since 1994. Sustainability in Practice (SIP) Certified, a project of Vineyard Team, is one of the wine industry's oldest and most important third-party programs. It utilizes a block-to-bottle, integrated approach to management, enabling farmers, wineries and winemakers to preserve the environment and protect human resources.



## GENERAL > EDUCATION

### California Polytechnic State University SLO

P1747

San Luis Obispo, CA ☎ 805-756-7308 • [www.wvit.calpoly.edu](http://www.wvit.calpoly.edu)

#### Cal Poly Wine & Viticulture Department

**DESCRIPTION:** Cal Poly's Wine and Viticulture Department offers a unique major with a three-pronged curriculum, combining viticulture, enology and wine business. The vineyard and pilot winery give students hands-on experience that the industry has come to expect from our graduates, who are ready to make a difference from day one. The university is currently building the Justin and J. Lohr Center for Wine and Viticulture, which includes a state-of-the-art, 5,000-case bonded winery and a 12,000-square-foot grange hall.



### Department of Viticulture and Enology, University of California, Davis

P1714

Davis, CA ☎ 530-752-0380 • [wineserver.ucdavis.edu](http://wineserver.ucdavis.edu)

#### UC Davis Department of Viticulture and Enology

**DESCRIPTION:** In the Department of Viticulture and Enology at UC Davis, we are 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 16 faculty members dedicated to performing research related to grapes and wine, and we provide both on- and off-campus educational programs to inform industry professionals of relevant research results.



### Fresno State Viticulture & Enology

A534

Fresno, CA ☎ 559-278-2089 • [www.fresnostate.edu/jcast/ve](http://www.fresnostate.edu/jcast/ve)

#### Education and Research

**DESCRIPTION:** Fresno State's viticulture and enology program serves the grape and wine industry, training future leaders through hands-on education and research, conducting solution-driven research and disseminating information. The department offers a B.S. degree in viticulture or enology and an M.S. degree in viticulture and enology. Students enhance their education by working for faculty researchers through the research center (VERC). Graduates can be found in leading positions around the world.



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behind the Artistry

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OF WINEMAKING  
KNOWLEDGE**

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UCDAVIS  
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Visit booth  
**P1714**

[cpe.ucdavis.edu/winemakingcert](http://cpe.ucdavis.edu/winemakingcert)

## GENERAL > EDUCATION

### Wine Business Institute at Sonoma State University & VESTA

A123

Rohnert Park, CA ☎ 707-664-3347 • [www.sonoma.edu/winebiz](http://www.sonoma.edu/winebiz)

#### Wine Business Institute at Sonoma State

**DESCRIPTION:** The WBI, located in Sonoma County, California, is the global leader in wine business research and education. Our programs include certificates and master's degrees in the U.S. focused on the business of wine. Currently offering: online certificate in wine business management, online certificate in wine industry finance and accounting, wine business finance workshops, online program in wine sales management and professional sales certificate courses.



## GENERAL > FACILITIES & CONSTRUCTION > ARCHITECTS

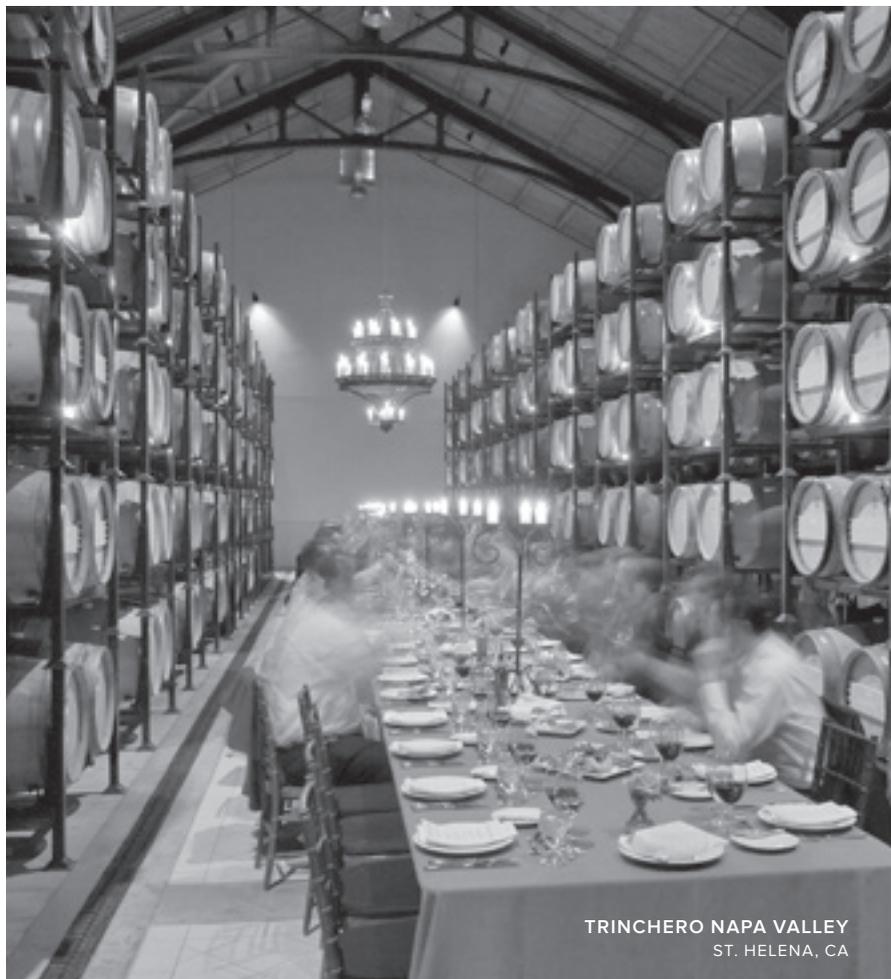
### BAR Architects

A427

San Francisco, CA ☎ 415-293-5700 • [www.bararch.com](http://www.bararch.com)

#### Architecture, Interior Design and Planning

**DESCRIPTION:** BAR Architects is an 85-person architectural, interior design and planning firm known for a diverse array of award-winning wineries, estate homes and hospitality projects throughout the U.S. and internationally. We have designed more than 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.



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ST. HELENA, CA

**BAR** architects  
415 293 5700 | [bararch.com](http://bararch.com)

WINERIES | CLUBHOUSES | RESORTS | CUSTOM HOMES

### Taylor Lombardo Architects LLP

P2033

San Francisco, CA ☎ 415-433-7777 • [www.taylorlombardo.com](http://www.taylorlombardo.com)

#### Winery Architecture

**DESCRIPTION:** Taylor Lombardo Architects is an award-winning architecture and land planning firm that specializes in custom homes and wineries of all sizes and styles, tailored specifically to the needs of each client. The design approach is to create site-sensitive and environmentally responsible structures that are timeless, innovative and enduring. Careful attention to scale, proportion, detailing and material selection assures the design will be true to the desired style.



## GENERAL > FACILITIES & CONSTRUCTION > CAVES

### Condor Earth

A134

Sonora, CA ☎ 209-532-0361 • [www.condorearth.com](http://www.condorearth.com)

#### Wine Cave Design Consultant

**DESCRIPTION:** Condor is the leading designer of wine caves in California, providing conceptual feasibility, geology/geotechnical investigations, engineering design, construction inspection and construction management services, from concept to finished construction. Condor helps owners find the best ground for their cave and integrate the cave with their winemaking facilities, overseeing the entire process.



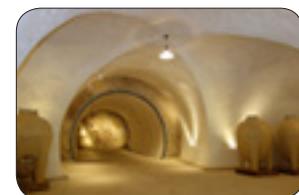
### Magorian Mine Services

A210

Auburn, CA ☎ 530-269-1960 • [www.magmineserv.com](http://www.magmineserv.com)

#### Wine Caves

**DESCRIPTION:** Magorian Mine Services builds distinctive caves for discerning clients. We perform initial site assessments, as well as draw and build unique project-specific cave plans—all in an effort to enhance site-effectiveness and bring owners' visions to reality.



## GENERAL > FACILITIES & CONSTRUCTION > CONTRACTORS

### Cello & Maudru Construction

P2225

Napa, CA • [www.cello-maudru.com](http://www.cello-maudru.com)

#### Construction Services/ General Contracting

**DESCRIPTION:** Cello & Maudru Construction has more than three decades of experience planning, building and maintaining wineries in California.



### Nordby Construction

A423

Santa Rosa, CA ☎ 707-526-4500 • [www.nordby.net](http://www.nordby.net)

#### Construction Services

**DESCRIPTION:** Nordby Construction Company is a general contractor that specializes in winery and wine cave construction. Services are encouraged to begin at the conceptual phase, emphasizing the importance of early budgeting to effectively set a baseline for winery project decision-making. Additionally, Nordby provides comprehensive pre-construction and construction services to ensure the intended project requirements for scope, budget and schedule are met throughout the course of the project, as well as post-occupancy.



## Sierra View General Contractor

P2193

Granite Bay, CA ☎ 916-774-7000 • [sierraview.com](http://sierraview.com)

### General Construction

**DESCRIPTION:** Sierra View has experience with pre-construction and can help provide different cost and design options during the project's design development. Whether you select Sierra View to assist in your design process or carry it through the end of the build, you can have confidence that Sierra View will work with you to make your idea into a reality.



## Sonnikson and Stordahl Construction

P1847

Martinez, CA ☎ 925-229-4028 • [www.sonstor.com](http://www.sonstor.com)

### Mechanical Process Piping, Civil Contractors

**DESCRIPTION:** Sonnikson and Stordahl Construction brings mechanical process piping, structural steel, fabrication and civil work to the wine industry.



## GENERAL > FACILITIES & CONSTRUCTION > ELECTRICAL

## Arthur Engineering, Inc.

C1319

Elk Grove, CA ☎ 916-394-0864 • [www.arthurengineering.com](http://www.arthurengineering.com)

### Electrical Consulting Services

**DESCRIPTION:** Arthur Engineering, Inc. offers electrical consulting and design engineering services to the wine industry. Services include: main utility service design, standby generation design, power distribution design, energy-efficient lighting and lighting controls design, and custom control systems design for crushing/pressing, filtering, bottling, wastewater treatment and other processes. Panels and devices are designed to safely hold up in tough winery environments.



## F Walther Electric Inc.

B633

Somerset, NJ • [www.waltherelectric.com](http://www.waltherelectric.com)

### Pin & Sleeve Connectors

**DESCRIPTION:** Walther Electric is a corporation manufacturer of IEC 60309 (pin & sleeve) plugs and receptacles, mechanical interlocks and safety devices, heavy-duty rectangular connectors, UL-listed standard "off the shelf" and custom portable power distribution systems, and UL power cable assemblies and harnesses. Walther provides product solutions to multiple market segments and industries, including broadcasting, entertainment events, OEMs, food and beverage, and marine and ship building.



## GENERAL > FACILITIES & CONSTRUCTION > ENGINEERS

## Arthur Engineering Inc.

C1319

Elk Grove, CA ☎ 916-394-0864 • [www.arthurengineering.com](http://www.arthurengineering.com)

### Alternate Electrical Power Sources

**DESCRIPTION:** Arthur Engineering, Inc. offers electrical consulting and design engineering services to the wine industry. With today's electrical utility fire safety shutdown concerns comes the need to consider alternate sources of power for critical operations. Unfortunately, these shutdowns can very likely be required during the heart of crush season. Arthur Engineering, Inc. can assist with evaluation of your electrical system and provide recommendations and design for suitable back-up power sources for your facility.



## Barnum Mechanical Inc.

B828

Rocklin, CA ☎ 916-652-7223 • [www.barnummech.com](http://www.barnummech.com)

### Design and Build

**DESCRIPTION:** Barnum Mechanical offers design, engineering, fabrication, installation and MRO support to the food and beverage industry. We have extensive experience in beverage (beer, wine, distilled spirits, soda and bottled water). We work with many of the top equipment manufacturers and represent some of the most well-known companies in the sanitary process industries.



## Eichleay, Inc.

C1426

Concord, CA ☎ 925-689-7000 • [www.eichleay.com](http://www.eichleay.com)

### Engineering, Design, Procurement, Construction Management

**DESCRIPTION:** Eichleay specializes in the development of small to large winery projects. Services include engineering, master planning, facility layout, winery process design (receiving through bottle ready), 3D design and estimating/scheduling. Our expertise in the art and science of winemaking extends to several distinct processing areas, including receiving, destemming, conveyance, press, fermentation, SO<sub>2</sub> injection, heating and cooling systems and emission controls. We also provide utility support for electrical, air, nitrogen, water and pomace discharge systems.



## Haskell

B937

Jacksonville, FL ☎ 904-791-4500 • [www.haskell.com](http://www.haskell.com)

### Architecture, Engineering and Construction

**DESCRIPTION:** Haskell is an architecture, engineering and construction firm with the capabilities of a global corporation but the flexibility of a local resource. We have served the wine industry for more than 20 years with experts dedicated to process and packaging engineering, as well as facility design and construction. Our specific areas of focus are master planning, processing/packaging additions and improvements, and facility expansions.



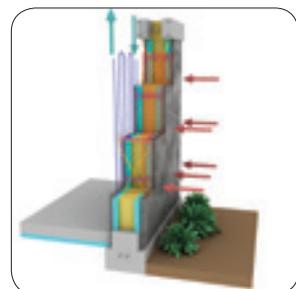
## Integrated Structures, Inc.

P1645

Berkeley, CA ☎ 510-665-9633 • [www.integratedstructures.com](http://www.integratedstructures.com)

### Energy Mass Wall System

**DESCRIPTION:** The Energy Mass wall system is a site-built, engineered sandwich panel that consists of a super-insulated core wrapped in durable concrete thermal mass. The result is a fire-resistant, structurally robust wall with integrated radiant cooling tubing. Cellar temperature and humidity are precisely maintained, reducing evaporative losses from the barrel to less than 2 percent.



## Lescure Engineers Inc.

A507

Santa Rosa, CA ☎ 707-575-3427 • [www.lescure-engineers.com](http://www.lescure-engineers.com)

### Civil Engineering and Land Surveying Services

**DESCRIPTION:** Since 1979, LE has provided professional civil engineering and land surveying services to the North Bay wine industry, including use permit processing, potable and fire suppression water systems, reservoir development plans, process and domestic wastewater treatment systems, vineyard development, erosion and sedimentation control plans, and facilities development plans, such as parking, circulation and ADA compliance.



GENERAL > FACILITIES & CONSTRUCTION > ENGINEERS

## MKM & Associates

C1406

Rohnert Park, CA ☎ 707-578-8185 • [www.mkmassociates.com](http://www.mkmassociates.com)

### Structural Engineering

**DESCRIPTION:** MKM & Associates provides structural engineering for all your construction projects.



## Summit Engineering Inc.

C1137

Santa Rosa, CA ☎ 707-527-0775 • [www.summit-sr.com](http://www.summit-sr.com)

### Engineering and Planning Services

**DESCRIPTION:** Summit Engineering offers civil, structural, electrical and water/wastewater engineering services. We also provide planning and permitting services to our clients. Through collaboration with our talented professionals, we can support winery projects through the full life cycle and scope of the project with a holistic approach, from planning to construction, from hospitality to production.



## ZFA Structural Engineers

C1117

Santa Rosa, CA ☎ 707-526-0992 • [www.zfa.com](http://www.zfa.com)

### ZFA Structural Engineers

**DESCRIPTION:** For more than 40 years, ZFA Structural Engineers has collaborated with winery owners who seek innovative, practical design solutions for their new facilities, expansions and remodels. Our firm's origins are rooted in the wine industry; our résumé includes hundreds of successful and award-winning projects, from boutique tasting rooms, such as the Law Estates Wines in Paso Robles, to the rehabilitation and retrofit of the historic Trefethen Winery in Napa.



GENERAL > FACILITIES & CONSTRUCTION > FLOORING

## ABT, Inc. PolyDrain-TrenchFormer

A125

Troutman, NC • [www.abtdrains.com](http://www.abtdrains.com)

### Trench Drains, NC

**DESCRIPTION:** ABT, Inc. PolyDrain-TrenchFormer offers a variety of trench drain systems to handle all applications, both interior and exterior (pedestrian to forklift-rated). This year, ABT is introducing the MTX all stainless steel trench drain series for those applications that need to meet the highest sanitary requirements. ABT's products are offered through distributor partners throughout North America.



GENERAL > FACILITIES & CONSTRUCTION > HVAC / REFRIGERATION

## Trane

C1416

Rocklin, CA ☎ 916-577-1100 • [www.trane.com](http://www.trane.com)

### HVAC/Refrigeration

**DESCRIPTION:** Trane offers a wide variety of HVAC products to help customers achieve HVAC/refrigeration success at their wineries. Trane offers the CGAM air-cooled chiller, which has the capability of providing chilled water down to as low as 28° F. The CGAM chiller can offer flexible options for whatever chilled water needs your winery requires.



GENERAL > FACILITIES & CONSTRUCTION > WASTE DISPOSAL / WASTEWATER TREATMENT

## Aries Tech/Elutriate Systems

C1141

Arroyo Grande, CA ☎ 805-474-9390 • [www.elutriatesystems.com](http://www.elutriatesystems.com)

### Bioreactors

**DESCRIPTION:** Elutriate Systems and Aries Tek LLC announced their merger, combining the wastewater treatment talents of both companies. Elutriate has served the wine and brewery industry for over 20 years with its bioreactor systems. With many successful system installations in the industry, Elutriate has high strength waste solutions for both large and small customers. Their KISS systems are known for low CAPEX, as well as simple and low OPEX.



## CLEANING SOLUTIONS FOR WINERIES UNDER ONE ROOF.

Find solutions you can trust at your Kärcher Store.

Our team understands the needs of vintners, and the role sanitation and disinfection have in the success of your business and the quality of your product. You need cleaning equipment you can trust, and O'Connell Jetting Systems' Kärcher Store is where you can turn. We stock a complete line of pressure washers, floor sweepers and scrubbers, and accessories to make cleaning easier and more efficient.

**Kärcher Store**  
**O'Connell Jetting Systems**  
 3190 Park Road, Benicia, CA 94510  
 (707) 747-4848



## BioFiltro

P2210

Davis, CA ☎ 530-564-4260 • [www.biofiltro.com](http://www.biofiltro.com)

### BIDA System

**DESCRIPTION:** BioFiltro offers a worm-powered wastewater solution that removes up to 99 percent of contaminants within a four-hour process. The system not only generates water that is apt for reuse in drip line irrigation but also worm castings, which are a beneficial soil amendment. Our systems offer an efficient and effective solution that complements your winery's circular economy approach to waste, upcycling and sustainability.



## EP Aeration

B722

San Luis Obispo, CA ☎ 805-541-6140 • [www.epaeration.com](http://www.epaeration.com)

### ADS Fine Bubble Aeration for Winery Wastewater Treatment

**DESCRIPTION:** EP Aeration is the California representative for Air Diffusion Systems' (ADS) fine-bubble aeration system for winery wastewater treatment. ADS systems are three to five times more energy-efficient than surface aerators, which qualifies for significant incentives and rebates from your energy purveyor. ADS systems are also guaranteed to be odorless and meet your discharge requirements. There are no electric or moving parts in the water, making maintenance simple and safe.



## Fluid Resource Management

B835

Arroyo Grande, CA • [www.frm-ops.com](http://www.frm-ops.com)

### Winery Wastewater Services

**DESCRIPTION:** FRM specializes in water, wastewater, winery and stormwater system operation, maintenance and management. Our highly specialized and licensed staff provide operations, maintenance, mechanical, controls, compliance and design/build services. FRM has been installing, operating and maintaining winery wastewater treatment systems for over two decades and has become a trusted resource for winemakers, design engineers and process waste equipment suppliers.



## JBI Water & Wastewater Equipment Inc. P2008

Sacramento, CA ☎ 916-531-5500 • [www.jbiwater.com](http://www.jbiwater.com)

### Wastewater Compliance Equipment

**DESCRIPTION:** JBI Water and Wastewater Equipment provides wastewater treatment to meet water quality permit requirements. From a single piece to a full-package solution, we have the equipment to keep your water quality within permitted values.



## O'Connell Jetting Systems

C1207

Benicia, CA ☎ 800-320-4848 • [www.oconnelljettingsystems.com](http://www.oconnelljettingsystems.com)

### All Water Cleaning Systems

**DESCRIPTION:** O'Connell Jetting Systems offers professional pressure washers, all pressure washer parts, accessories and detergents, as well as service of all brands. The company sells Karcher floor care products, Cuda parts washers and parts, and the Water Maze water recovery and recycling systems.

## GENERAL > FINANCE, LEGAL & ADMIN. SVCS. > ACCOUNTING SERVICES

## Payroll Masters

P2013

Napa, CA ☎ 800-963-1428 • [www.payrollmasters.com](http://www.payrollmasters.com)

### E-Comp Pay-As-You-Go Workers' Compensation

**DESCRIPTION:** Payroll Masters partners with E-COMP Insurance to provide lower workers' compensation premiums, featuring no deposit and no down payment. Just "Pay-As-You-Go." Rates are accurately calculated each month, eliminating huge annual payments due up-front, which is great for cash flow. Payroll Masters does your payroll and automatically sends your data to E-Comp every payday. Multiple carriers, expertise and exceptional service are all in one place.



### TimeWorksTouch

**DESCRIPTION:** With TimeWorksTouch, all your timekeeping data are collected into a single, cloud-based online account, making it easy to access, edit, approve and export. TimeWorksTouch has an intelligent, interactive touch-screen clock with fingerprint and prox reader support. The clock is WiFi-enabled, with battery back-up and an off-line mode. TimeWorksTouch accurately tracks meals and breaks, and easily calculates job or department costs.



### Winery and Agriculture Services

**DESCRIPTION:** Payroll Masters offers agricultural payroll solutions, farm labor contractor pay stub reports, non-productive and recovery time reporting. We know agricultural overtime rules, and our systems can import AgCode data and do piece-work calculations. We have multiple bilingual payroll specialists. We can do 943 tax returns and take full responsibility to calculate, collect and deposit your payroll taxes accurately and on-time, guaranteed.

## GENERAL > FINANCE, LEGAL & ADMIN. SVCS. > BUSINESS CONSULTANTS

## Azmera

B913

Napa, CA ☎ 833-829-6372 • [www.azmeraconsulting.com](http://www.azmeraconsulting.com)

### NEW Management Consulting for Wine and Agriculture

**DESCRIPTION:** Azmera offers a set of lean and continuous improvement tools focused on the identification and reduction of waste for the wine and agribusiness industries; anything that doesn't add value to your customer is either eliminated or reduced. Azmera embeds these tools into the company culture, making them self-sustaining.



## The Cavanagh Group

B1035

Napa, CA ☎ 707-681-5116 • [www.thecavanaghgroup.com](http://www.thecavanaghgroup.com)

### Lean Process Improvement Consulting and Training

**DESCRIPTION:** Lean Six Sigma team performance and organizational development offers consulting, coaching, training and project execution grounded on the world-class principles of operational excellence. We offer a fact-based, data-driven philosophy of business improvement, with a focus on gaining support and acceptance for the solutions by including and engaging the people that do the work.

## California Payroll

A127

Brentwood, CA ☎ 925-240-2400 • [www.californiapayroll.com](http://www.californiapayroll.com)

### NEW Time and Attendance and GPS Tracking

**DESCRIPTION:** California Payroll's mobile Timekeeping app now offers advanced geofencing capabilities for employees to clock in and out. Managers see at a glance where employees clocked in through a GPS position and whether the position was inside the correct location. Managers can simply draw a geofence around each site to monitor punch locations. California Payroll's Time & Attendance Tracking Software helps you stay in compliance while facilitating better work flow and reducing costs.



GENERAL > FINANCE, LEGAL & ADMIN. SVCS. > FINANCIAL SERVICES / BANKING / LEASING

## Full Circle Finance Inc.

B728

Wenatchee, WA • [www.fullcirclellc.us](http://www.fullcirclellc.us)

### Equipment Financing

**DESCRIPTION:** Full Circle Finance provides funding for new and used equipment purchases. We can also work with start-up companies, vendor sales and private parts sales.



GENERAL > FINANCE, LEGAL & ADMIN. SVCS. > INSURANCE

## National Winery Insurance

P2167

Los Gatos, CA ☎ 408-343-8682 • [www.nationalwineryinsurance.com](http://www.nationalwineryinsurance.com)

### Winery and Vineyard Insurance

**DESCRIPTION:** National Winery Insurance (formerly WineAmerica) is licensed in all states and offers risk management solutions specifically tailored to meet the needs of winery and vineyard operations nationwide. Through our risk analysis process, we develop insurance programs to fit your unique exposures based on your company values. Coverages offered include property, liquor liability, general liability, chemical drift liability, wine leakage, spoilage, contamination, stock throughput, excess liability, automobile, workers' compensation, equipment, stock, crop and more.



## ProAg

A117

Clovis, CA ☎ 800-366-2767 • [www.proag.com](http://www.proag.com)

### Crop Insurance and Named Peril

**DESCRIPTION:** ProAg delivers federal crop, crop hail and named peril policies that meet the risk management needs of wine and grape growers. The product line includes policies, such as the grape cluster freeze, raisin reconditioning, assorted weather products and many more.



GENERAL > FINANCE, LEGAL & ADMIN. SVCS. > LEGAL SERVICES

## Dickenson, Peatman & Fogarty

A146

Napa, CA ☎ 707-261-7200 • [www.dpf-law.com](http://www.dpf-law.com)

### Legal Counsel

**DESCRIPTION:** DP&F provides full-service legal representation to members of the wine industry. Our areas of practice include alcohol beverage regulation, business, employment, Geographical Indications, land use, litigation, trademarks and water law. Based in California, DP&F represents wine industry clients throughout the United States, as well as internationally.



GENERAL > FINANCE, LEGAL & ADMIN. SVCS. > PERSONNEL SERVICES

## Star Staffing

P2290

Sacramento, CA ☎ 916-274-4543 • [www.starhr.com](http://www.starhr.com)

### Staffing Services

**DESCRIPTION:** Staffing your business can be a real headache. We pride ourselves on making staffing swift, effortless and cost-effective. Whether you're scaling your start-up, filling a vacancy or adding a new position, we free you to focus on running your business—not staffing it. We offer long-term, flexible staffing solutions focused on making a real difference for your business.



## Winejobs.com

A122

Sonoma, CA ☎ 707-940-3920 • [www.winejobs.com](http://www.winejobs.com)

### Winejobs.com

**DESCRIPTION:** Winejobs.com offers applicants the ability to search and apply for wine industry positions. New this year—users can now have their own account page within winejobs.com, which tracks saved jobs and shows the application history of any job for which they've applied. They can also create and maintain a Wine Business profile that will soon be searchable by prospective employers. Employers can post job listings, review applications and set up auto-response emails to applicants.



GENERAL > IT SOLUTIONS > ACCOUNTING SOFTWARE

## Business Impact Inc.

P2009

Chapel Hill, NC ☎ 919-537-8900 • [www.businessimpactinc.com](http://www.businessimpactinc.com)

### NEW Adaptive Insights

**DESCRIPTION:** Adaptive Insights is a planning and budgeting tool that allows company-wide active planning. Adaptive Insights' departmental annual budgeting, revenue goals, cost modeling and planning help wineries meet their monthly, quarterly and yearly objectives.

... Burgess Cellars, C Donatiello Winery, Cain Vineyard and Winery, Cakebread C...  
**The Wine Industry's Leading Online Job Site**  
 ... Chappellet Winery, Charles Krug Winery, Chateau Bianca, Chateau Diana, LL...  
 ... Cline Cellars, Inc., Clos Du Bois, Clos Lachance Winery, Clos Pegase Winery, Co...  
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 ... Carano Vineyards & Winery, Fetzer Vineyards, Fleury Estate, F...  
 ... Family Wines, Francis Ford Coppola Presents, Frank Family Winery, Robert...  
 ... Frog's Leap Winery, Galante Family Winery, Inc., Glenora Wine Cellars, Inc., Goo...  
 ... Estate, Groth Vineyards & Winery, Gundlach Bundschu Winery, Hagafen Cellars...  
 ... Vines, Hanna Winery, Hedges Family Estate, Heitz Wine Cellars, Hess Collection...  
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 ... Korbel Champagne Cellars, Krupp Brothers Estates/Stagecoach Vineyards, Kune...  
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**winejobs.com**

More wineries use **winejobs.com** than any other online job site.

created & managed by  
**WINE BUSINESS MONTHLY**

## GENERAL > IT SOLUTIONS > DIRECT TO CONSUMER SOFTWARE

### Bloom

B925

Seattle, WA ☎ 206-595-8185 • [www.bloom.wine](http://www.bloom.wine)

#### Bloom

**DESCRIPTION:** Bloom is a growth platform for wineries built on Shopify. Providing modern websites, e-commerce, POS, clubs and integrations with Mailchimp and ShipCompliant, Bloom is a fully-integrated system. Additionally, we are a full-service digital agency: Wineries benefit from our expert strategy, design and photography services.



### Microworks Wine Software

P2141

Napa, CA ☎ 707-224-9620 • [www.winesoftware.com](http://www.winesoftware.com)

#### NEW Microworks - Cash Manager for iPad

**DESCRIPTION:** Cash Manager for iPad offers tablet POS functionality with integrated payment processing and wireless capability. For use on-site or off-site, a simple user interface provides speedy check-out with high-quality customer service. Features include customer-prompted tip entry, email receipts, signature capture, club pick-ups, open tabs, kitchen printing, alerts and more.



#### Microworks - Integrated E-commerce

**DESCRIPTION:** Leverage your online presence by integrating your tasting room with your online store. Microworks Integrated E-commerce provides a platform for your customers to purchase wine, join your club and manage their profile. Orders are validated for compliance and forwarded to your fulfillment system automatically. Online activities are immediately visible from all touch points, giving you complete control and real-time sales monitoring.



### vinSUITE

A501

Napa, CA ☎ 707-253-7400 • [www.vinsuite.com](http://www.vinsuite.com)

#### NEW Custom Club

**DESCRIPTION:** vinSUITE has added a third club module to its all-in-one software solution, Custom Club. Custom Club allows club members to add and remove wine from their upcoming club shipment. Wineries have the control to choose which wines can be added/removed and set order minimums, such as price and bottle quantity.



### WineDirect

C1303

American Canyon, CA ☎ 800-819-0325 • [www.winedirect.com](http://www.winedirect.com)

#### WineDirect

**DESCRIPTION:** WineDirect empowers wineries of all sizes to achieve their direct-to-consumer business goals. We provide the most flexible, comprehensive suite of wine club, point-of-sale and e-commerce tools in the industry, backed by a high-touch training and support team committed to your success. With over a decade of experience working with more than 1,800 wineries around the world, WineDirect is the partner you can count on to continue to invest in innovation and enable your long-term growth.



### Xüdle

P2223

Temecula, CA ☎ 951-541-0777 • [www.xudle.com](http://www.xudle.com)

#### Xüdle

**DESCRIPTION:** Xüdle provides wineries an all-in-one solution for direct-to-consumer sales. Built from the ground up specifically for the wine business, Xüdle's automated wine club scheduler, event sales management tools, e-commerce platform and fully integrated point-of-sale system will save you time and resources through automation and proven efficiencies.



## GENERAL > IT SOLUTIONS > HARDWARE

### Fleet Tracker, Inc.

A118

Mariposa, CA ☎ 209-661-5222 • [www.fleettrackergps.com](http://www.fleettrackergps.com)

#### GPS Products

**DESCRIPTION:** Fleet Tracker GPS is focused on agriculture, including theft recovery, managing your farming operation to maintain equipment and more. Features include row-by-row tracking, spraying speed, in-field hours, idle versus run time, harvest hours, timecards, ELD and allowing applications to communicate with each other.



## GENERAL > IT SOLUTIONS > SALES SOFTWARE

### Activ8 Commerce

P1846

Pleasanton, CA • [www.activ8commerce.com](http://www.activ8commerce.com)

#### Activ8 Commerce

**DESCRIPTION:** Activ8 Commerce is an all-in-one direct sales system that provides point-of-sale, club, e-commerce, web design, multi-location inventory management, email, CRM and wholesale in a single, secure cloud database.



## THE BUSINESS SIDE OF WINE

# microworks

WINE SOFTWARE

## Increase Your Direct-to-Consumer Sales



Your passion is making wine. Ours is helping you sell it.

Microworks Technologies, Inc., Napa California  
[www.winesoftware.com](http://www.winesoftware.com) ■ [info@winesoftware.com](mailto:info@winesoftware.com) ■ 707-224-9620

## GENERAL > IT SOLUTIONS > SALES SOFTWARE

### Orion Wine Software

A418

Santa Rosa, CA ☎ 877-632-3155 • [www.orionwinesoftware.com](http://www.orionwinesoftware.com)

#### NEW Orion Cloud

**DESCRIPTION:** Orion Cloud is Orion's cloud-based wholesale and DTC management platform. Built on top of Salesforce, Orion Cloud handles a winery's entire sales and inventory process, including wholesale, club, tasting room and e-commerce.

With the seamless accounting integration, wineries have a single view of their customers and inventory for deep analytics, collaboration and mobile access. Salesforce's AppExchange allows for thousands of additional integrations.



## GENERAL > IT SOLUTIONS > SOFTWARE SUITES

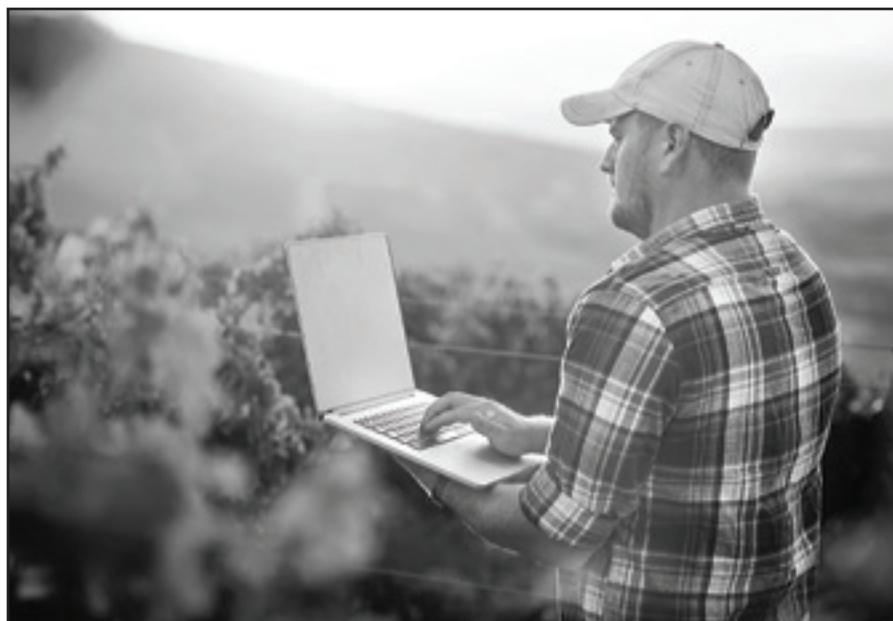
### AgCode Inc.

P2177

Glenwood, MN ☎ 877-250-8435 • [www.agcode.com](http://www.agcode.com)

#### AgCode

**DESCRIPTION:** AgCode's leading software solution in specialty crops empowers operations by providing mission-critical services, delivering unified data and business intelligence to maximize efficiency and productivity. With new passive data collection technology and 18 years in business, AgCode's consultants and software are essential to organizations around the world, serving all high-value specialty crops, including vineyards, tree fruit, nuts, berries and field crops.



## GO DEEPER THAN THE DATA.

Experience your most efficient seasons ever with **AgCode Passive**, the seamless new GPS-powered data feature from the wine industry's essential software solution.

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**AgCode**   
PLAN RECORD PRODUCE

### Azmera

B913

Napa, CA ☎ 833-829-6372  
• [www.azmeraconsulting.com](http://www.azmeraconsulting.com)

#### Software Services

**DESCRIPTION:** Azmera offers software design, implementation, upgrade and support services with a deep understanding of wine and agribusiness processes and challenges.



### Business Impact Inc.

P2009

Chapel Hill, NC ☎ 919-537-8900 • [www.businessimpactinc.com](http://www.businessimpactinc.com)

#### NEW Power BI

**DESCRIPTION:** Power BI is a business intelligence tool by Microsoft that helps organizations receive better reporting and visualization from their data.

#### TARGIT

**DESCRIPTION:** TARGIT is a business intelligence solution that helps wineries receive better data visualization and dashboard reporting.

### Microworks Wine Software

P2141

Napa, CA ☎ 707-224-9620 • [www.winesoftware.com](http://www.winesoftware.com)

#### Microworks - DTC Suite

**DESCRIPTION:** Manage your direct-to-consumer sales seamlessly with Microworks Wine Software DTC Suite. Our software suite includes all the tools needed for small and large wineries to manage their tasting room, inventory, wine club, e-commerce, shipping, compliance, sales tax, accounting and more. One solution, one database. Microworks has specialized in wine industry DTC solutions since 1994.



#### Microworks Bullseye - Data Driven Marketing

**DESCRIPTION:** With our data-driven Bullseye Marketing Engine, you can create campaigns with pinpoint accuracy of key buying groups based on customer activity. Bullseye introduces business intelligence that takes advantage of Microworks 360-degree view of customer activity and comes pre-packaged with built-in campaign profiles. Identify big buyers, case buyers, frequent buyers and more. Never miss an opportunity—Let Bullseye lead your sales team.



## GENERAL > IT SOLUTIONS > VINEYARD SOFTWARE

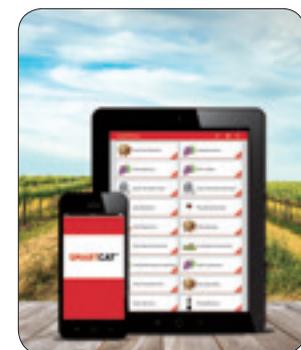
### William Frick & Company

B1017

Libertyville, IL ☎ 847-918-3700 • [www.smartcatrfid.com](http://www.smartcatrfid.com)

#### SmartCAT

**DESCRIPTION:** SmartCAT is an Android and iOS data collection platform that provides custom forms to input information pertaining to vineyard, harvest and winemaking processes. NFC RFID tags, barcodes, GPS coordinates, dynamic drop-downs and time/date stamps enable accurate data to populate into these forms. The collected data are then available via the SmartCAT cloud portal to generate reports and export in real-time. The app also functions offline to allow for continuous data collection.



## GENERAL > IT SOLUTIONS > WEB SERVICES

### GrapeConnect

P2294

Atlanta, GA ☎ 415-423-1029 • [www.grapeconnect.com](http://www.grapeconnect.com)

#### GrapeConnect Online Marketplace

**DESCRIPTION:** The GrapeConnect Marketplace is an online B2B wholesale marketplace platform for wine producers and growers. Our platform and tools support sales, sourcing and analytics with a particular focus on the bulk wine and grape trade.



### Grapes & Bulk Wine

P2246

Sonoma, CA ☎ 707-940-3920

• [www.winebusiness.com/classifieds/grapesbulkwine](http://www.winebusiness.com/classifieds/grapesbulkwine)

#### Grapes & Bulk Wine Exchange

**DESCRIPTION:** The most popular place for wineries and growers to buy and sell their grapes, the Grapes & Bulk Wine Exchange is part of the wine industry's most popular website, [winebusiness.com](http://winebusiness.com). It was created and is managed by Wine Business Monthly. With an average of 100 new listings per week, and more than 6,000 listings posted last year, the exchange offers buyers and sellers of grapes and bulk wine an easy way to facilitate the purchase of products.



## GENERAL > IT SOLUTIONS > WINE PRODUCTION SOFTWARE

### Ekos

B1029

Charlotte, NC ☎ 704-973-5640 • [www.goekos.com](http://www.goekos.com)

#### Ekos Winemaker

**DESCRIPTION:** Ekos Winemaker is an all-in-one winery management solution designed to optimize inventory, production, sales and accounting processes for craft winemaking businesses. The system allows users to keep track of inventory, compare production costs, log fermentation data, assign and complete production tasks, send and receive sales invoices, easily compile data for the Report of Wine Premises Operations and create custom reports. The software subscription includes unlimited users and unlimited customer support.

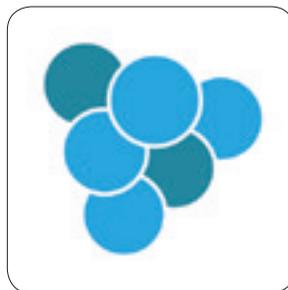
### InnoVint, Inc.

C1431

West Linn, OR ☎ 707-418-0119 • [www.innovint.us](http://www.innovint.us)

#### InnoVint

**DESCRIPTION:** InnoVint goes beyond just a production database, focusing on optimizing cellar work flows and improving communication. The cloud-based software engages the entire winery team: managing daily activity and work orders in digital form; providing real-time insight into inventory cost accounting, reporting and compliance; and giving the business a holistic view of its winery. InnoVint saves clients several hours per week so they can reinvest that time and money back into the business.



### Orion Wine Software

A418

Santa Rosa, CA ☎ 877-632-3155 • [www.orionwinesoftware.com](http://www.orionwinesoftware.com)

#### Blend

**DESCRIPTION:** Blend is Orion's deep, feature-rich winemaking management solution for small- to mid-sized wineries. Track all of your lots from crush through bottling, with detailed composition, additions and analysis information always a click away. Additional modules include work order management and barrel management.

### Orion Wine Software

A418

Santa Rosa, CA ☎ 877-632-3155 • [www.orionwinesoftware.com](http://www.orionwinesoftware.com)

#### WiPS

**DESCRIPTION:** WiPS is the leading enterprise-scale winemaking management solution. Built for multi-plant operations that need deep compliance and costing capabilities, WiPS is robust and scalable. Modules include costing, barrel management, work order management, document management, lab analysis, compliance and more.

### Process2Wine

P2214

Encinitas, CA ☎ 415-246-7792 • [www.process2wine.ca](http://www.process2wine.ca)

#### Process2Wine

**DESCRIPTION:** Process2Wine is a cloud-based Software-as-a-Service, accessible from any device. P2W manages your enterprise production from vineyard to winery to bottled and packaged finished goods, tracking labor and inputs while generating spray and 5120 reports along the way. We have a mobile version for entering work orders on the fly, in the field or in the cellar.



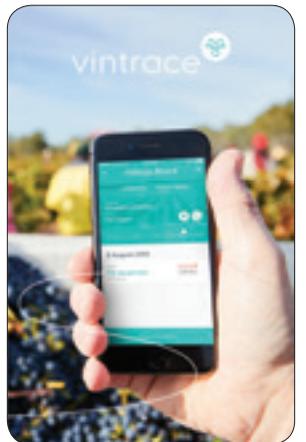
### vintrace

C1307

Sonoma, CA ☎ 888-240-4860 • [www.vintrace.com](http://www.vintrace.com)

#### NEW Boutique by vintrace

**DESCRIPTION:** Boutique by vintrace is a streamlined, mobile-first experience for the small producer. Use Boutique for real-time tracking of vineyard blocks, fruit intake, lab analysis, composition, lots for FDA compliance and TTB compliance reporting. A free 30-day trial is available at [www.vintrace.com](http://www.vintrace.com).



#### vintrace

**DESCRIPTION:** Vintrace is a simple cloud platform for winemakers. Since 2007, vintrace has helped global winemakers crush, track and process over 3.65 million tons of fruit, making it one of the most trusted solutions for winemakers worldwide. With vintrace you and your team have the choice of using smartphones, tablets or desktops to track and manage cellar operations, lab analysis, inventory, costing, and TTB and FDA compliance reporting.





## 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](http://www.gfawine.com) • [info@gfawine.com](mailto:info@gfawine.com) • 707.940.4744

### GENERAL > PUBLICATIONS

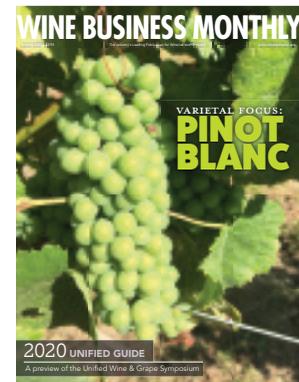
## Wine Business Monthly

P2246

Sonoma, CA ☎ 707-940-3920  
• [www.winebusiness.com](http://www.winebusiness.com)

### Wine Business Monthly

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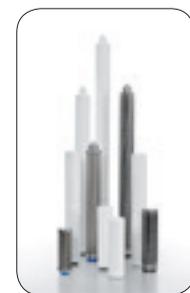
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P1949

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VARIETAL FOCUS:

# PINOT BLANC

Lance Cutler

**PINOT BLANC** is the Rodney Dangerfield of white wine: It gets no respect. It has neither the unctuous resonance of Chardonnay nor the zesty complexity of Riesling. Even its cousin, Pinot Gris, has brighter fruit and tangier acidity. Pinot Blanc is more of a restrained pleasure with medium body and shy fruits. It is a simple thirst-quencher that is equally at home on a summer afternoon or paired with a wide variety of foods.

Pinot Blanc is another of the many mutations of Pinot Noir that most likely originated in Burgundy, where it is still permitted in Grand Cru vineyards although it is seldom used in blends. It found its true home in Alsace, where it comprises 21 percent of all vineyard plantings. It is used primarily for Crémant d'Alsace, but many wineries produce dry wines from the grape as well, often blended with Auxerrois.

Pinot Blanc found a second home in northeast Italy, where it is called Pinot Bianco. Planted in Friuli and the Alto Adige, it's produced in a wide variety of styles—from sparkling wine to refreshingly acidic wines made without oak. In Germany and Austria, where the grape is known as Weissburgunder, wines are often aged in oak to broaden the mouthfeel and finish. Pinot Blanc is grown in many places in the New World, including California, Oregon and British Columbia, Canada, although many of the older plantings have turned out to be the Melon de Bourgogne grape. It is also produced in small amounts in Slovenia, Croatia, Argentina and Uruguay, among others.

For this Varietal Focus, we decided to concentrate on dry white wines. We selected Oregon's Willamette Valley, where both **Thomas Houseman** of **Anne Amie Vineyards** and **Anne Hubatch** of **Helioterra Wines** stir lees while the wine is in barrel to produce better texture. **Drew Voit** of **Harper Voit Wines** also seeks greater texture but prefers his wines to rest on lees without stirring. In the Okanagan Valley, winemakers use a variety of styles to make their Pinot Blancs. **Matt Dumayne** at **Okanagan Crush Pad** focuses on texture-driven wines, **Sandy Leier** from **Sandhill Wines** uses Burgundian techniques with American oak barrels, and at **St. Hubertus & Oak Bay Winery**, winemaker **Bill Pierson** and owner **Andy Gebert** work to achieve a brighter Riesling-like style. In Mendocino, Calif., **Jason McConnell** uses his estate grapes to make an easy-drinking style at **RIVINO Winery**. **Jim Klein** at **Navarro Vineyards** also uses Rivino Vineyard fruit, along with some newly planted estate grapes and a bit of Chardonnay. **Randy Meyer** of **Barra Winery** uses a fair amount of Melon de Bourgogne, which gives his **Girasole Vineyards'** wine a different fruit profile than the other Mendocino Pinot Blancs.

**Lance Cutler** has been a working winemaker in Sonoma Valley for 40 years. He has been a contributing editor for *Wine Business Monthly* for 15 years. His unique perspective on winemaking has led to our Industry Roundtable series and our Varietal Focus series. Lance is also the author of five Jake Lorenzo books and *The Tequila Lover's Guide to Mexico*.



VARIETAL FOCUS:

# PINOT BLANC

## WILLAMETTE VALLEY

Just 850 tons of Oregon's 2017 grape harvest were Pinot Blanc, which is less than 1 percent of the total 91,342 tons harvested. Pinot Gris, by comparison, accounted for 13,785 tons or 15 percent of the harvest. The Willamette Valley winemakers in this Varietal Focus pointed out that they were already making a lively, fruity wine with abundant acidity, using their Pinot Gris. Rather than make a wine that was similar to, and thus competed with, one they already had, they decided to concentrate on texture when it came to Pinot Blanc. They tamed the fruit character by fermenting in used barrels and keeping the wine on its lees. They maintained acidity by refusing to allow malolactic fermentation.



HELIOTERRA



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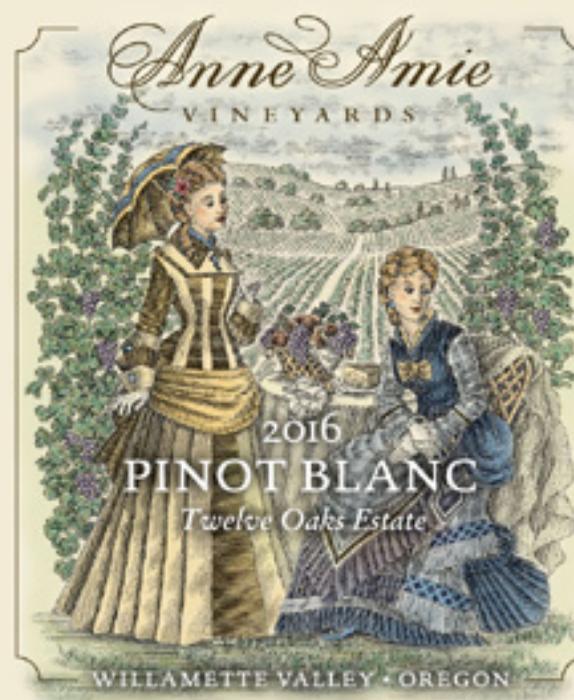
VARIETAL FOCUS:

# PINOT BLANC

## ANNE AMIE

2016 Twelve Oaks Estate Pinot Blanc

Thomas Houseman is a son of the South who made his way to New York to pursue a career in modern dance but ended up at **CSU Fresno** and earned a degree in enology. He got a job at **Fetzer Vineyards** and followed that with a stint at **Husch Vineyards** in the Anderson Valley. He jumped at a chance to make wine in New Zealand; and when he returned to the United States, he took a job as assistant winemaker at **Ponzi Vineyards**. In 2006, after four years at Ponzi, he accepted the winemaking position at Anne Amie.



Wine goes to neutral French oak and stainless steel barrels for fermentation, which is carried out at 50° F. Juice is usually around 3.1 pH, so no acid is added. We will bump to 300 ppm YAN at Brix drop, using DAP, Superfood and **MicroEssentials** Trace. Lees are stirred bi-monthly and the wine sits on gross lees until the *cuvée* is assembled, usually 9 months.

“We cold-stabilize using cream of tartar and cold temperatures. We heat-stabilize using bentonite as necessary. The wine is sterile-filtered because we do not go through malolactic. Our Pinot Blanc gets a screw cap closure with a 302 liner. The wine ages in bottle for a full year before release.”

### ACCORDING TO HOUSEMAN:

“The idea behind this Pinot Blanc was to make a wine that was about sur lie, rather than primary fruit characteristics. The focus is on texture, not fruitiness, and my inspiration was the wines of Muscadet and Chablis. The wine is completely dry, but the sur lie quality (even without malolactic) provides good mid-palate weight, along with bright acidity. The wine feels rich and textured.

“Our **Twelve Oaks Estate Vineyard** sits at 650 to 700 feet. The Laurelwood soils are like a cupcake made of volcanic soils into which the roots must find a footing, while a thin layer of wind-blown soil sits like frosting on top. Vines are spaced 8 feet by 1 meter. While we have both Clone 5 and 7 in the vineyard, only Clone 7 is used for this wine because it better lends itself to the style we are attempting. We use 3309 and 101-14 rootstock. The vineyard is dry-farmed and **LIVE** certified.

“We pull leaves on the morning side to encourage airflow and sunlight. These vines have more canopy area than our Pinot Noir. We mechanically leaf after bloom and clean up by hand pre-*veraison*. We drop fruit for airflow and to make sure no clusters are touching. We cultivate every other row, turning in green manure cover crop. Production averages 3.5 tons per acre.

“Picking is more about flavor than chemistry. We look for flavors to change from Granny Smith to Golden Delicious, from citrus to stone fruit. The canopy yellows, skins start speckling and softening, and the pulp starts to separate from the seeds. We can usually get fully ripened fruit under 22° Brix. We sort both in the field and on an incline conveyor to the press.

“Grapes are whole-cluster pressed with no SO<sub>2</sub>, and we allow the juice to brown. Juice is settled for at least 48 hours at 38° F without using enzymes. The wine gets racked, and we add VL yeast alternating between 1, 2 and 3.



THOMAS HOUSEMAN

## TASTING NOTES

**HOUSEMAN:** Aromatically, there is a Juicy Fruit gum quality to it. There is stone fruit and kaffir lime. It has a bit of feijoa and a bit of quince. There is a powdery, mineral quality of dusty road and a saline note. It is dry. I like the length and focus of it. There is some citrus and a lot of sur lie texture. It straddles the line of being linear and focused with structure and acidity but has the width from sur lie. It has texture without being oily.

**VOIT:** The nose is sweet and herbaceous with a tarragon, spearmint character. You get a hint of stone fruit and citrus on the nose, which becomes stronger on the palate. There is a varietal spice character. I get texture from the lees on the palate. There is sweet citrus and yellow stone fruit on the palate and then moves to underripe apricot, peach and pear, with linear ripe stone fruit. The tension between acidity and breadth is beautiful without being "lees-y."

**HUBATCH:** I echo what they have said, but I also get lemon curd and some lemon meringue pie. The stone fruit and minerality really pop. I love the generous aromatics on this wine. It keeps you guessing what the flavors will be. There is a bit of bâtonnage character that comes on throughout the wine in the middle, the front and the finish. I like the underripe fruit character. On the palate, I love the bracing acidity that is nicely balanced out by a touch of oak and the lees weight on the mid-palate.

**MEYER:** Potent apricot and peach with some vanilla cream. Slight nutmeg and a nice "Flintstone vitamin" character that I like. Unique wine with out-of-the-norm flavors.

**MCCONNELL:** I got lavender and some almonds, along with stone fruit. This had a great acid finish with tart apple flavors.

**KLEIN:** Very perfumed and then a sour apple character that carried through. The vitamin character strikes me as yeast nutrient. It is a pretty little wine. Like all the wines in this flight, you can tell they are picked at low maturity.

**LEIER:** Sweet dried apple aromas, lemon and confectionary notes. Concentrated fruit, candied lemon on palate with medium-plus acidity. Dried orange peel, slightly pithy on finish.

**PIERSON:** Nutty aromas with very ripe baked orchard fruit followed by flavors of pear and orchard fruit.

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# PINOT BLANC

## HELIOTERRA

2017 Willamette Valley Pinot Blanc

Anne Hubatch grew up in Sheboygan, Wisconsin. She earned a degree in geology and environmental studies at **UW Madison** before moving to Portland, Oregon where she became fascinated with the wine industry. She worked in a variety of roles for eight years and learned from many great Oregon winemakers, including **Eric Hamacher (Hamacher Wines)**, **David Adelsheim** and **Dave Paige (Adelsheim Vineyard)**, **Joe Dobbles (Dobbles Family Estate/Wine By Joe)** and **Alfredo Apolloni (Apolloni Vineyards)**. Hubatch introduced her first solo vintage in 2009 when she launched **Helioterra Wines**.



“I pick mostly on flavor but also target pH; I look for a 3.1 pH on average. I want to wait for flavor but preserve the acidity. Maintaining acid is more difficult at the Redman site, where ripening is earlier and the flavors tend toward floral and tropical, so acid drop may precipitate picking. At Yamhill, we look for light golden skins and the development of flavors of graphite and wet concrete, along with green papaya. That vineyard holds acidity very well.

“Grapes are sorted in the vineyard. Grapes are whole-cluster pressed with no destemming. No SO<sub>2</sub> is used at pressing. We underload the press, tumble the grapes first and use a longer press cycle, trying to minimize tannin extraction and maximize juice extraction. The juice browns and is settled for 24 to 48 hours at 40° F. No acid additions are necessary, but we will use micro-nutrient, DAP and bentonite, and sometimes we include **Optiwhite**. We rack to stainless steel tank, stainless barrels and neutral oak barrels. I inoculate with five different yeasts. Fermentation temperature varies between 55° F to 70° F, depending on the vessel.

“About 30 percent of the wine is fermented in neutral French oak barrels, and lees are stirred every two weeks. We will increase stirring if we need more lees character. This continues for five to six months. We rack only to blend. The wine is cold-stabilized traditionally in tank or with **Celstab**, and heat-stabilized using bentonite although most times it is already stable due to the earlier bentonite addition. We cross-flow filter, use a cork closure and age the wine for six months before release.”

### ACCORDING TO HUBATCH:

“Stylistically for Pinot Blanc, I like acidity and aromatics backed by texture and complexity. I am trying for a lively wine with plenty of texture on the palate and enough acidity to provide a refreshing finish.

“The grapes for this wine come from two separate vineyards with very different soils, providing different levels of vigor. The **Redman Vineyard** is comprised of Willakenzie sedimentary soils, sits at an elevation of 500 feet and is a much warmer location, often harvested two weeks earlier than **Yamhill Valley Vineyards**. Yamhill is primarily sedimentary clays with basalt intrusions. It has larger clusters, and the fruit is more savory, with stone fruit character and has better acidity. Both locations feature the Colmar clone. The Yamhill site is own-rooted, and the Redman site is 3309 rootstock. Everything is dry-farmed, LIVE certified and **Salmon Safe**.

“Some fruit is dropped to maintain flavor and even ripening, with more fruit being dropped at the Yamhill site. Leaves are pulled twice throughout the growing season to allow sunlight and encourage airflow in the fruit zone. We want some sun to reach the clusters but not enough to burn the fruit. The Redman site produces 2.5 to 3 tons per acre. Yamhill carries a bit more, closer to 3.5 to 4 tons per acre.



## TASTING NOTES

**HUBATCH:** Aromatically, I get a lot of minerality, a range of concrete and crushed stone combined with some citrus-like kaffir lime. I get a calcareous, briny component. There is a white floral sweetness reminiscent of white peach, along with underripe peach and pear notes. On the palate, there is amplified juicy acidity, a lot of length and some lemon citrus and spice quality and broader fruit notes. The "leesiness" comes through a little bit, but there is a lot of mid-palate broadness. It is very dry; I love the length.

**HOUSEMAN:** It has that dusty road quality. There is a bit of reduction with star fruit on the nose and a savory quality that reminds me of Vegemite, dry apricot and quince paste. I really like where it is going on the nose. It is ripe and underripe at the same time, which is really fun. I love the acidity. More quince comes across on the palate. It is broad with underripe pineapple, lime zest and grapefruit. I love the acidity on this.

**VOIT:** I get the same dusty profile on the nose, like dusty concrete. There is some Golden Delicious apple on the nose with some green pear. On the palate I get dried tropical or dried fruit tones that come through like dehydrated apple. Baked pineapple is a strong note for me and candied yellow melon rind. It has some citrus pithy tones and great acidity.

**MEYER:** It had a candied, dry fruit profile. I picked up bread dough, crisp acidity and a bit of apple skin. I also got some soy or Marmite yeast autolysis on the palate, which might have been yeast- or oak-related.

**MCCONNELL:** This was the lightest and most delicate wine in the flight. It was yeasty and soft with more orange than lemon, along with some white peach. It was very muted and delicate. I'd probably love this wine ice-cold and refreshing.

**KLEIN:** I had this lemon peel, candied fruit aroma. There were green, low-maturity flavors with a hint of vanilla from some kind of barrel-aging that I found very attractive. These wines are holding up better than the Canadian wines we are seeing at the same age.

**DUMAYNE:** A very plush, ripe and heavier style. It's big on caramel and baked fruit tones. It's softer on the palate. Not the most concentrated. I get some oxidative/bruised fruit notes with a short finish.

**LEIER:** Aromas of ripe orchard fruit, bruised apple, pear and straw. Low to medium acidity on the palate with flavors of ripe apple and pear. Light body with a fresh, citrusy finish.

**PIERSON:** It is ripe and nutty with subtle citrus, some floral and definite flint. The flavors are ripe with citrus and stone fruit.



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## HARPER VOIT WINES

2018 Harper Voit Pinot Blanc Surlie

Drew Voit spent the formative years of his winemaking career at **Domaine Serene** and **Shea Wine Cellars**, where he worked with some of the best vineyard sites in the Willamette Valley. Ten years ago, he started his own Harper Voit Wines, seeking out great vineyard sites, beautifully farmed fruit and long-term relationships with growers. Voit also consults for several wineries in the Willamette Valley and operates a custom winemaking operation for small, ultra-premium brands.



## ACCORDING TO VOIT:

“I am looking for a bone-dry wine with focused bright acidity and a strong mineral and briny character. I want to present a definite lees character that provides rounded texture with tension between the acidity and that autolytic character—without using malolactic fermentation.

“This **Meredith Mitchell Vineyard** has soil that is a mixture of broken basalt and marine sediments. Elevation is 450 feet, and rows are planted 9 by 5 feet. The vineyard uses Colmar Clone planted on 101-14 rootstock. The shallow soils create a very low-vigor vineyard, but one that has high acid retention. The vineyard is dry-farmed and biodynamic with minimal leaf-pulling. Fruit-dropping is minimal due to the low vigor, resulting in just 2.25 tons per acre yields despite the continued strengthening of the vines; it’s a result of the biodynamic farming practices.

“The vineyard ripens late, so I am usually waiting for flavor development and acid drop. Brix is always low at this site, but I am waiting for pH to climb above 3.0. I look for the flavor to move off the green spectrum, but I want to

pick before flavors move fully to stone fruit because I know the finished wine will present flavors farther along the ripe spectrum than those when tasting the fruit.

“Grapes are picked by hand with no sorting. We whole cluster-press, using no SO<sub>2</sub>. We handle the grapes with the intention of minimizing tannin phenolic extraction. We allow juice to brown and will fine with bentonite and casein gelatin. We settle the juice for 24 hours at 45° F. The juice is racked to 500 L puncheons (75 percent) and French oak barrels (25 percent). We add **Cross Evolution** yeast, but no acid additions are made. MicroEssentials Powder and Trace are added at 2° to 3° Brix drop. Wine ferments between high 50° Fs and mid-60 °Fs. We like these warmer fermentation temperatures because they help reduce fruitiness, which complements our style goals. Post-fermentation, we top up to remain as reductive as possible. We want yeast autolysis with minimal oxidation, so we never stir the lees. Wine sits on lees for nine months as we wait for the desired texture to develop.

“We rack right before bottling, seed with K<sub>2</sub>CO<sub>3</sub> and bulk-chill for cold stability, adding bentonite if necessary. Wine is cross-flow and then sterile-filtered. We finish with **Diam** corks and bottle-age one to two months prior to release.”



PHOTOS: CAROLYN WELLS-KRAMER PHOTOGRAPHY

## TASTING NOTES

**VOIT:** It's recently bottled, so there's a bit of sulfur influence on the nose. I get a flinty, low-level, reductive lees-y note, and then some citrus zest and sour fruit, along with yellow melon rind. There is a low-level spice tone that I think is autolytic that I like. On the palate, we are focused on texture. The acid drives it, and there is breadth from the lees-aging. It has a salty, briny tone on the palate, and it finishes without phenolic interference.

**HUBATCH:** The aromas are a bit disjointed from the bottling. I get a lot of mandarin orange backed up with jasmine and some clove baking spice. There is some of those orange "circus peanut" candies in here. The saltiness comes off, like corn chips in the beginning, that's blown off. It is extremely textural, very mouth-filling and round with yellow melon cantaloupe and unripe stone fruit. It has a lot of length, and it really pops mid-palate. It has a soft finish.

**HOUSEMAN:** This has the most reduction in the flight. What leaps out at me is ripe apricot. There is yellow plum, Golden Delicious and buttered toast. I get ripe pear and really like what it is doing aromatically. It has focused acidity, is pithy with a broad mid-palate and flavors of citrus zest, lime zest, underripe kiwi and a wonderful long finish. I like it quite a bit.

**MCCONNELL:** Perfumed nose of violets, dried blueberries and dried apricots. There was a lot of flavor and aroma. At the same time, it was dry and tart even though there is a sweetness to the flavor.

**KLEIN:** Tastes like Gravenstein apple cider. Nice and tart with an almost lemon rind finish.

**MEYER:** Had a very impressive mouthfeel extract. It had to be sur lie-aged. Whatever winemaking technique was used here, it really produced an excellent mouthfeel while still being tart and crisp. There is a nice, slight dried-flower perfume, as well as green pear character. I get little stone fruit and some lemon grass.

**DUMAYNE:** High SO<sub>2</sub> with delicate fruit notes underneath. Green acid, but it carries the length of the wine.

**LEIER:** Pastry and lemon notes on the nose with herbs and green apple. Some green character on the palate: tomato vine, lemon and lime flavors. Medium body with vibrant acidity, leaving a tart, green apple finish.

**PIERSON:** There are some ripe medicinal aromas, along with floral character. The flavors are ripe with citrus and baked apple.



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VARIETAL FOCUS:

# PINOT BLANC

## OKANAGAN VALLEY

While winegrapes are grown in several parts of British Columbia, Canada, the Okanagan Valley is the largest region and accounts for 84 percent of British Columbia's vineyards. The climate is extreme—winter temperatures are as low as -4° F and summer temperatures can reach up to 104° F. The growing season is short, defined by hot temperatures and long days. Rainfall averages between 8 to 12 inches annually, depending on where you are in the valley, so irrigation is essential, but these dry conditions and low humidity reduce pest and disease pressure. Pinot Blanc accounts for just 5 percent of white wine production in British Columbia.



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# PINOT BLANC

## ST. HUBERTUS & OAK BAY WINERY

2017 St. Hubertus Vineyard Pinot Blanc

Andy Gebert was a plumber in Switzerland when he joined in the army to fulfill his required military service. He decided to come to Canada in 1985 to help his brother, **Leo**, who had purchased 76 acres of historic vineyard—it was originally planted in 1928. They chose to focus on cold-climate varieties, farm organically and use estate fruit exclusively. Gebert learned about wine by tasting, and hired accomplished winemakers, like **Bill Pierson**, to handle the day-to-day production. St. Hubertus & Oak Bay Estate Winery now produces 14,000 cases annually.

### ACCORDING TO GEBERT:

“We want to produce a brighter, lighter ‘Riesling’ version of Pinot Blanc. We want straight-forward fruit aromas of apple, lemon and peach, yielding to a juicy palate where ripe fruit flavors break through before the acidity reins it back into a long finish. It is meant to be clean, fresh and fruit-driven wine.

“Our soils are sand-based with gravel but with more clay as you near the lake. The vineyard is at 1,000 to 1,300 feet elevation. Vines are planted on SO4 rootstock, using clones imported from France long ago. We farm organically and are transitioning to **Canadian Organic Standards** through

the **Pacific Agricultural Certification Society** (PACS). The vineyards are irrigated, and crop size is around 5 tons per acre. We remove leaves from the north side to promote airflow through the fruit zone and green-drop in August or September.

“We pick primarily based on flavor, looking for bright fruit citrus flavors, along with some tropical notes, with a lessening of green apple character, including an acid drop. We look for brown seeds and make sure to pick before it snows. Usually grapes come in between 22° and 23° Brix with .75 TA.

“Grapes are machine-harvested and pressed, separating free run from press juice. We usually do not use SO<sub>2</sub> but will if grape conditions require it. Juice is settled at 57° F for 48 hours. It is racked to stainless steel tanks where yeast is added. We add enough nutrients to maintain a healthy fermentation. The wine ferments at 70° F in stainless steel, but we have one new oak barrel fermentation that we use in the blend for extra flavor and subtle complexity. The barrel sits on lees but with no stirring. The tank portion is racked after fermentation, and then we do a clear racking off settled lees. The final racking comes at bottling.

“The temperature in the winery cold-stabilizes the wine, and we use bentonite for heat stabilization. The wine is sterile-filtered. We have had enough problems in the past with bad corks to now use screw caps. The wine receives six months’ bottle age before release.”



Andy Gebert (left) and his brother Leo

## TASTING NOTES

**PIERSON:** The nose is bright with citrus, stone and flinty aromas. The palate is a lovely fruit basket with a touch of toast that is balanced by the acidity.

**DUMAYNE:** Focused citrus pith aromatics. Good balance. The slight RS helps with the texture and pops the finish nicely. Good solid fruit core with great juicy acidity. Very solid wine.

**LEIER:** Bright aromas of fresh orchard fruit and integrated toasty oak on the nose. Some flinty notes on the palate and citrus fruits with a round, smooth mouthfeel. Nicely balanced with good acid, leaving a clean finish.

**MEYER:** I really enjoy the crisp mineral freshness on this wine. It reminds me of Gravenstein apples. Citrus notes were present. It was bright and lively, the zippiest of the three with a really clean finish.

**MCCONNELL:** This was the brightest of the flight. There was some wet granite and stone fruit with some melon on the end. It was well put together and really clean.

**KLEIN:** I agree that it is nice and clean with a potpourri, dry flower. I thought it had quite a bit of oak. It is fresh and sweet with a mineral freshness.

**VOIT:** It is slightly reductive with a sweet corn silk character. It is fairly herbal on the nose with peppermint and tarragon. There is some citrus and pear on the palate. It is very clean, not lees- or oak-driven at all. It is dry and bright with lime, mandarin orange and green pear.

**HOUSEMAN:** I get reduction. There is lime zest, buttered corn, buttered toast and hot eraser. It is crisp and bright, but with some phenolics that make it a bit short with some bitterness on the finish. It has really good acid, is very tight, but there is a tiny bit of apricot, hinting at a warm growing season.

**HUBATCH:** There is an almost margarita character here: a lime zest, saltiness and tequila accent. There is some lemon zest and a lot of citrus, but not a lot of fruit. It is zippy on the palate and a little astringent from phenolics. I got some clove and a bit of stone fruit. It has great acidity but is a little clamped and short on the finish.



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# PINOT BLANC

## SANDHILL WINES

### Sandhill Pinot Blanc 2017

Sandy Leier is a native of the Okanagan and grew up playing in family orchards, developing an affinity for agriculture. She received a degree in chemistry from **UBC Okanagan College**, which led to a research job. She became interested in the wine business and applied for a position at **Andrew Peller Limited** in 2006, working as a winemaker for **Calona Vineyards** and later **Wayne Gretzky's** Okanagan wines. She was named winemaker of Sandhill Wines in 2017.



“We want to maintain acidity and fruit flavor, so we target 22° Brix. We watch Brix and total acidity and look for the seeds to harden. Grapes start with a sour, green pithy taste. As that flows into the apple and the straw realm, we pick.

“Grapes come to the winery and receive 50 ppm SO<sub>2</sub> in the fruit bins. If necessary, the grapes pass through a chiller on the way to the press. They are pressed after we have added some enzyme. We run a two-and-a-half hour press cycle and separate the free run juice from the press portion. The juice is settled for two days at 45° F. We clean rack off the lees but add lees back until we hit approximately 180 NTUs. We add up to 1.5 g/L of tartaric to the juice before yeasting. **Anchor VIN 13** yeast is added to bolster the fruit and focus of the wine, and we use **Dynastart** in the yeast culture. Once fermentation has started, we will add Thiazote pH and **Fermaid K** if needed and then feed again at one-third Brix depletion.

“We rack 30 percent of the juice to new and second-use American oak barrels. We use American barrels to differentiate from our Chardonnay, which is in French oak. The American oak gives us some spice and texture. Fermentation in barrels reaches 65° F. The main portion of Pinot Blanc ferments in stainless steel between 58° F and 60° F. We stir the lees in both tank and barrel weekly for three months, rack the wine and then continue stirring weekly for another three months. We rack one last time to blend before bottling.

“The wine is cold-stabilized by chilling in tank after seeding with cream of tartar. It is heat-stabilized, using a minimal addition of bentonite. The wine gets cross-flow-filtered to 0.2 microns just before bottling. We seal the wine with screw cap to help retain fruit character and age the wine approximately 30 days before release.”

### ACCORDING TO LEIER:

“We always strive to make wines that are balanced and focused that showcase varietal characteristics. Our Pinot Blanc exhibits apple, pear and toasted oak aromas and flavors. We want a wine with intensity that has body in the mid-palate with balanced acidity for a clean, lingering finish.

“The geology at Sandhill is glacial, which means very deep sand with some coarser sandy loam. The vineyard grows at an elevation of 1,200 feet. Vines are planted in 4 feet by 8 feet spacings. Everything is Clone 54, half of which is own-rooted; the other half is on SO4 rootstock. The vineyards are irrigated and farmed traditionally. We pull leaves on the shade side to improve air flow but do very little on the sun side to prevent burning of the grapes. Conditions tend to be hot and dry, which give the vines enough stress, so we drop fruit to our target yield of 3 to 3.5 tons per acre.



## TASTING NOTES

**LEIER:** Vanilla and baked apple, toasty oak and pear on the nose. Flavors of golden apple, melon, toast and straw. Textured, but delicate and refreshing with citrus, spice and pear on the finish.

**DUMAYNE:** Nice toasty notes. It could use a touch more integration, but there's an appealing mandarin, orange pith and marmalade aroma. Silky texture. A softer style. The oak is a good framing of warmer fruit. Much better integrated on the palate. Excellent glycerol notes. Very oily.

**PIERSON:** There is fresh orchard fruit with baked apple and light toasty caramel on the nose. The palate has that baked apple, light citrus, stone and caramel, along with a creamy texture.

**HUBATCH:** It has some grassy, straw, Sauvignon Blanc-like character. It is coupled with some interesting sweetness of vanilla and sarsaparilla and citrus. On the palate, I got a lot of shortbread and pastry qualities. It was sweet and very ripe with melon flavors. The finish was short and truncated.

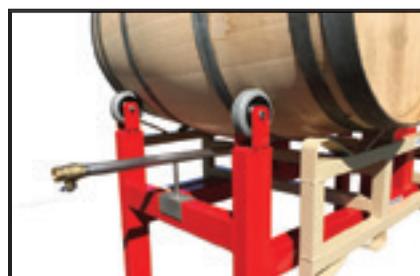
**HOUSEMAN:** There is reduction. There is lime zest with good acidity, but it is very phenolic. It is very ripe, oily and slightly hot. It has apricot and stone fruit flavors, but this ripeness tightens the wine, shortens the finish and gives more phenolics.

**VOIT:** I agree, especially about the phenolic aspect and riper profile. There is a touch of oxidation or ripe fruit of peach and apricot. It is intense on the palate, but the phenolics on the finish stick out.

**MCCONNELL:** On the nose I get almonds with cinnamon overtones. There seems to be quite a bit of malolactic, giving the wine a butterscotch character. It seems more like a Chardonnay than a Pinot Blanc.

**KLEIN:** I see it differently. It has fresh citrus, lemon peel with bitter orange and an edgy acidity, giving good length on the palate. It is very dry.

**MEYER:** I got almond and honey character and ripe apple. It has a spicy, nutmeg character. There is a toasted bread note. It is soft on the palate. It is a more heavy-handed style.



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VARIETAL FOCUS:

# PINOT BLANC

## OKANAGAN CRUSHPAD

Narrative Pinot Blanc 2017

Matt Dumayne was born and raised in Auckland, New Zealand. He took wine courses in Hawke's Bay and worked for eight years under the guidance of **Grant Taylor**. For 10 years he worked at various wineries in Oregon and California. He moved to the Okanagan Valley in 2011 and joined Okanagan Crush Pad Winery in 2012. Currently, he is head winemaker, as well as consulting for other wineries.



“Since we want to retain acidity, we watch pH and total acidity but also focus on flavor development. We wait for the green apple flavors to turn grapefruit/citrus, moving toward tropical. Grapes are partially green with others golden at harvest. Grapes are hand-picked, whole-cluster sorted and whole-cluster pressed. We add 10 ppm SO<sub>2</sub> and use a long, slow press cycle. Juice is settled for a day at 60° F. We use no hard chilling so as not to kill native yeasts. We rack to **Nico Velo** concrete tanks and stainless, where wine ferments between 65° F and 72° F. We use higher temperatures because we want to build glycerol. We only add nutrients if YAN is low (which is rare) or if H<sub>2</sub>S is present. We do not stir lees, but the wine sits on gross lees for the majority of its life.

“We rack a few weeks prior to bottling but do no cold or heat stabilization. Wine is filtered through **MicroFlex** to one micron. Coming from New Zealand, I am most comfortable using screw cap closures. We like to bottle-age the wine for one year but will release sooner if market demands dictate that.”

### ACCORDING TO DUMAYNE:

“We want to produce a wine that is fresh and lively, true to the varietal and, most importantly, to the Okanagan region. Grapes come from a 32-year-old vineyard and produce a wine that is mineral-driven with great texture. Texture is our main focus, and we ferment in concrete to enhance that texture and the minerality of the wine. We don't want any external flavor influences, such as oak, acidification or chaptalization.

“Our vineyard consists of glacial till over sandy loam at a 1,300-foot elevation. Vines are planted in 4 foot by 4 foot spacings on SO4 rootstock but with 32-year-old vines. We aren't certain which clones were used. The vines are irrigated and farmed organically, but not certified. We drop fruit to two clusters per shoot, leaf-pull post *veraison*, and fruit drop to hit target yields of 2.5 to 3 tons per acre. We use infrequent deep-water cycles to encourage root growth.



## TASTING NOTES

**DUMAYNE:** Grapefruit, apple and citrus notes. Slightly lifted Creamsicle. Lush texture with good length, some oxidative notes are starting to show, but the acidity is tart and focused.

**LEIER:** Bright citrus and fresh pear aromas with subtle notes of toast and flint. The palate is round with beautiful minerality and smooth texture. The flinty character comes through on the palate with spiced pear, lemon and a long finish.

**PIERSON:** It has a very bright nose with citrus and a wild floral component. In the mouth the flavors are restrained with citrus, creamy lees and some mineral flavors.

**KLEIN:** It is nutty and tart with a slight herbaceousness. I thought it might have been barrel-fermented.

**MEYER:** I get a nutty, toastiness, along with a cut hay character. There is some ripe pear and a hint of kiwi. Definitely some oak in there somewhere. It is medium-bodied with a fairly dry finish and good acidity.

**MCCONNELL:** I get a kind of metallic taste and a small amount of malolactic character. It has a lot of acid that seems to have been added. I also get a roasted almond taste.

**HOUSEMAN:** There is less stone fruit than the Oregon wines. Seems off-dry. I like the acidity and length, but it has more bitterness than it should.

**HUBATCH:** It is reductive and ripe. Very ripe, intense aromatics and flavors, again of shortbread and lemon curd. It seems over-the-top, but with good acidity. It is astringent on the back palate. It has citrus and acid, but not a lot of fruit.

**VOIT:** Ditto reduction and lean profile aromatically. There is nice focused acidity, but the wine is very tight and fairly phenolic.



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VARIETAL FOCUS:

# PINOT BLANC

## MENDOCINO COUNTY

Thirty years ago, little Pinot Blanc was grown in California, just 2,500 acres. Since then, things have gotten much worse: Currently, only 425 acres are remain throughout the state, and Mendocino County has just 25 total acres of Pinot Blanc.



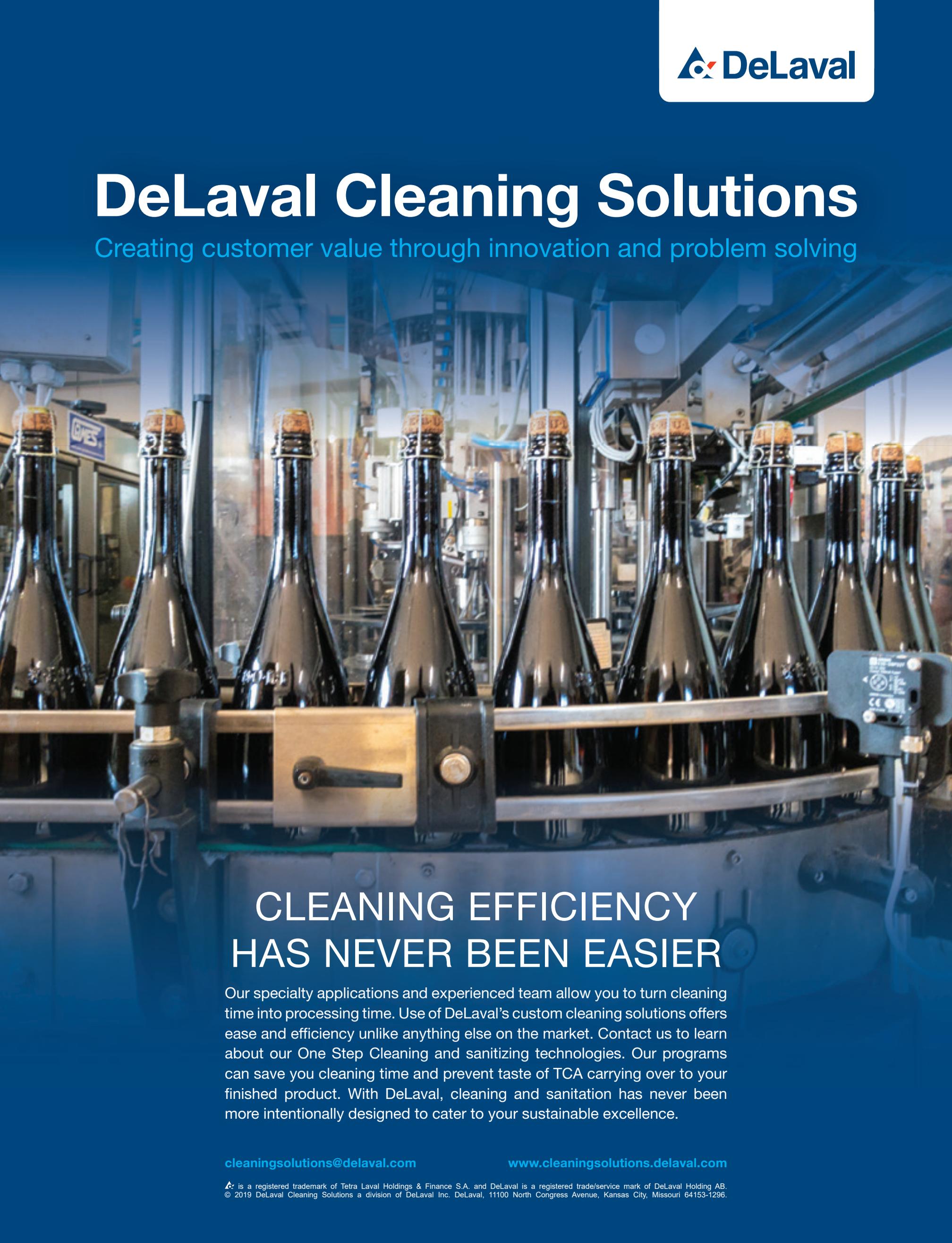
GIRASOLE VINEYARDS

Barra Girasole of Mendocino Redwood Valley Vineyards

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# Mendocino

Winery	GIRASOLE VINEYARDS	RIVINO WINERY	NAVARRO VINEYARDS
<b>Wine</b>	2018 Girasole Vineyards Pinot Blanc	2017 RIVINO Estate Pinot Blanc	2018 Pinot Blanc
<b>Winemaker</b>	<b>Randy Meyer</b>	<b>Jason McConnell</b>	<b>Jim Klein</b>
<b>Style Goals</b>	Semi-dry with clean, crisp flavors of apple, melon and citrus. No oak influence with good mouthfeel. A balanced wine that is not too sweet and not too dry.	Light and crisp with naturally high acid and low alcohol. Citrus and stone fruit with a clean finish.	Tropical fruit with peach. Dry with mineral elements, blended with Chardonnay for length and weight.
<b>AVA</b>	Mendocino County	Mendocino County	Mendocino
<b>Vineyard</b>	Redwood Valley Vineyards	Rivino Estate Vineyard	Rivino Vineyard and Navarro Home Ranch
<b>Vineyard Data</b>			
<b>Predominant Geology</b> (soil type)	Pinole, redvine soil	Alluvial river bottom	70% Russian loam, 30% Boontling loam
<b>Elevation</b>	825 feet	600 feet	560/260 feet
<b>Vine Spacing</b>	6 feet x 10 feet	7 feet x 8 feet	5 x 8 feet and 3 x 8 feet
<b>Rootstock</b>	St. George	3309	SO4
<b>Clones</b>	Old vines unknown from Wente; in 2015 clone 54 or 55	59	ENTAV-INRA 54, FPS 6
<b>Irrigation or Dry-farmed</b>	Irrigated	Irrigated	Irrigated
<b>Farming</b> (organic, Biodynamic, traditional)	California Certified Organic (CCOF) and vegan friendly	Traditional	Traditional at Rivino, sustainable at Navarro
<b>Production</b>	4 tons per acre	6.5 tons per acre	6 tons per acre at Rivino; 1.5 tons per acre at Navarro
<b>When to Pick</b>	TA, pH, Brix, color and taste; Look for viscous pulp, ease of berry removal from pedicel	Brix and taste; looking for a split of harder greener clusters and softer yellow clusters to give a nice balance; usually around 21° Brix	Target Brix for lower alcohol; concentrate on flavor; watch fruit condition
<b>Vineyard Practices</b>	Crown-suckering, shoot-thin and shoot-position; pull leaves, vertical trellis, deficit irrigation; cover crops cultivated with hoe plow; pomace cooked and turned back to vineyards	Pull leaves on morning sun side and try to keep deer away	Pull leaves on morning side, cane-cut and first leaf-pull mechanically; Home Ranch pull leaves
<b>Winemaking Data</b>			
<b>Sort</b>	Field-sorted	None	No
<b>SO<sub>2</sub></b>	20 ppm at crusher, 30 ppm post-primary fermentation	30 ppm	None at crush, 50 ppm after fermentation
<b>Crush, Destem, Press</b>	Destem straight to press	Whole cluster press	Crushed, destemmed and pressed immediately
<b>Settling</b>	48 hours at 50° F then add 2 lbs. bentonite after racking off lees	3 to 5 days at 40° F	48 hours at 42° F
<b>Yeast</b>	Maurivin AWRI 350	Elixir	QA23
<b>Nutrients</b>	Fermaid 2133 organic	If needed	Argilact (bentonite casein) pre-fermentation, DAP and FermK at 20 percent fermentation
<b>Acid Addition</b>	3 g/L	None	Rivino add 1.5 g/L to 6.6 g/L and 3.3 pH; Home fruit no addition
<b>Fermentation Temperature</b>	60° F to 62° F	Start 55° F, drop to 40° F then raise slowly back to 55° F	52° F to 55° F
<b>Fermentation Manipulation</b>	Laffort Fresharom to lower SO <sub>2</sub> usage	Slow and cold	None
<b>Tank Types</b>	Stainless steel	Stainless steel	Stainless steel
<b>Barrel Fermentation</b>	None	None	Moved to neutral puncheons on light lees post-fermentation
<b>Barrels Used</b>	None	None	500 L Tonnellerie Billon puncheons, 4 to 10 years
<b>Stir Lees</b>	No	No	Twice a month
<b>Racking</b>	Once post-primary to get off heavy lees	After primary fermentation	Off light lees and to bottle
<b>Cold Stability</b>	Add KHT and chill to 31° F	28° F for 6 weeks or as needed	10 to 14 days at 32° F
<b>Heat Stability</b>	Bentonite 3 lbs. per 1,000 gallons	Bentonite at juice stage	Bentonite
<b>Filtration</b>	Sterile-filtered	Plate and frame to sterile	DE, .45 micron at bottling
<b>Closure</b>	Screw cap	Engineered cork	Micro-agglomerated cork
<b>Bottle Age Before Release</b>	2 weeks	Few months to get through bottle shock	6 weeks

VARIETAL FOCUS:  
**PINOT  
 BLANC**  
 DATA SHEET

# Oregon

Winery	ANNE AMIE VINEYARDS	HARPER VOIT WINES	HELIOTERRA WINES
<b>Wine</b>	2016 Twelve Oaks Estate Pinot Blanc	2018 Harper Voit Pinot Blanc Surlie	2017 Willamette Valley Pinot Blanc
<b>Winemaker</b>	<b>Thomas Houseman</b>	<b>Drew Voit</b>	<b>Anne Hubatch</b>
<b>Style Goals</b>	Focus on sur lie rather than primary fruit. Inspiration was Muscadet and Chablis. It has mid-palate weight, along with bright acidity. Completely dry but the sur lie coupled with ML makes it feel rich and textured.	Bone dry with focused acidity and strong mineral, briny character. Nine months lees aging to round out texture and add richness and autolytic character without ML.	Like acidity and aromatics backed by texture and complexity. Trying for a lively wine with texture on the palate and enough acidity for refreshing finish.
<b>AVA</b>	Yamhill-Carlton District, Chehalem Mountains	McMinnville/Willamette	McMinnville Hills and Ribbon Ridge
<b>Vineyard</b>	Twelve Oaks Estate Vineyard	Meredith Mitchell Vineyard	Yamhill Valley Vineyards/Redman Vineyard
<b>Vineyard Data</b>			
<b>Predominant Geology</b> (soil type)	Laurelwood	Broken basalt and marine sediments	Sedimentary clays w/basalt intrusions/Willakenzie sedimentary soils
<b>Elevation</b>	650 feet	450 feet	500 feet
<b>Vine Spacing</b>	8 feet x 1 meter	9 feet x 5 feet	Varies
<b>Rootstock</b>	101-14, 3309	101-14	Own-rooted/3309
<b>Clones</b>	Clone 7	Colmar	Colmar
<b>Irrigation or Dry-farmed</b>	Dry-farmed	Dry-farmed	Dry-farmed
<b>Farming</b> (organic, Biodynamic, traditional)	LIVE certified	Biodynamic	LIVE certified, Salmon Safe
<b>Production</b>	3.5 tons per acre	2.25 tons per acre	2 to 3.5 tons per acre
<b>When to Pick</b>	When flavors change from Granny Smith apple to Golden Delicious; Skin starts speckling, and flesh separates from seeds; More about flavor than chemistry	Look for flavor development and wait for acidity to drop; Brix is always low	Pick predominantly on flavor while targeting a pH of 3.1
<b>Vineyard Practices</b>	Pull leaves morning side to encourage airflow and expose to sunlight; Hedge higher to fill vine space; No clusters touching; Cultivate every other row, Turning in green manure cover crop	Minimal leaf-pulling and fruit-dropping	Some fruit drop to maintain flavor and ripening; Leaves pulled twice during growing season
<b>Winemaking Data</b>			
<b>Sort</b>	In field and on incline conveyor to press	None	Sort in vineyard
<b>SO<sub>2</sub></b>	No SO <sub>2</sub> until post-fermentation	None at pressing, only after primary fermentation	None at pressing, added post-primary fermentation
<b>Crush, Destem, Press</b>	Whole cluster press, brown out the juice	Whole cluster press	Whole cluster press
<b>Settling</b>	At least 48 hours at 38° F	24 hours at 45° F	24 to 48 hours at 40° F
<b>Yeast</b>	VL alternating between 1, 2 and 3	Cross Evolution	Five different yeasts
<b>Nutrients</b>	Bump to 300 YAN with DAP, Superfood and MicroEssential Trace	MicroEssentials Powder and Trace at 2° to 3° Brix	Micro nutrient and DAP, sometimes Optiwhite
<b>Acid Addition</b>	None	None	None
<b>Fermentation Temperature</b>	50° F	High 50° Fs to mid-60° Fs	55° F to 70° F, depending on vessel
<b>Fermentation Manipulation</b>	Air, if necessary	None	None
<b>Tank Types</b>	Barrels and stainless steel	75 percent 500 L puncheons; 25 percent 228 L barrels	Stainless tanks, stainless barrel, oak barrels
<b>Barrel Fermentation</b>	Yes	Yes	About 30 percent
<b>Barrels Used</b>	Neutral 5 to 10 years old	4 to 9 years old	5 to 10 years
<b>Stir Lees</b>	Yes, bi-monthly	No	Every 2 weeks
<b>Racking</b>	Stays on gross lees until cuvée is assembled	Rack right before bottling	Only at blending
<b>Cold Stability</b>	Add cream of tartar and chill	K <sub>2</sub> CO <sub>3</sub> seeding and chill	Chill in tank or Celestab
<b>Heat Stability</b>	Bentonite	Bentonite during fermentation and prior to bottling if necessary	Bentonite
<b>Filtration</b>	Sterile-filtered	Cross-flow- and sterile-filtered	Cross-flow-filtered
<b>Closure</b>	Screw cap with 302 liner	Diam cork	Cork
<b>Bottle Age Before Release</b>	1 year	1 to 2 months	6 months

# Okanagan Valley

Winery	OKANAGAN CRUSH PAD	ST. HUBERTUS & OAK BAY WINERY	SANDHILL WINES
<b>Wine</b>	Narrative Pinot Blanc 2017	2017 St. Hubertus Pinot Blanc	Sandhill Pinot Blanc 2017
<b>Winemaker</b>	<b>Matt Dumayne</b>	<b>Andy Gerbert</b>	<b>Sandy Leier</b>
<b>Style Goals</b>	Fresh and lively. Mineral-driven with no oak, unnecessary manipulation, acidification or chapitalization. Textural-driven wine is the main focus.	A clean, fresh fruit-driven wine with apple, lemon and peach aromas. A juicy palate with ripe fruit flavors until acidity reins it back into a long finish.	Focus on varietal character and balance. Want a wine with intensity that has body in the mid-palate with balanced acidity for a clean lingering finish.
<b>AVA</b>	N/A	Okanagan Valley/S. Kelwona Slopes	Okanagan Valley
<b>Vineyard</b>	Black Dog Vineyard	64% St. Hubertus, 36% Oak Bay, (both estate vineyards)	Sandhill Estate Vineyard
<b>Vineyard Data</b>			
<b>Predominant Geology (soil type)</b>	Glacial till over sandy loam	Sand-based with gravel, becoming more clay-based approaching the lake	Deep sand with coarser sandy loam
<b>Elevation</b>	1,300 feet	1,000 to 1,300 feet	1,200 feet
<b>Vine Spacing</b>	4 feet x 4 feet	3 feet x 8 feet and 8 feet x 5 feet	4 feet x 8 feet
<b>Rootstock</b>	SO4	SO4	Half own-rooted, half SO4
<b>Clones</b>	Unknown (30-year-old-vines)	Unknown	Clone 54
<b>Irrigation or Dry-farmed</b>	Irrigated	Irrigated	Irrigated
<b>Farming (organic, Biodynamic, traditional)</b>	Farmed organically (not certified)	Organic	Traditional
<b>Production</b>	2.5 to 3 tons per acre	5 tons per acre	3.3 to 3.5 tons per acre
<b>When to Pick</b>	Flavor development most important; Brix less important than acidity and pH	Pick primarily based on flavor, looking for bright citrus fruit, along with tropical fruit flavors; Look for brown seeds and pick before snow	Look for minimum 22° Brix; Sample Brix and TA; Taste for flavor development
<b>Vineyard Practices</b>	Fruit dropped to two clusters per shoot; leaves thinned at 60 percent veraison	Remove leaves from the north side; Green drop in August or September; Use irrigation to keep vines healthy	Leaf removal; drop fruit to get target yield
<b>Winemaking Data</b>			
<b>Sort</b>	Cluster-sorted	Machine-harvested	None
<b>SO<sub>2</sub></b>	10 ppm at press; maintain 20 ppm post-fermentation	30 ppm in juice pan	50 ppm in fruit bins
<b>Crush, Destem, Press</b>	Whole cluster press	Destemmed and lightly crushed to press; free run separated from press fraction	Destemmed then pressed; free run separated from hard press
<b>Settling</b>	One day at 60° F	48 hours at 57° F	2 days at 45° F
<b>Yeast</b>	Native	EC1118	Anchor VIN 13
<b>Nutrients</b>	Dependent on YAN and H <sub>2</sub> S detection	Fermaid K&O at one-third and two-thirds of ferment	50g/hL FermaidK and 25 g/hL Thiazote pH at one-third ferment
<b>Acid Addition</b>	None	None	1.5 g/L tartaric to juice before yeasting
<b>Fermentation Temperature</b>	65° F to 72° F	70° F	58° F to 60° F
<b>Fermentation Manipulation</b>	None	N/A	None
<b>Tank Types</b>	Nico Velo concrete tanks and stainless steel	Stainless steel	Stainless steel
<b>Barrel Fermentation</b>	No	1 barrel	30 percent barrel-fermented
<b>Barrels Used</b>	N/A	New	New and second-use American oak
<b>Stir Lees</b>	No	No	Weekly for 3 months
<b>Racking</b>	Wine sits on gross lees until it is racked for bottling	Rack off lees post-ferment, clear rack in December and racked to bottle	Rack after stirring lees for 3 months then again at blending
<b>Cold Stability</b>	No	Chill in tank	Chill and seed with cream of tartar
<b>Heat Stability</b>	No	Bentonite at 3lbs. per 1,000 gallons	Bentonite
<b>Filtration</b>	MicroFlex	Cross-flow- and sterile-filtered	Cross-flow-filtered
<b>Closure</b>	Screw cap	Screw cap	Screw cap
<b>Bottle Age Before Release</b>	One year; sooner if market demands	6 months	1 month

# PINOT BLANC

## RIVINO

### 2017 RIVINO Estate Pinot Blanc

Jason McConnell is a mechanical engineer from Canada, who was working in construction management when he was transferred to Northern California. He met his wife, **Suzanne Jahnke-McConnell** (also Canadian), whose father owned the **Schrader Ranch Vineyard** just south of Ukiah. They dabbled with homemade wines from the vineyard and in 2008 took the plunge with RIVINO Winery. RIVINO is 100 percent estate-vinted and -bottled. The estate has just over 200 acres planted to vines.



#### ACCORDING TO MCCONNELL:

“We would like our Pinot Blanc to be light and crisp with naturally high acid and low alcohol. We emphasize pear, citrus and stone fruit character with some chalky minerality. We want our wine to be bright and refreshing with a lingering acid finish. This Pinot Blanc is designed to be great with or without food.

“This block of Pinot Blanc grows on fertile alluvial river bottom soil that has lots of clay loam, so it retains moisture very well. It sits at 600 feet in elevation. The vines are planted 7 feet by 8 feet on 3309 rootstocks with Clone 59 exclusively. The vineyard is

drip-irrigated and traditionally farmed. The vines are vigorous and can handle high crop loads of grapes, usually averaging 6.5 tons per acre. We pull leaves on the morning sun side, cane-prune and do the first leaf-pull mechanically. We get large, tight clusters that tend to ripen evenly, especially because we harvest at lower sugars. We irrigate right up to harvest to keep the leaves green and the canopy healthy. We do not want any yellowing in our leaves.

“We determine when to pick based on Brix and taste. We will have a split of harder green clusters and others that are softer and golden. Grapes usually come in around 21° Brix. We find this mix gives the wine a nice balance; and while we like to say we pick based on taste and science, the biggest factor is deer. We have a lot of deer, and Pinot Blanc is their favorite grape. When they start eating the grapes, **Jim Klein** tells us to pick his grapes for the **Navarro Vineyard**. When Jim picks, we all pick. It has worked great up to this point, so why change?

“Grapes are machine-picked at night and are not sorted. We add 30 ppm SO<sub>2</sub> and go directly to the press while still cold. We add bentonite and settle the juice for three to five days at 35° F. We rack clear post-settling to stainless tanks and add **Elixir** yeast. We add no acid and only add nutrients if we detect H<sub>2</sub>S in the fermentation. We like to ferment slow and cold. Typically, we start fermentation at 50° F then lower it to the mid-40s. When we reach 3° to 4° Brix, we’ll let the temperature climb slowly to 55° F. At 0.4 residual sugar, we add SO<sub>2</sub> and stop fermentation. Our Pinot Blanc fermentations usually take two months to finish.

“We use no oak barrels for this wine. We rack when primary fermentation has stopped. We cold-stabilize by chilling tanks down to 28° F for six weeks, or as needed. Bentonite at the juice stage takes care of heat stability. Wine is plate- and frame-filtered and then sterile-filtered. We bottle with some natural CO<sub>2</sub>, which we think brightens the wine and keeps it lively. We use engineered corks and age the wine a few months to allow it to get past bottle shock.”





RIVINO

Pinot Blanc tasting at RIVINO (left to right)

Jason McConnell, RIVINO; Jim Klein, Navarro Vineyards; Lance Cutler, WBM; Randy Meyer, Girasole Vineyards

## TASTING NOTES

**MCCONNELL:** Aromatically, it has a bit of citrus and nectarine without a lot of spicy notes. What I enjoy about Pinot Blanc is that I don't get a whole multitude of flavors out of it. It is more one-dimensional. It has high acid and some white peach. It is clean, which I enjoy. No other varieties are blended in. It's clean and pleasant to drink.

**KLEIN:** I get green apple and some distinct minerality. There is a briny character. It is a palate-cleansing wine, perfect for summer. It doesn't have layers of flavor. It is simply a briny, palate-cleansing, straight-forward wine.

**MEYER:** I enjoy that chalky character. I get green pear and a hint of lemon-lime citrus. I like the sugar/acid balance. I think the hint of RS helps the drinkability. The color is nice and clean and bright. It is a light, crisp style without the crazy aromatics of a Sauvignon Blanc, for example. I like the balance.

**DUMAYNE:** Nice plush stone fruit. Good tropical notes. Quite a ripe style with ripe bananas. The entry is sweet, texture is lush, and the RS dominates a little. Phenolic structure is sound.

**PIERSON:** I get citrus, pith, floral, stone, flint and honey on the nose. In the mouth there is fresh citrus, along with a subtle sweetness.

**LEIER:** Pale lemon color. Bright citrus notes on the nose with hints of honey and mandarin. Some minerality on the palate, medium intensity, body and acidity. Smooth, even palate with toasty, yeasty notes. Finishes light but not dry.

**HOUSEMAN:** Across the board, there are more aromatics in this flight than the other two, almost to the point where it comes off as different fruit. This has lifted candied fruit, like fruit cocktail. Very nice nose with some crushed shell as well. Good acidity. It is crisp and round and comes off as off-dry. The palate is like fruit salad, and the fruit seems ripe.

**HUBATCH:** This is the most savory of the three in this flight with a crushed stone and seashell brininess. There is a vegetal kelp character that morphs into a bit of funk. I got that cherry and fruit salad. On the palate, I love the texture of this wine. I wish it had more acidity. It has stone fruit, muskmelon and cantaloupe flavors.

**VOIT:** It is very fruity and floral with a mixture of greenness. There is a heavy ripe melon character. The stone fruit flavors are apricot-driven on the palate. It is distinctly off-dry but nicely balanced.

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# PINOT BLANC

## GIRASOLE VINEYARDS

2018 Girasole Pinot Blanc

Randy Meyer is responsible for making wine from more than 9,000 tons of grapes annually at **Barra Redwood Valley Cellars**. A graduate of **UC Davis** with a degree in fermentation science, he worked at **Korbel Champagne Cellars** for 23 years. He served as senior winemaker with **Draxton Wines** for eight years. In June 2019, Meyer started as director of winemaking and operations for **BARRA of Mendocino/Girasole Vineyards**, as well as the Barra Redwood Valley Cellars' custom crush facility.



### ACCORDING TO MEYER:

“Our goal for Girasole is to produce a fresh, crisp, brightly balanced version of Pinot Blanc at a reasonable price point. We get flavors of apple, melon and citrus by picking a bit riper. There is no oak influence, and we strive for good mouthfeel and balance—a wine that is neither too sweet nor too dry and finishes with a crisp, dry finish.

“Girasole comes from a vineyard that has Pinole and Redvine soil. It sits at an elevation of 824 feet. Rows are planted using 6 foot by 10 foot spacing; all vines are on St. George rootstock. The old vines are unknown clones but believed to be the very aromatic Melon Clone (which is not a true Pinot Blanc). The 8 acres planted in 2015 use Clone 54 or 55. The vineyard is irrigated and certified by the **California Certified Organic Farmers (CCOF)**.

“There is a tremendous amount of hand work done on the vines, including crown-suckering, shoot-thinning, shoot-positioning, fruit-dropping and leaf-pulling. Vines are vertically trellised. Cover crops are planted in the fall,

and cultivation is performed with a hoe plow. No pesticides, herbicides or non-organic fertilizers are used in the vineyard. Pomace is turned to compost and returned to the vineyards. We irrigate to keep the vines healthy and green, cut canes late to facilitate picking and harvest yields about 4 tons per acre.

“We pick based on the sugar balance but watch TA, pH and Brix progression during ripening. We look for a viscous pulp and the ease of berry removal from pedicel. We prefer a riper style and wait for flavors to develop, knowing full well that we will need to make acid additions, especially to the Melon Clone grapes.

“Grapes are hand-picked and field-sorted. We destem straight to the press without crushing but add 20 ppm SO<sub>2</sub>. Juice is cold-settled for 48 hours at 50° F and then racked. Bentonite is added at 2 pounds per 1,000 gallons after racking. Low solids are very important because we can't afford problems with H<sub>2</sub>S due to being organic. We make our acid additions as much as 3 grams per liter if necessary. We use **Maurivin** AWRI 350 yeast for its high ester character. Fermaid 2133 organic nutrient is added at 20° Brix. We use **Laffort** Fresharom to help lower our SO<sub>2</sub> usage. Wine ferments at 60° F to 62° F. These higher temperatures give us better mouthfeel.

“Wine is fermented in stainless steel tanks. No oak is used in the process. Post primary fermentation, the wine is racked off heavy lees.



GIRASOLE VINEYARDS

We shoot for a residual sugar in the range of 2 to 3 grams per liter. Cold stability is achieved by chilling the wine with an addition of KHT. Heat stability is achieved using more bentonite. Wine is cross-flow- and sterile-filtered. Bottles are sealed by screw cap and aged for two weeks before release.”

## TASTING NOTES

**MEYER:** There is a considerable amount of stone fruit with that minerality, which defines Pinot Blanc. It has unripe apricot, some pear notes and almond husk. There is not a lot of stone fruit or tropical character, but there is some pear. The acidity is firm, and the RS adds mouthfeel and weight.

**MCCONNELL:** I get more orange and lemon on this. This has less acid than the Navarro, and that ends the finish more quickly. There is some green pear and some stone fruit. It has higher alcohol. It is clean and refreshing.

**KLEIN:** It is a riper style. We’ve moved into dry pear and orange zest. It is not cloying, but there is a definite sweetness that helps the wine finish with a punchy juiciness rather than crisp acidity.

**DUMAYNE:** High SO<sub>2</sub> on the nose. A bit lactic and cheesy. The length is great, and the texture is superb. Some deeper brown apple characters but without oxidative notes. Juicy and mouthwatering with great balance.

**PIERSON:** Bright citrus, mostly lime with apple. Nice acidity. Lovely citrus on the palate with a fresh, bright, acid finish.

**LEIER:** Pale lemon color. Sweet ripe stone fruit aromas with fresh peach, sweet lemon, pear and a hint of fresh herbs. Nice intensity, medium body. Slight astringency on the finish with nectarine lingering on the palate.

**VOIT:** Extremely aromatic and terpene-driven. I would be shocked if this was 100 percent Pinot Blanc. It is citrusy and grapefruity on the palate, but I can taste those terpene characters through on the palate. I think there is Muscat or Gewürztraminer in here. It is bright and acidic, but the fruit is so generous that it presents as sweet, even if the wine is not.

**HOUSEMAN:** I wrote Muscat twice. It has that Juicy Fruit gum thing and fruit cocktail. It tastes like there is some Muscat in here, and it is phenolic as well. It is fruit-forward. It reminds me of a white Alsace blend. It’s pretty, and I like it. It has lots of melon with nice acidity, very generous fruit and a tiny bit of heat.

**HUBATCH:** It is nicely done, but it is more an aromatic white wine than Pinot Blanc. I enjoyed the wine. It was fresh and clean with pear, peach, white floral and a little apricot. Lots of aromatics that popped. Very clean on the palate with white peach, apricot, jasmine and great citrus. It is well-balanced, a little off-dry, very clean and focused.



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## NAVARRO VINEYARDS

2018 Pinot Blanc

Jim Klein views himself as a winegrower more than a winemaker. After graduating from UC Davis, he made wine in the Santa Ynez Valley, New Zealand, Napa Valley and the Golan Heights in Israel. He joined Navarro Vineyards in 1992 and won the title of Winemaker of the Year from the **San Francisco Chronicle** in 2002. He chose to live on the ridgeline above the Anderson Valley to get a feel for how the weather affects the grapes every day of the year. He continuously looks for new varietals, blends and techniques and has consistently produced well-made, delicious wines at Navarro for close to 30 years.



### ACCORDING TO KLEIN:

“With this Pinot Blanc I am looking for minerality without overt fruit, so I want the wine to be dry with mineral elements. The variety gives some tropical fruit, peach and pear character. We harvest cool, trying to avoid bitter flavors from heat. We blend in a bit of Chardonnay for length and weight on the palate.

“These grapes come from two different vineyards. Rivino Vineyards accounts for 71.4 percent, and 21.4 percent comes from a newly planted section on the **Navarro Home Ranch**. We have also added 7.1 percent Chardonnay. The Rivino property is Russian loam, sitting at 560 feet elevation. Vine spacing is 7 feet by 8 feet on 3309 rootstock using clone 59. The Navarro Home Ranch has Boontling loam, sits at 260 feet and is planted in 5 foot by 8 foot and 3 foot by 8 foot spacings. Clones are ENTAV-INRA 54 and FPS 6, and both are planted on SO4 rootstock. Both vineyards are irrigated. Rivino is farmed traditionally, while Navarro is farmed sustainably. At Rivino they pull leaves on the morning sun side, cane-cut and do the first leaf-pull mechanically. At the Home Ranch we pulled leaves. Production at Rivino was around 6 tons per acre. At the Home Ranch, this first harvest came in at 1.5 tons per acre.

“When determining the time to pick, I target Brix for lower alcohol, concentrate on flavor and watch fruit condition. I look for the absence of green flavors. I want to see some peach stone fruit character and even some tropical mango character. At Rivino, the deer know when the grapes are ready, and we need to harvest before they do.

“Grapes at Rivino are machine-harvested at night to gondolas. The grapes are cold, which is important. We receive the grapes and go immediately to press. We add no SO<sub>2</sub> and allow the juice to brown. We settle for 48 to 72 hours at 42° F with Argilact (bentonite casein). We rack to a stainless steel tank, then lees-filter the lees and add them back into the mix. We adjust the acid with 1.5 g/L to 6.6 g/L and 3.3 pH. We add DAP and FermK



at 20 percent fermented. We inoculate with QA23 because it ferments cold and clean and *always* finishes. Fermentation temperatures were kept between 52 and 55° F. After fermentation, the wine is moved on light lees to 500 L **Tonnellerie Billon** puncheons that are four to 10 years old. The wine rests for four months with the lees being stirred twice a month. The Home Ranch fruit was whole-cluster pressed to oak ovals, where it fermented in the low 50s for 30 days. Then we added SO<sub>2</sub> and chilled the wine.

“We blend the lots in January. I added about 7 percent Chardonnay (Selection 76 on SO4, no

ML, neutral barrels) for mid-palate weight and length. The wine was chilled to 32° F for 10 to 14 days to achieve cold stability, and we used bentonite for heat stability. We DE-filtered and went through .45-micron filters to bottle. We used micro-agglomerate corks (**Ganau UNIQ**), and the wine was bottled for six weeks before release.”

## TASTING NOTES

**KLEIN:** There is stone fruit and some minerality, along with length, probably from the Chardonnay. There is even a touch of Meyer lemon. I get a briny, bright, palate-cleansing feature that I find desirable. It hangs in on the finish with a bit of fresh fig.

**MEYER:** This beautifully displays the delicacy of Pinot Blanc. It has a lightness and refreshing nature. There is strong stone fruit, but it is balanced and buffered by that firm acidity. The finish is really refreshing. The acid gives length, and there is a wonderful varietal minerality and chalkiness.

**MCCONNELL:** It has lemon zest up front with good acid along the way. That Chardonnay seems to round it out, where it has a little more mouthfeel and body than the other wines in this flight. My favorite part is when you get to the end: The acid keeps holding on and makes for a mouthwatering experience.

**DUMAYNE:** High SO<sub>2</sub> on the nose, but nice tropical and pineapple notes underneath. Good concentration and length with fruit that carries nicely onto the palate. The acid balance is great, but there is a touch of astringency.

**PIERSON:** It is ripe with citrus, tropical, apple and pear. In the mouth there are subtle hints of citrus with orchard apple and pear. I think I pick up some oak influence.

**LEIER:** Yellow apple and pear on the nose with some citrus notes. The palate is delicate and refreshing with lemon, toast and a hint of vanilla. Fresh, bright acidity with citrus on the finish. Clean and focused wine.

**HUBATCH:** Bursting with fresh fruit aromas. There is some citrus, a bit of watermelon rind and a hint of barrel toast. It is fresh and clean with some floral character. On the palate, it was balanced and pretty. Very complete wine with terrific acidity and freshness. I get a bit of carbonic acid on the finish and some brininess. It is the driest of the three.

**VOIT:** Slight honey and floral character on the nose. There is a mixture of sweet herbal and a touch of mushroom. It seems very Alsatian in style. There is lovely citrus and green pear on the palate with slight phenolics. It is extremely balanced with spice tones on the finish. Beautiful wine.

**HOUSEMAN:** It is bright and powdery in a powdered sugar way. It is floral with a honeysuckle quality. I get a tiny bit of fruit cocktail and ripe pear. I love the acidity. It has well-made phenolics. I get mandarin slices and ambrosia salad. I like the floral character a lot, along with the saline quality. It was the driest of the three, and I really enjoyed this wine.



RIVINO

**PINOT BLANC** is a versatile grape variety that can be made in a variety of wine styles. All the Oregon winemakers opted to focus on texture while maintaining some fruitiness and balanced acidity. The wines shared a sense of place and style while offering a variety of flavors. The Okanagan wines were more winemaker-centric: individual winemaking choices had direct influence on the finished wines with some wines being fruitier and others more textured. In Mendocino, there was a clear difference between the wines made primarily with true Pinot Blanc and the one produced using the Melon clone.

Based on this varietal focus, winemakers can pretty much do whatever they want with Pinot Blanc. Almost half of the grapes used in this varietal focus were machine-harvested. Wines were fermented in a variety of vessels, including stainless steel, concrete, puncheons, French oak barrels and American oak barrels. Fermentation temperatures ranged from low (45° F) to high (72° F). Some wines settled on lees, others were stirred, and still others were racked clean.

Whatever the place and however the winemakers chose to vinify, the Pinot Blanc wines in this Varietal Focus were perfect for easy drinking. They offered apple, pear and citrus aromas, along with a flinty or smoky backbone. Flavors flowed into stone fruit, more exotic citrus and some tropical flavors. All the wines showed admirable acidity and good length. No one element overpowered another.

In short, there is a subtlety inherent in Pinot Blanc that can be charming. The wines are equally at home on a dinner table with a fine meal or on a blanket at a sandy beach on a summer day. It is hard to imagine food that would not pair well with Pinot Blanc. The wine is adaptable for almost any occasion and available at prices that all should be able to afford. [WBM](#)

# The Case for Dedicated Pumps

Tanks equipped with their own pumps make better wine using less labor, say convinced winemakers.

Jim Gordon



PHOTOS BY: CECILY RAY FOR PARRISH FAMILY VINEYARD

**THE IDEA OF PERMANENTLY** attaching a pump to each red wine fermenter in the cellar is a bit of a stretch when first considering it. Why buy multiple pumps when it's easy enough to wheel one pump from tank to tank for pump-overs and cleaning?

Pumps are expensive and aren't needed 24/7, except during fermentation. So why have winemakers all over California, including **Chateau Montelena Vineyard** in Napa Valley, **Bogle Vineyards** in Clarksburg and **Parrish Family Winery** in Paso Robles, invested in dedicated pumps for their tanks?

The winemakers we spoke with on the subject were very clear about the advantages. The main benefit: dedicated pumps help make better wine and require fewer worker hours.

"I just think these things are such labor savers," said **David Parrish**, owner and winemaker for Parrish Family Vineyard. "They increase the quality of the wine because you can dial things in so much better during fermentation. The foremost thing, is that I can do a lot more pump-overs and space out the timing a lot better over time."

Other advantages include less frequent pump cleaning, automation of tasks, protection against human error, improved worker safety and reduction of hose clutter on the cellar floor.

## Question of Expense

"The price isn't really a disadvantage," said **Curtis Phillips**, a veteran California winemaker and **Wine Business Monthly's** senior technical editor. "At its most advantageous, one is using a dozen \$1,000 to \$5,000 pumps to replace a single \$15,000 to \$20,000 positive displacement pump—and that's without having to spend nearly as much labor."

"If you're just trading one **Jabsco** pump for a dozen, then yeah, maybe you shouldn't be looking at automating. But if you're just using a single Jabsco flexible impeller pump, you're probably too small a winery to see any real advantages in automation anyway."



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

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## The Case for Dedicated Pumps

A lot of the efficiency in labor provided by dedicated pumps comes from the fact that the cellar crew needs to clean and sanitize a dedicated pump and its hoses only when that tank is done fermenting and is ready to press off. The pump comes into contact with only one wine at a time, so it doesn't require cleaning during a fermentation any more than the tank itself.

But it does result in more pumps to maintain. "The maintenance might be a wash, but with dedicated pumps you're deferring all the pump and hose cleaning and sanitation you have to do several times a day to once every time you drain and press-off a fermenter," Phillips said. "On a fast, three-day ferment tempo, this is exchanging six to nine cleanings for however many fermenters you're running."

## Necessary for Automated Tasks

A dedicated pump is an essential component in a fully automated tank control system. In a December 2017 *Wine Business Monthly* article, **Ted Rieger** laid out the reasons: "Many control systems can schedule automated pump-overs—times and frequencies, durations, speed—when individual tanks are designed with dedicated pumps and pump-over systems. This provides significant labor efficiency with greater worker safety, and more reliable and precise processing. Control systems can be designed to integrate temperature control with automated pump-overs and cap irrigations to reduce the temperature stratification that commonly occurs in tanks, particularly during red wine fermentation."



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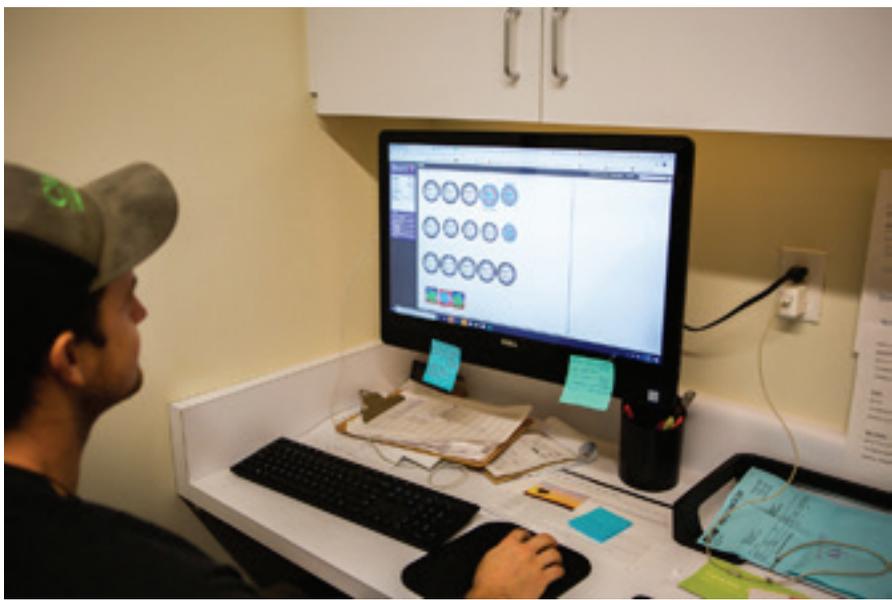
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David Parrish bought 15 tanks set for automated pump-overs, with hot and cold glycol built in. The tanks, which range from 4- to 8-ton capacities, require a 480-volt power supply and can be monitored remotely with a Venturi system.



Parrish Family Vineyard produces 3,500 cases annually, and owner David Parrish and his small crew had been doing pump-overs by hand for 16 years. Then, before the 2017 crush, he bought 15 tanks from **Westec Tank & Equipment** with dedicated pumps from **Burgstahler Machine Works**, all set up for automatic pump-overs and with hot and cold glycol built in. The tanks ranged from 4-ton to 8-ton capacities and came from the manufacturer with all the bracketry built in, requiring some coordination between the pump and tank manufacturers to ensure everything would fit.

An electrician attached and set up the designated pumps at the winery; they needed a 480-volt power supply. Parrish also chose to have a **Venturi** system installed in each one and connected to compressed air to enable automated oxygenation. The control system was connected to each tank so that the various operations can be scheduled and monitored from a computer or mobile device, as well as turned on and off at the tank.

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## The Case for Dedicated Pumps

### Programmed for Pump-overs

“I had maybe 60 to 70 pump-overs in the last week as we finished fermenting,” Parrish said regarding the 2019 harvest. He emphasized that during fermentations, especially early in the process when the yeast has just begun multiplying, the time between pump-overs and the volume of each are critical. “But now I can really dial them in. It’s a fantastic way to do a lot of pump-overs,” he said.

He programs the pump-overs based on the turnover percentage in the tank. Knowing the gallons-per-minute rate of the pumps and the volume of his tanks, he supplemented the charts that came with the equipment to show the minutes needed in each tank for a 100 percent pump-over and what he calls the half and quarter pump-overs. He typically uses 50 percent of the pumps’ maximum speed, sometimes 30 percent.



“Before, I would never do four pump-overs in a day, but now I can do that, especially early in the fermentation when it’s most crucial,” Parrish said, noting he likes to get a lot of skin contact while the must is still basically a water solution in order to get color into the wine. “Color is water-soluble.

Tannin is more alcohol-soluble. I don't want big, tannic wines; I want big, colorful wines with soft tannins."

With his control system and the dedicated pumps doing most of the work during fermentation, and with much less cleaning being done in between pump-overs, his crew now goes home for dinner—or at the latest by 8:30 p.m. "It used to be that my guys would be up all night. It's saving me overtime hours and dollars, and the guys are fresher—not making so many mistakes," Parrish said.

Another convert to dedicated pumps is **Matt Crafton**, winemaker at 50,000-case Chateau Montelena, who uses them on 30 tanks. Each has a dedicated pump and **LOTUS** cap irrigator controlled by **TankNET**, according to an article in the April 2019 issue of *WBM* by **Lance Cutler**.

At Bogle, a winery with a much larger production, crew members run pump-overs twice a day in each tank, using attached equipment controlled by TankNET and a **TOAD** irrigator to wet the cap, but keeping a human eye on the process through 36-inch manways that **Eric Aafedt**, director of wine-making, specifically requested for this reason. The system makes adjustments in pumping speed and duration as needed.

The 2.5-million-case winery has roughly 350 tanks made by Westec that range in size from 1,000 gallons to 129,000 gallons. The fermentation tanks are outfitted with temperature probes for the cap and for the body of the wine and are integrated into the TankNET system. All of the tanks are set up for semi-automatic pump-overs, and the largest tanks have dedicated pumps.

Vendors of tank control technology in California also include **VinWizard**, **Logix Controls**, **Moon Valley Circuits** and **Placer Process Systems**. Potentially any tank maker can build their tanks to accommodate dedicated pumps.

**"I just think these things are such labor savers...they increase the quality of the wine because you can dial things in so much better during fermentation. The foremost thing, is that I can do a lot more pump-overs and space out the timing a lot better over time."**

**David Parrish**, owner and winemaker, Parrish Family Vineyard

## Any Shortcomings?

Back in Paso Robles, Parrish pointed out that dedicated tank pumps are designed to pump juice, not solids, so they may not be up to the task during cold soaks. When he first tried it, the screens used with the dedicated pumps became clogged when trying to mix the cold must. Now his crew does manual pump-overs for the first three days, then adds yeast and pauses until the cap has risen enough to pump just the juice below it.

Parrish said that's a minor shortcoming. His only other quibble was that he would have preferred a 2-inch pipe that goes from the dedicated pump to the top of the tank rather than the 1.5-inch ones that the manufacturer installed.

Parrish's enthusiasm for dedicated pumps is as high as Phillips', who said, "Frankly, for any winery producing more than a few thousand cases per year, there are few or no downsides to using automated pump-overs, except the initial capital outlay. And that isn't so bad if one counts the savings in labor."

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# Impact of Oxygen on Red Wines Aged in Oak Barrels

Alexandre Pons, Andrei Prida, and Philippe Darriet

**Alexandre Pons** is a researcher for Tonnellerie Seguin Moreau and director at the Institut des Sciences de la Vigne et du Vin, University of Bordeaux, Villenave-d'Ornon, France.

**Andrei Prida** is R&D manager, Tonnellerie Seguin Moreau, Merpins, Cognac, France.

**Philippe Darriet** is director of enology research unit, Institut des sciences de la vigne et du vin, Villenave-d'Ornon, France.

## Key Points

The article deals with evaluation of oxygen impact on several red Bordeaux wines aged in oak barrels. It has been shown that wine has the ability to mitigate (buffer) differences in oxygen supply without production of a chemical oxidation marker associated with an aromatic evolution. This ability is strongly dependent on certain intrinsic wine qualities and grape varieties.

**AGING IN BARRELS IS** accompanied by the dissolution of oxygen. Oak is a porous material, permeable to gas, allowing exchanges with ambient air throughout the aging period. It is easy to determine that oxygen ingress during barrel aging, is significantly higher when using airtight containers (such as stainless steel).

During oak barrel aging, the ways in which wine intakes oxygen may differ: it can be related to the porosity of wood, sometimes to permeability, and it is important to consider, the contributions of technological operations, such as wine transfer, racking, etc. The actual state of the art emphasizes the fact that oxygen ingress in wine kept in oak barrels is not constant but could be divided into two steps:

1. Intense initial release (first one to two months)
2. Low and progressive oxygen dissolution (following period until the end of maturation in barrels).

In the first step, oxygen originates from two distinctive mechanisms. The first one is related to the extraction of oxygen contained in wood porosity. The quantity of oxygen trapped in wood is estimated to be 0.3 mg per gram of dry wood, in trials realized with oak pieces (staves) immersed in model wine.<sup>5</sup> Thus, the impregnation of wine in the wood of new barrels can be accompanied with the dissolution of several mg/L of oxygen.

The second mechanism was highlighted by **Maria del Alamo-Sanza** et al.<sup>1</sup> This research group found decreasing wood oxygen permeability with increased moisture content. After an intense initial release, oxygen transfer decreases and stabilizes. After dissolution, oxygen is quickly consumed by the

wine and involved in numerous reactions that modify the color, aroma and taste of a wine. This is a rather complex subject that is not fully understood today. For this reason, it is impossible to ascertain the amount of oxygen a wine can receive during aging.

In the current research, we studied this aspect from another angle. We followed the wine aroma modification and oxidation by monitoring the content of MND (3-methyl-2, 4-nonanedione). This highly odorous molecule, identified by **Alexandre Pons**, is generated through the oxidative mechanisms in red wine.<sup>2</sup> The flavor, reminiscent of prune hints, is very specific “oxidized” flavors. The content of this compound increases with the oxidation state of the wine, which makes it a very good marker of oxygen supply and oxygen sensitivity of the wine.

Moreover, contrary to some other compounds (such as acetaldehyde), which could be regarded as oxidative markers, MND, once produced, is stable in wine and slightly affected by SO<sub>2</sub> addition. It expresses the cumulative impact of oxygen ingress, and its level is easier to interpret than the level of dissolved O<sub>2</sub>, which is very dependent on the balance between oxygen dissolution and consumption by wine. In a large study,<sup>4</sup> the authors showed that red and Rosé wines with no “oxidation” flavors contain very few MND while “oxidative” wine comprised a significantly higher level of this compound.

The goal was to understand the effects produced by oxygen in wine. Indeed, what ultimately interests the enologist is not the amount of oxygen provided, but the effect produced by this contribution, translated by sensory changes in wine. The monitoring of MND in the different wines that have undergone traditional aging in new barrels has revealed new findings, presented below.

## Wines and Monitoring Method

The red wines used in the study (Cabernet Sauvignon and Merlot) were sampled from eight wineries in the Bordeaux region (vintages 2015, 2016, 2017). These wines were aged between 10 and 18 months in new oak barrels.

The oxidation marker, MND (3-methyl-2, 4-nonanedione), was assayed in order to estimate the impact of oxygen on wine. The analysis of this compound was performed by liquid-liquid extraction and GC-MS, using a method described by Alexandre Pons et al.<sup>2,3</sup>



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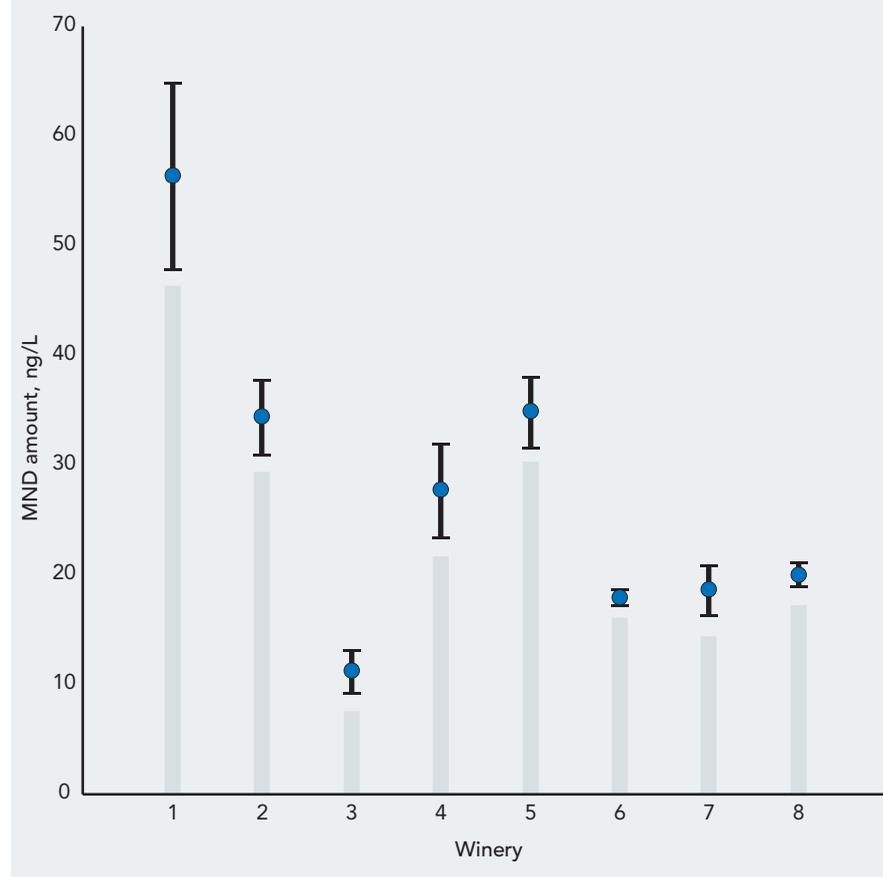
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## Monitoring MND in Different Red Wines at End period of Maturation in Barrels

The resulting measurements of MND in wines sampled from different barrels and from different wineries at the end of aging are presented in **FIGURE 1**. Samples from the same winery could be considered as replicates because no blending was performed during maturation. The maturation times were typical for each winery and ranged between 10 to 18 months.

**FIGURE 1** Example of the variability of MND level in wines at end of aging period (n=10)



The variation between wine in barrels sampled from the same winery were very low (coefficients of variation: about 10 percent) in comparison with the typical variation found while tracking extraction of wood compounds within barrels.

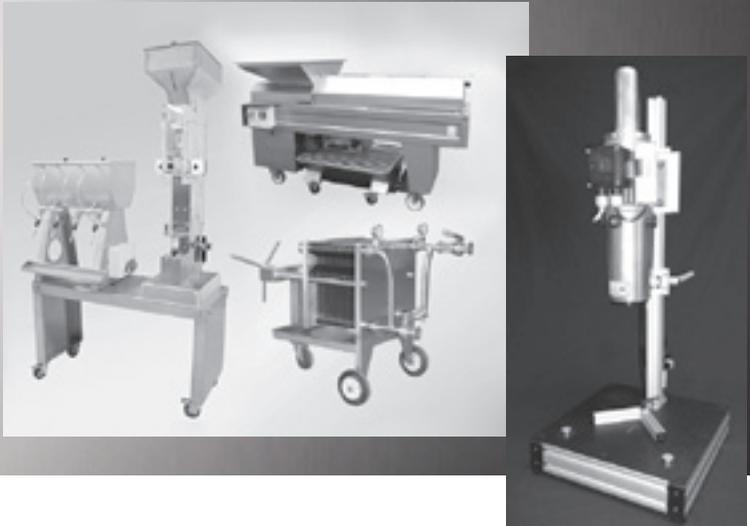
For example, **John Towey** and **Andrew Waterhouse** found a much higher value of barrel-to-barrel variation for common wood extractives equal to 15 percent up to 40 percent.<sup>6</sup> This low variation of MND could be explained by two hypotheses: either wines receive a similar quantity of oxygen during maturation or wine is able to buffer the impact of oxygen without production of MND (wine is resistant to oxygen impact).

Looking at the first hypothesis, it is difficult to imagine that all wines from different barrels receive exactly the same amount of oxygen. Through estimating the stave oxygen transfer rate (OTR), **Victor Martínez-Martínez** concluded that, inside each batch of barrels, one can find individual barrels can have anywhere between 2.0 to 2.5 times higher OTR than others.<sup>7</sup>

Moreover, there are many other factors that can induce a variation in oxygen quantity among barrels during aging, such as barrel opening, racking, level of air in headspace and different evaporation rates between barrels. Therefore, the second hypothesis seems more plausible: wine can consume different oxygen quantities with no significant sensory changes. This fact is related to the resistance, or sensitivity, of wine to oxygen.

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This observation contrasts with the heterogeneity of MND values found between wineries: the wines at the end of aging contain more or less MND. Therefore, we can conclude that the wines are more or less sensitive to oxidation. It could also be noted that more sensitive wines (those that develop more MND) are characterized by a higher variation of MND level when compared with more resistant wines. This fact confirms the hypothesis that wine is able to buffer oxidative flavor production: wine with higher resistance is less dependent on oxygen variations.

This survey lets us draw an important conclusion about the important role of the wine matrix in comparison with the variation of oxygen ingress during barrel aging. A resistant wine can receive more or less oxygen with no impact on its sensory profile while a small difference between oxygen ingress can provoke important changes for a more sensitive wine. Below, we present results that illustrate the impact of wine's intrinsic quality on its ability to produce MND during oak barrel maturation.

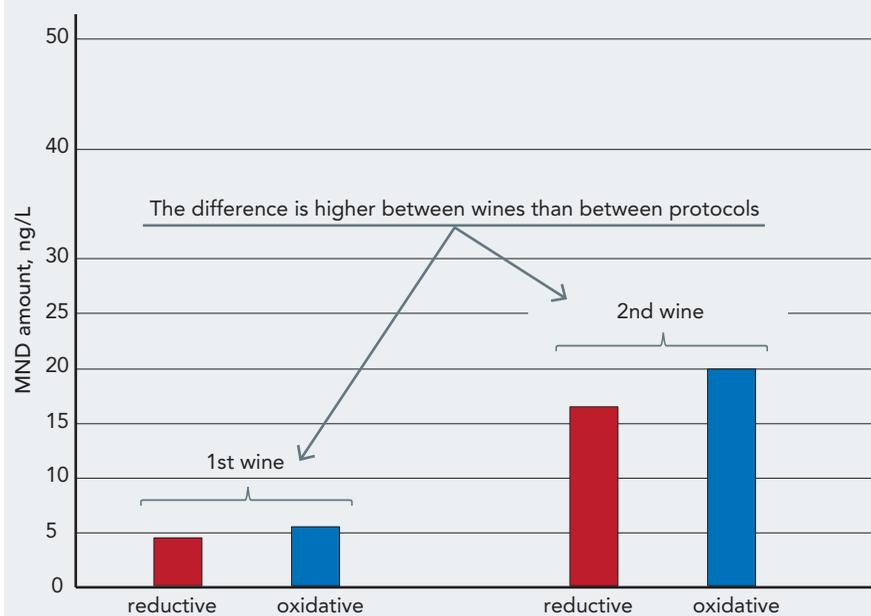
## Comparison of MND Production in First and Second Wine of Same Winery

The study was performed in the same winery that produced first and second wines from the Cabernet Sauvignon variety. (Wines were empirically selected according to their aging potential.) Both wines were aged in new barrels and followed two different protocols in terms of oxygen impact (FIGURE 2). In the "red" protocol (so-called reductive), the barrels were well-hydrated (filled with water) for 24 hours before receiving wine for aging (in order to decrease oxygen impact). All wine transfers were carried out under nitrogen. In the "blue" protocol (oxidative protocol), barrels were filled with wine directly without the use of nitrogen at any step. There is a slight difference

reported in MND content between the two protocols for each wine, respectively. However, the biggest difference was shown not between protocols but between the wines. The second wine in the same conditions accumulated more MND than the first one; it was more sensitive to oxygen.

This means that the winemaker can empirically evaluate the ability of wine to resist oxygen. The main factors in such an appreciation are the wine's body, structure, polyphenolic composition and flavor richness.

**FIGURE 2** Comparison of MND levels at the end of maturation period in first and second wine from the same estate



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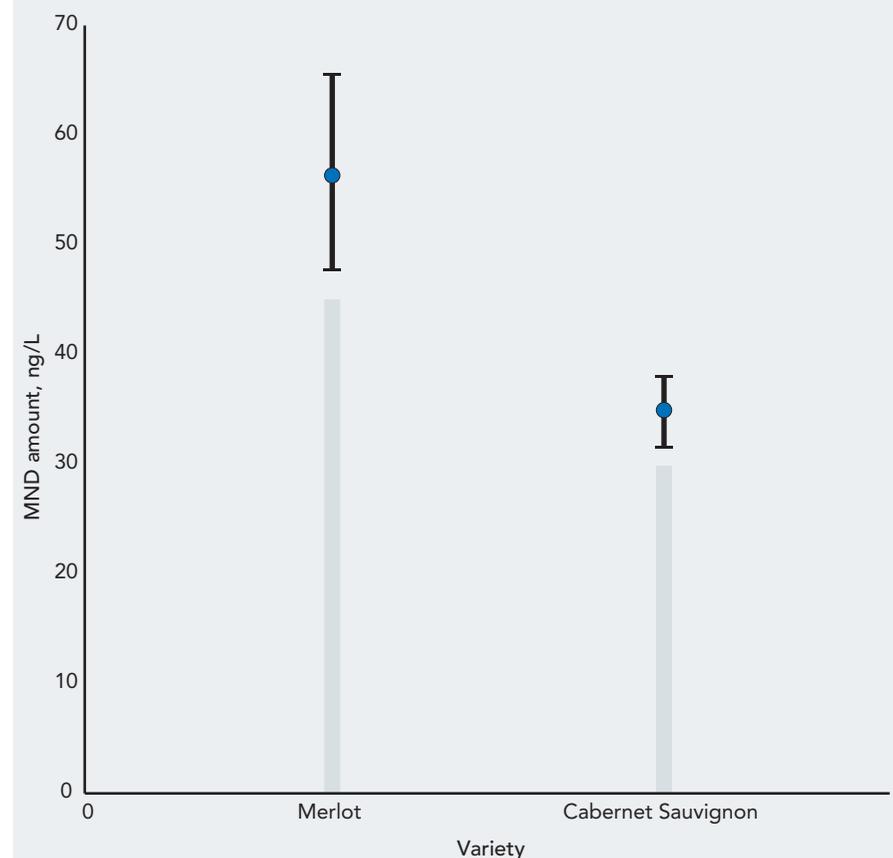
## Impact of Oxygen on Red Wines Aged in Oak Barrels



### Comparison of MND Production in Merlot and Cabernet Sauvignon Wines Originating from Same Winery

In another trial, wines from Merlot and Cabernet Sauvignon grapes were aged in new barrels at the same winery and followed the same aging protocol. The comparison of MND production in Merlot and Cabernet Sauvignon shows a significant difference between these two varieties, Merlot being more oxidative (FIGURE 3).

FIGURE 3 MND level compared to grape variety



Thus, the effect of grape variety seems to be important for the ability of a wine to interact with oxygen. One can therefore take a step toward the comprehension of mechanisms to manage wine resistance and aging ability. Other factors, such as ripeness level, occurrence of polyphenols and other anti-oxidant species, probably play a role. Follow-up research will deal with these aspects. [WBM](#)

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# The Brown, the Hazy, the Green and the Gold: Inert Pressing for Aromatic White Wines

Managing oxygen for specific wine types and styles

Curtis Phillips

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



**THE COLORS AND AROMAS** of wine are determined by the wine-making techniques used to produce them as much as they are by the grapes from which the wines are made. While it is certainly true that the grape variety and vintage conditions set the potential for both, it is what happens between picking and bottling that determines if the final wine meets that potential. Thus, it is the winemaker's job to not "mess up" the integrity of the harvested grapes.

A red wine may be purple, garnet-red, brick-red, a dingy reddish-brown or just brown, depending on its pH, age and the degree and timing with which it has been exposed to oxygen. Similarly, a white wine's color may range from pale straw color to deep gold, and even shades of brown.

Interventionist winemaking that aims to correct for less-than-optimal grapes can make a decent wine, and is sometimes very necessary to salvage challenging vintages. I think every professional winemaker has, at one time or another, taken a heavy hand in order to have a wine worth drinking. These maneuvers should be the exception, not the rule, if the winery is getting sound fruit from the vineyard.

## The Colors of White Wine

It's easy to see how oxygen exposure leads to brown colors and oxidized aromas, but it is often less obvious that too little oxygen can also cause problems. Although these problems are usually called "reductive," as in, "the Syrah has gone reductive," (and this makes a certain amount of sense, given that reduction is the opposite chemical process from oxidation), the situation is a good deal more complex than the wine simply not having a given oxidative state. Timing matters as much as the total oxygen exposure.

In my opinion, there is no single correct value for the oxygen that a given wine needs. The need for oxygen exposure varies from cultivar to cultivar, region to region and vintage to vintage. Too much oxygen, and the resulting wines end up, well, oxidized with brown colors and muted, oxidized aromas. Too little oxygen, and the yeast may struggle to complete fermentation, resulting in a stuck fermentation and/or the production of hydrogen sulfide (H<sub>2</sub>S) which can, in turn, "bind" to form mercaptans. The goal is to find the correct balance point for the particular wine, timing any needed oxygen exposure so that it benefits, rather than detracts, from the final wine.



PHOTOS CURTIS PHILLIPS

The thiol-driven aromas in some white wines can be easily masked by oxidation.

## Brown: Oxidation and Hyper-Oxidation

Oxidation is not always a negative attribute: Sherry, Madeira, Vin Jaune, Tawny Port, Tokaji Szamorodni (dry oxidized Tokaji) as well as California's own Angelica, all depend on oxidation as part of their winemaking styles. Professor **Vernon Singleton** shared, and passed on, his appreciation of oxidative wine styles with generations of winemaking students at **UC Davis**, yours truly included.

It should be pretty self-evident that an oxidative wine style would benefit from oxidation. It may be less obvious that non-oxidative wine styles can also benefit from oxidation. Hyperoxidation is a technique that is used in white winemaking prior to fermentation. The idea is to oxidize anything that may turn the finished wine brown before the juice has been fermented. These oxidized compounds then flocculate and are either allowed to settle out of the juice or, more typically, float up to the surface via air bubbles and skimmed off. When done this way, the technique is called "flotation." This is a common technique in Europe, particularly Italy, and can result in pale straw-yellow white wines. Unfortunately, the process can strip or oxidize out the varietal aromas for aromatic white wine varieties.

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### Haze: Protein Instability

In white wines, anytime measures aren't taken to remove excess proteins, as well as excess tannins and polyphenols, a hazy solution develops. Since such haze is the product of polymerization reactions, which proceed more quickly as the temperature increases, it is often called a "protein haze" or "protein instability." White wines are usually tested for their heat stability prior to bottling. Those that fail the test for heat stability are then fined with bentonite clay to remove enough protein from the wine so that it won't polymerize, flocculate, or cause a haze. As noted above, hyperoxidation can be used to ensure heat stability at the price of removing most, if not all, of the desirable aromatic compounds from the wine.

### Green: Green Juice for Aromatic Whites

I almost called this section "Green is the New White," but then I had to ask myself if it's really that simple. I think that with all winemaking, things are not as simple as that. Oxidation, especially uncontrolled oxidation, can deaden, mask or just flat out eliminate some aromas. Generally, these are notes that range from grassy to tropical fruit in character and make up some of the distinctive varietal aromas for several wine cultivars.

The thiol-driven characteristics of some aromatic wines, like Muscat (Orange Muscat, Muscat of Alexandria), Sauvignon Blanc (also Sauvignon



Nitrogen CryoPak

Vert and Sauvignon Musqué), Semillon and Riesling, are particularly interesting insofar as, in addition to being fairly volatile, they aren't found in grapes in more than trace amounts. During fermentation, the yeast synthesizes volatile thiol compounds, like 3-mercaptohexan-1-ol (AKA 3MH: grapefruit, passion fruit, gooseberry, guava aromas), 4-methyl-4-mercaptopentan-2-one (AKA 4MMP: box tree, passion fruit, broom, black currant aromas), 3-mercaptohexyl acetate (AKA 3MHA: passion fruit, grapefruit, box tree, gooseberry, guava aromas) and 4-mercapto-4-methylpentan-2-ol (AKA 4MMPOH: box tree, broom flower, cat pee aromas) from a collection of thiol precursors, including cysteine and glutathione (examples include S-3-(hexan-1-ol)-L-cysteine, S-4-(4-methylpentan-2-one)-L-cysteine, S-3-(hexan-1-ol)-glutathione and S-4-(4-methylpentan-2-one)-glutathione.

These aromas are deadened by oxidation, so it makes sense to do as much as possible to maximize them. This means minimizing the oxygen exposure of the juice until yeast are actively fermenting and therefore able to scavenge the oxygen before it can react with the thiols. About the only way to do this is to press the grapes in an inert atmosphere, which results in green juice rather than the brownish-gold juice we usually see in white wine production.

### Inert Atmosphere Pressing

Inert-atmosphere tank presses (AKA membrane presses) have been one of the more recently developed tools for the production of aromatic white wines. The basic idea is relatively simple: Take a tank press (AKA a membrane press) and fill the press with an inert atmosphere, in practice either nitrogen or carbon dioxide. The press is then filled through the door, or the axial-feed if the press has one, as per normal. Once the press is closed, the membrane (AKA "the bag") is inflated to press the grapes; but when the membrane is deflated, instead of passively letting in the outside atmosphere, more inert gas is used to fill the void over the grapes.

Since inert pressing seems to be intended only for white grapes, the juice needs to be delivered to the tank under similar inert-atmospheric conditions. This means that, at least for the few inert atmosphere presses that I have seen, the sump that catches the juice, as it exits the juice channels at the end of the press, is also filled with gas and drains immediately into an enclosed surge-tank, the ullage of which is also filled with inert gas.

Various manufacturers have been tinkering with the idea of filling a tank press with an inert gas rather than the ambient atmosphere for years. I saw a few of these units in Europe more than 15 years ago. To my knowledge, there are very few such presses in the United States.

### The Diemme Enologia Neutral 2 System

The Diemme Enologia Neutral 2 System is the most recent iteration of inert-atmosphere presses from Diemme Enologia, an earlier version of which was already a mature enough product to receive a silver medal in innovation from SITEVI (Montpellier) back in 2003.



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The Diemme Neutral 2 surge tank maintains the inert atmosphere in the ullage of the press pan as juice is pumped out.

### WHAT MAKES AN INERT-ATMOSPHERE PRESS DIFFERENT?

First off, an inert-atmosphere press must have some provision for maintaining the nitrogen or CO<sub>2</sub> atmosphere inside of the press and the press-pan. Secondly, the press-pan must be enclosed, making it more of a juice surge-tank than a pan *per se*. The Neutral 2 has an additional surge-tank over the press-pan tank, which is a neat feature but not a requirement for inert pressing, strictly speaking.

To my mind, other than the gas inlets and the requirement for a closed press-pan, the main difference is the programming control system of the press, which needs to time everything correctly so that it can keep a layer of inert gas over the grapes. This gives the juice somewhere to go if it is coming out of the press more quickly than it is being pumped out of the press-pan tank or sump. There is a gas pressure relief valve on this surge-tank, like one would find on a positive-pressure bottling tank, allowing the nitrogen or CO<sub>2</sub> in the press-pan (tank) to be compressed a bit before the pressure-relief valve lifts. This, in turn, maintains the inert atmosphere in the ullage of the press-pan and surge-tanks as the juice is pumped out to the fermentor.

### INERT GAS CYCLE

Wine presses all generally do the same thing—press grapes—and use similar means to accomplish their task. The differences are in the details and how well the different designs accomplish that task. Grapes or must go into the press, the press is closed, the membrane inflates to expel the juice or wine, the membrane deflates, the press is rotated to break up the pomace and the cycle repeats.



Broken Earth Winery was the first U.S. producer to install the Diemme Neutral 2.

An inert-atmosphere press includes additional steps to ensure that the ambient atmosphere, which is about 21 percent oxygen, is purged from the inside of the press, and the press-pan before the press is filled with grapes and purged again each time the press membrane is deflated.

### KEEPING THE INERT GAS STERILE

It's an easy-to-miss detail if you're not looking for it, even though Diemme notes it prominently in all the relevant literature about the press, but the Neutral 2 uses a fresh volume of nitrogen or carbon dioxide each time the membrane in the press is deflated.

One might think that the inert gas could be captured when the membrane in the press was inflated, and thereby displace the inert gas out of the press to be reused as the membrane is deflated. As it turns out, that would be false economizing. Both nitrogen and CO<sub>2</sub> are relatively inexpensive gases, which means that attempting to reuse the inert gas represents only a modest savings—modest enough that the cost of keeping any inert gas recycling system sterile so that it wouldn't become a source of wine-spoilage microbes would quickly outstrip any savings from trying to reuse the gas. Also, and this is likely a very minor point in comparison to spoiling your wine, both nitrogen and CO<sub>2</sub> are extremely miscible with the atmosphere. Trying to reuse them would only result in the dilution of the inert gas and decrease the efficacy of the entire concept.

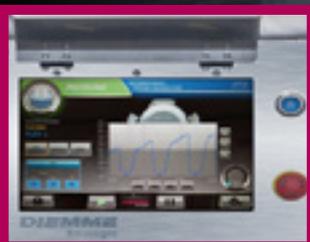
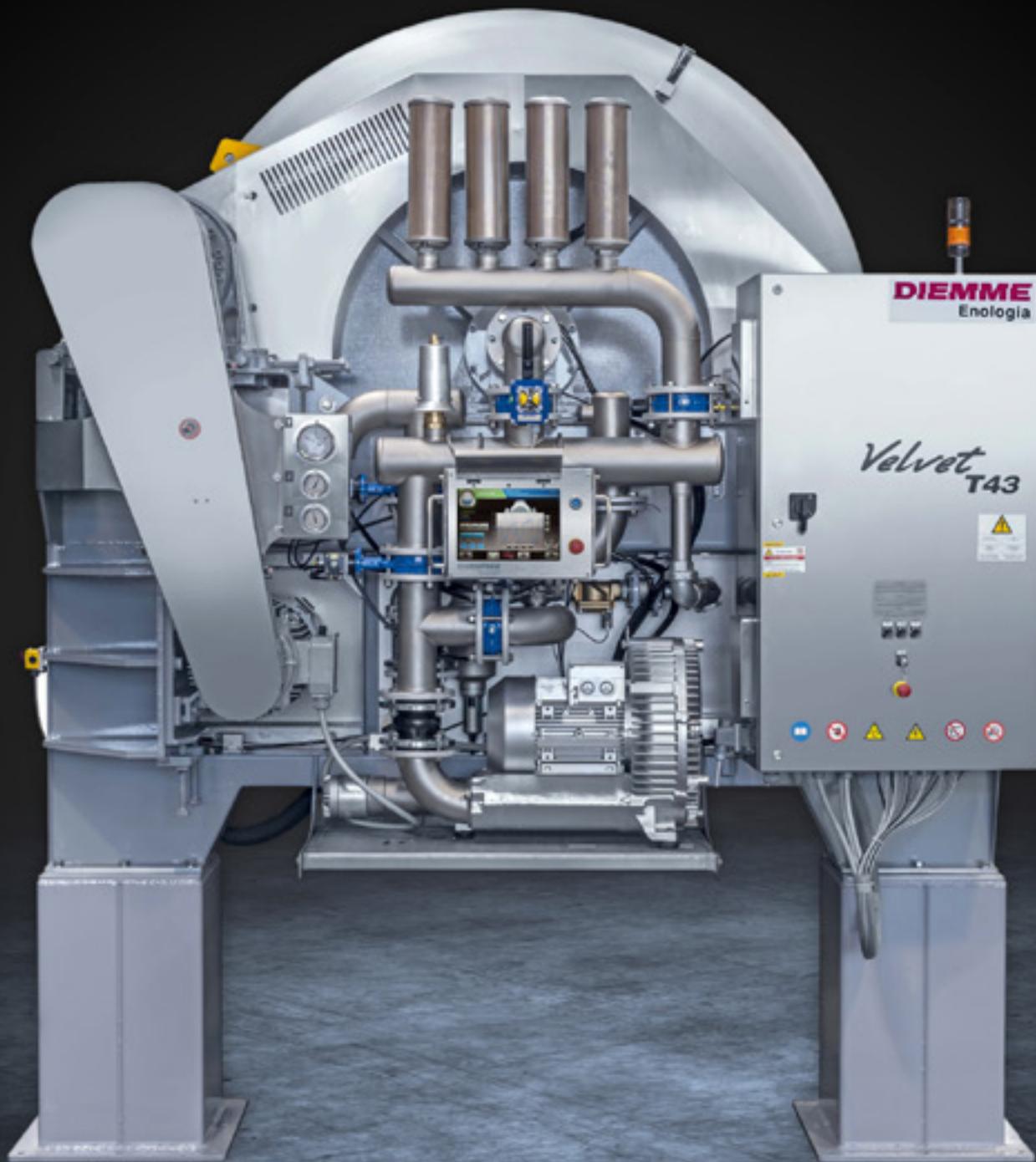
### BROKEN EARTH WINERY

Diemme told me that **Broken Earth Winery** was the first winery in the U.S. to use the Neutral 2. I visited Broken Earth Winery's temporary home in Paso Robles during the 2019 harvest in order to see the Diemme Neutral 2 inert-atmosphere press in action and to taste some of the wines from prior vintages that had been produced with this system. The wines all tasted remarkably fresh. I kept returning to the Pinot Blanc, which is not known as a particularly aromatic variety. I'm not going to bore other winemakers with a flowery wine description. I've made several Pinot Blancs, both true Pinot Blanc and Melón de Bourgogne (which is also called Pinot Blanc in California), but Broken Earth's winemaker **Chris Cameron** has me well and truly beat. It was the best Pinot Blanc I can recall having.

Pressing grapes under an inert atmosphere, also called "neutral pressing," has been around for a number of years. Ordinarily, pressing off grapes is an oxidative operation. In most cases, the juice or fermenting must becomes completely saturated with oxygen as it is splashed into the press-pan and pumped into the receiving tank. This is not necessarily a bad thing. Wine-making practices evolved with the assumption that oxygen would be introduced at this stage, and several "traditional" winemaking styles wouldn't really be feasible without it.

When I started making wine, closed-tank presses were still considered a new idea; making wine using a closed-tank press and closed-top stainless steel fermentors was considered "reductive winemaking." My career, at least, has seen a slow oscillation between the two extremes—from oxidative to reductive and back to oxidative winemaking for pretty much all wines. Only relatively recently has it become more common to view oxygen exposure as something that should vary according to the wine being made. [WBM](#)

## DEPENDABILITY THAT'S BUILT TO LAST



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# Finger Lakes' Winery Grows from European Roots

Ray Pompilio

Ray Pompilio is a wine writer based in Ithaca, New York. An avid follower of the Finger Lakes' wine scene and new grape varieties across the East and Midwest, Pompilio likes to find new and interesting methods of growing grapes and producing top quality wines in these regions. He also knows that finding ways to sell those wines is important.

**RAVINES WINE CELLARS IS** producing some of the Finger Lakes' most heralded Rieslings and other fine *vinifera* wines. The winery, owned by **Morten and Lisa Hallgren**, is based in Geneva, New York, where the **New York State Agricultural Experiment Station (NYSAES)** has been providing groundbreaking research since 1882. The station became a part of **Cornell University** in 1923 and was re-branded as **Cornell AgriTech** in 2018.

The success of Ravines has been built with foresight, education and training on two continents, and a passion to establish a family winery to produce the best possible Old World-style wines in an area that has been growing *vinifera* grapes for only about 60 years.

## Starting with European Roots

The Hallgren's journey to the Finger Lakes began in Copenhagen, Denmark, where Morten Hallgren was born, and continued in the Provence region of France, where he was raised. His family owned **Domaine de Castel Roubine**, which had approximately 170 acres of vineyards. Morten decided to go in a different direction and studied physics and astrophysics for eight years at the **University of Texas**, where he met his future wife, Lisa.

Hallgren began his long journey back to grapes and wine in 1993 when he returned to the family's estate in France. While working there, he studied at the **École Nationale Supérieure d'Agronomie** in Montpellier and earned advanced degrees in enology and viticulture.

During the 1994 harvest, he had the opportunity to work at the prestigious Bordeaux estate, **Chateau Cos d'Estournel**. "It was kind of a chance to see how one of the great family owned and operated wineries was doing things in the Medoc region—it had a rich tradition but still with a family involvement, and not some corporate entity," Hallgren said. "It was really helpful getting that kind of classical training and seeing what was involved in making cool-climate wines. It served me well coming to the Finger Lakes, where we weren't afraid of making a Cabernet blend because we found the balance here lending itself to that."

While still in France, Hallgren connected with people at **Cordier Estates**, which in the following year would lead him back to Texas, where Cordier cooperated with **University Lands** to plant vineyards and make wine at Cordier Estates' **Ste. Genevieve Winery** (now owned by **Mesa Vineyards**) near Fort Stockton. He stayed there through the 1996 harvest, when he was recruited to work at the **Biltmore Estate Winery** in Asheville, North Carolina.

Hallgren worked at Biltmore as assistant winemaker until early 1999, when he travelled to the Finger Lakes for a February job interview at **Dr. Konstantin**



Morten Hallgren

**Frank Winery**. The winter weather did not dissuade the Hallgrens, so he took the job as head winemaker.

The couple quickly decided to stay in the area. In 2001, they purchased 17 acres on the steep, eastern shore of Keuka Lake, laying the foundation for the future of Ravines Wine Cellars. "It didn't take long to see the potential in the region," Morten said. "It reminded me of the classic northern European wine regions that I've come to know in my training in France." Their land is on a glacier-carved hillside, between two large ravines—hence, the winery name.

The first wine production in 2002 was made in a rented barn while Hallgren was still at Dr. Konstantin Frank Winery, where he continued to work until 2005. Five years later, in 2010, the Hallgrens moved their production facility to **White Springs Winery** in Geneva, NY, at the northwestern edge of Seneca Lake in order to grow their business. For the next two years, Hallgren was the winemaker and general manager at White Springs. In 2012, the then 95-year old owner, **Carl Fribolin**, decided he wanted to sell his complete operation to the Hallgrens, including 50 acres of vineyards. They had the turn-of-the-century slate barn renovated to expand the space for tank and barrel storage, warehousing, a new lab and an area for tastings and events.

The Hallgrens also purchased the **16 Falls Vineyard** in Lodi, N.Y. on the eastern shore of Seneca Lake. This 44-acre vineyard has since been a continuing major source of grapes each vintage. Another important investment is the partnership with the **Argetsinger** family, who farms 26 acres originally planted in the mid-1980s on the southeastern edge of Seneca Lake. This vineyard has a limestone-dominant soil, and has been the source of some of Ravine's most heralded wines, both white and red.

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Hallgren produces dry, structured wines, emulating the character found in the wines of Europe—not flashy, but subtle, with complex nuances. Although best known for his dry Riesling, Pinot Noir and Bordeaux blends, Hallgren was pleased to talk about another wine that fits into his European background: Gewürztraminer.

### Gewürztraminer at Ravines

Hallgren enjoys the challenge of working with Gewürztraminer and thinks the White Springs Vineyard is a great location for this finicky grape. “It started out as a very small part of our production, and it changed overnight

after we purchased the White Springs property in 2012,” he said. **Bryson Cochran** was recently hired as the vineyard manager, and brings a geology background to the tasks at hand, while **Chris Fluri** and **Jim Eddinger** manage the 16 Falls Vineyard and the original Keuka Lake vineyard, respectively.

The White Springs Vineyard has 3.5 acres of Gewürztraminer, planted in 2003. The vines were sourced from the **Hermann J. Wiemer Nursery**, and are planted on the rockiest, hilliest part of the limestone sub-soil vineyard. The clone is unknown, but the vines are on 3309 rootstock and planted in 8.5 foot by 4 foot blocks, roughly 1,250 vines per acre.

“It is one of the most cold-sensitive grapes you can expect to grow in the Finger Lakes—meaning anytime the temperature dips much below 0° F, you are going to lose some buds,” Hallgren said. “It puts it on par with Merlot and Sauvignon Blanc—at the threshold of what you can reasonably expect in the Finger Lakes. You can, and should, expect large fluctuations in your Gewürztraminer vineyard from year-to-year.” He estimated the variation can

be up to eight times, from as little as 0.5 tons per acre to 4 tons in a bountiful vintage, such as in 2017, which yielded grapes that produced about 1,000 cases of Gewürztraminer.

### In the Vineyard

“Gewürztraminer is a mid-budding and mid-ripening variety, but in the last couple years it has been a part of our earlier pickings, not necessarily by choice. We have had some instances of wasps boring into the ripening berries,” Hallgren said. One way to combat the pest problem, which can also include deer, is to use a leaf blower to remove foliage in the fruit zone, which helps the grapes ripen better and limits fungus problems. Hallgren mentioned that if done at the right time, it can also help loosen the clusters, which further aids ripening. He uses a tractor-mounted **COLLARD** leaf remover, sourced from **Lakeview Vineyard Equipment** in Niagara-on-the-Lake, Ontario.



White Springs Vineyard in winter

Bud break is usually during the second week of May, *veraison* in early August and, if pest-free, harvest is around mid-October. In 2019, however, *veraison* had not begun on August 19 (see photo), and Hallgren estimated it could take another 10 days or so to commence. He noted this was not specific to his Gewürztraminer, rather an across-the-board result of cooler temperatures during the season.

The large and relatively disease-free 2017 harvest provided excellent fruit but did require modest crop thinning. The grapes were harvested at about 21.5° Brix, with TA at 6 g/L and a pH of 3.4. The yield topped out at 3.5 tons per acre. The previous year, 2018, was a totally different result. The White Springs' grapes had some winter bud damage, and a lot of rain, particularly late in the growing season, reduced the Gewürztraminer yield to just over 1 ton per acre.

### Making the Wine

“We’re fairly conscientious about making a Gewürztraminer that’s a balanced wine. By that I mean the philosophy at Ravines has always been to push the dry side of things. When it came to Gewürztraminer, over the years I’ve had to re-think that. I don’t think I can balance it significantly over 13 percent alcohol—so, unlike our Riesling, Chardonnay and red wines, I choose to leave some residual sugar behind,” Hallgren said. He found that fermenting Gewürztraminer totally dry would cause it to be too alcoholic and, with the resulting lower acidity, soapy and flat. He finds the variety to be the trickiest white cultivar to work with in the Finger Lakes, precisely because of the balancing issues.

At harvest, the grapes are machine-picked early in the morning to maintain a cool temperature for the fruit. Ravines uses a **Gregoire** pull-behind harvester and **Delta E2** crusher/de-stemmer to process the fruit. “We actually want skin contact, so there’s no reason not to machine-pick,” Hallgren said. The grapes are brought to the press pad, where an 80 hL **Bucher Vaslin** tank press awaits. Eleven tons of machine-picked grapes are loaded into the press.

Hallgren likes this press for his skin contact wines, such as Gewürztraminer, Rosé and Sauvignon Blanc. The tank is filled, and with the valves closed, the grapes begin their first phase. “It’s not uncommon for us to do about 24 hours with the Gewürztraminer. We want to have good skin contact as there are so many wonderful aromatics to extract,” he said. Following the pressing, the juice is inoculated with **Laffort Zymaflore X5** yeast. A number of indigenous yeast trials have been done over time, but Hallgren prefers to inoculate the Gewürztraminer.

Prior to inoculation, 30 to 50 ppm of potassium metabisulfite ( $K_2S_2O_5$ ) is added, depending upon the cleanliness of the fruit. Fermentation is in





Gewürztraminer early in the season at White Springs Vineyard

stainless steel tanks, which range from 200 to 2,000 gallons, depending upon the yield amount. Hallgren laughed as he commented, “That’s life in the Finger Lakes.”

All the tanks are temperature-controlled and can be heated or cooled. The wine ferments at 58° to 59° F for up to two weeks. “I don’t mind slowing the fermentation down with Gewürztraminer and like to finish with 6 to 10 g/L of residual sugar,” he said.

A key part of producing Gewürztraminer entails systematic pump-overs of the fermenting wine and managing the period of contact on the lees. “We do a lot of our racking after Thanksgiving, and we always keep the whiter, fluffier lees with our white wines, including Gewürztraminer. The wine will sit sur lie until April or May,” Hallgren said. “Lees contact is a very important part of polishing the texture of Gewürztraminer as a balance to the aromatic and phenolic character of the wine—it’s a valuable tool.”

Prior to bottling, which occurs around Memorial Day, Ravines does tandem plate and frame filtration, doing rough and fine filtrations at the same time. The wine is then put through its sterile filtration, with a single plate and frame filter in front of the .45-micron membrane filter. Ravines’ Gewürztraminer is cork-finished, as are most of the wines. Screw cap closures are only used for earlier-maturing wines, such as the Rosé, Sauvignon Blanc and Muscat. Hallgren uses **Diam** 10 and 30 corks, which require a lower amount of free sulfur at bottling. He usually bottles at 20 to 25 ppm free sulfur.

Hallgren likes to bottle-age the Gewürztraminer for about a year but also realizes he must still adapt to the supply and demand of the product. The 2017 vintage is currently available, and the amount produced (1,000 cases) will allow the much smaller inventory of the 2018 vintage to spend more time in bottle prior to release. The 2017 wine finished at 13 percent alcohol, with 7.5g/L total acidity, 9g/L residual sugar and a pH of 3.42. The retail price at the winery is \$19.95 per 750 ml bottle.

Hallgren regularly samples earlier vintages to see how they are developing. He has wine from every vintage, starting in 2002 and totaling some 8,500 bottles of Ravines’ wines. He is currently drinking his Gewürztraminer from 2007 and 2008 and said they are still showing well, giving him an indication of the amount of time his style of wines can age.

## Not Only White But Red

Although Hallgren has been lauded for its stylish white wines, about 35 percent of his production—almost 9,000 cases—is red wine. He has approximately 25 acres of Pinot Noir, and the Cabernet Franc has an excellent reputation. Using grapes predominantly from the Argetsinger Vineyard, he also produces a red blend named Le Petit Caporal to honor the vineyard’s late founder,

**Sam Argetsinger**, who had a great interest in **Napoleon Bonaparte**. The 2016 vintage is made of equal parts Cabernet Sauvignon, Cabernet Franc and Merlot. The White Springs and 16 Falls Vineyards supply him with grapes for another Bordeaux-variety blend, Maximilien, which is 65 percent Cabernet Sauvignon, 18 percent Cabernet Franc and 17 percent Merlot.

The Cabernet Franc is made with 60 percent White Springs Vineyard and 40 percent 16 Falls Vineyard fruit, and is now being aged in new, 20 hL (528 gallon) casks purchased from **Fassbinderei VBS Schön GmbH**, an Austrian cooperage founded in the early 1930s. Hallgren is very excited to add this cooperage to his facility, which will age the wine without a heavy-handed presence of oak. “I see us going more and more in this direction of oak casks,” he said.



Gewürztraminer grapes in White Springs Vineyard

## Importance of Food with Wine

Although Morten Hallgren has firm control of Ravine’s wine production, his wife Lisa has complemented it with the development of a rigorous food program, the Ravinous Kitchen Experiences. Regularly scheduled tastings at the winery include the Ravinous Tastings, combining an educational tour of the wine facility, at least one tank or barrel sample and a tasting of five wines paired with a grazing table of savory food items from the kitchen.

A more formal Ravinous Table event is also available. During the growing season, up to 14 people can enjoy sparkling wine, a cellar tour and a five-course meal paired with Ravines wines. The Ravinous Kitchen began in 2010 and was named one of America’s best winery kitchens by the magazine **Food & Wine Magazine** in the August 2018 issue.

## Where It’s at Now

Ravines Wine Cellars developed from the dream of Morten and Lisa Hallgren. Their goal was to build a family winery with an “Old-World” wine style and do that in a special location in upstate New York. With dedicated planning and a tremendous amount of work, Ravines has grown into a dynamic winery considered by many to be a leader in the Finger Lakes region.

Today, Ravines has 130 acres of estate vineyards that produce 25,000 cases annually, made up of 20 different wines priced from \$17.99 to \$49.99 per bottle. In the past year, their wines began nationwide distribution by New York City importer and wholesaler **Skurnik Wines**. No longer do consumers have to live in or visit the Finger Lakes to find these quality wines. Ravines has come a long, long way. **WBM**

## Winemaker Trial: Investigating Sur Lie Aging Treatments

Using her experience with sur lie aging, winemaker Aimée Sunseri wanted to learn how different techniques—specifically bâtonnage and dry-ice regimens—would affect the mouthfeel of her wines.

Stacy Briscoe

*Editor's note: During the time of this interview, the experiment was in the early stages. Thus, the questions and answers published here are a reflection of an in-progress trial. Sunseri plans to exhibit her completed trial at Wine Business Monthly's 2020 Innovation + Quality event this February.*

**Aimée Sunseri** is a fifth-generation California winemaker and grapegrower. She earned a viticulture and enology degree from the University of California, Davis. She works with vineyards in Napa and Vina, Calif., and produces wines under three labels: New Clairvaux Vineyard, Nichelini Family Winery and Aimée. She is a descendant of the Nichelini family, who own and operates the oldest family winery in Napa Valley and work with the Trappist monks at the Abbey of New Clairvaux, America's first Trappist winery.



**TRIAL OBJECTIVE:** Investigation of the effects on wine styles by various sur lie treatments, including different stirring regimens and the addition of a beta-glucanase enzyme.

**TRIAL DESCRIPTION:** Roughly 4 tons of fruit were crushed, pressed and put into a cold-settling tank. Adjustments were made to the acidity, yeast was pitched, and nutrients were added. On day two, the wine was racked into barrels (about 50 gallons per barrel). There were six dry ice barrels, six dry ice and beta-glucanase barrels and five bâtonnage stir stick barrels. In the beta-glucanase barrels, the enzyme was added. At the time of this interview, Sunseri and her team were in the second month of the trial and continuing the experiment.

**Lot 1:** Trebbiano, aging sur lie with daily dry ice addition

**Lot 2:** Trebbiano, aging sur lie with daily bâtonnage

**Lot 3:** Trebbiano, aging sur lie with beta-glucanase enzyme, with daily dry ice addition

**CONCLUSION:** The trial is still being completed. Results will be shown at Innovation + Quality on Feb. 27, 2020.

**Stacy Briscoe** is the assistant editor of *Wine Business Monthly*. She has been writing about wine professionally since 2015, freelancing for multiple publications including *The San Francisco Chronicle*, *Edible Communities* and *Napa Sonoma Magazine*, among others. She also maintains her own website, *BriscoeBites.com*, dedicated to wine reviews and tasting notes. Outside of wine writing, she also contributes as a freelance editor for the independent publisher She Writes Press. Stacy has a Bachelor of Arts degree in English-language literature from the University of California, Santa Cruz.



### Winemakers Progress Report

*Why are you interested in studying sur lie aging techniques?*

**Sunseri:** Simply for more knowledge on how to build more mouthfeel. Viscosity in wine is usually associated with alcohol and residual sugar. But then there are also yeast proteins, which is what sur lie is about.

*What variety/varieties are you working with for this experiment? Is there any reason you're specifically working with these grapes?*

**Sunseri:** I am using Trebbiano. It's an unusual grape for Americans, but it is one of the most widely planted grapes in the world. Trebbiano is a bit of a plain-Jane variety, but with oak and sur lie it can transform into something exceptional and delicious. What I mean by that is, it does not have a lot of unique character on its own, not like Sauvignon Blanc or Muscat do, where you can smell those and know instantly what they are. Oak and sur lie, I think, work well with a plain variety because they add something interesting, and that something interesting does not compete with something else interesting.

# FRENCH OAK ELEGANCE WEST COAST STYLE



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### *What are the different sur lie aging regimens you're using?*

**Sunseri:** My experiment is part practical and part theoretical. I have been making sur lie wines since 2007. I started with a traditional bâtonnage stir stick, but it can be pretty time-consuming, and you get more oxygen exposure—unless you're also using dry ice at the same time. The bâtonnage, using the stir stick without dry ice, adds more oxygen because you have to open the barrel to mix. We stir for about one minute per barrel, whereas dry ice takes a few seconds to add, and then you just need to burp the barrels (vent off the excess CO<sub>2</sub> by lifting the bung and then pushing it back in again) until the ice has dissolved.

So, I started adding dry ice to my regimen. I noticed that dry ice alone seemed to stir the lees just as well. So I started to skip the stick and just added dry ice. My control is dry ice versus bâtonnage stick. I do not add dry ice to the bâtonnage lot, so this is also a bit of an oxidative versus reductive experiment. But then, I had enough barrels of this sur lie trial to also throw in a beta-glucanase enzyme lot. For that lot I use just dry ice to stir the lees, so it is the control versus beta-glucanase.

### *Thus far, have you encountered any complications or difficulties? If so, how have you dealt with them or plan to deal with them? If not, are there any issues you're hoping to avoid or are specifically keeping an eye out for?*

**Sunseri:** Sur lie can get a little funky, but I have been doing this long enough that I know where the trouble spots are. The funky is usually in the realm of H<sub>2</sub>S. I find that barrel ferments that do not have a cooling jacket to help regulate the fermentation can go pretty fast—even though we put it in a room that is 55° F and have cold-settled it before going to barrel. We usually make a second nutrient addition mid-ferment, but catching it at mid-ferment can be difficult. So, we just anticipate that and watch it really carefully.

Nutrients are important. We use DAP, but I am sure other nutrients could be utilized just as well and maybe even better. Yeast hulls might be a good choice to help with the sur lie part. You might be able to extract out more proteins to help with the mouthfeel. Maybe we will try with our next experiment.

### *Who else is working with you on this trial? Do you or your colleagues have any predictions about the trial's conclusions?*

**Sunseri:** My ROC\* associates gave me the idea for the beta-glucanase. That part has been amazing to see develop, and it has changed my mind about using enzymes. I used to use enzymes when I first started winemaking. But my approach, in general, was so complicated, I could not tell what was doing what. So, I quickly flipped my approach and simplified everything. I started using one yeast, not 10. I started using one nutrient, not four. Personally, I needed to see the effects of one thing and not compound it with the effects of 20 other things. What I have found is that every variety and wine style is different and can benefit from tailored programs. Using an enzyme is just one of those tailored fits that I think works well with Trebbiano and the style of wine we are creating.

### *Have you made any conclusions yet? If not, what data have you collected thus far? Have you learned anything new or interesting that you didn't know before? Or, have you proven a theory you may have had?*

**Sunseri:** I have only really tasted the wines at this point. All the wines are coming along nicely. The beta-glucanase lot has the most mouthfeel. The dry ice lot is the cleanest and most streamlined. And the bâtonnage has an interesting nutty/bread character that I love. So, they are all winners in my mind.

### *Based on the results of the experiment, do you foresee making any changes to your current white wine winemaking program? To what benefit?*

**Sunseri:** I will have to eventually blend them to fit my customers' needs, but I will see how it all tastes once together and then go from there.

### *Will you conduct a follow-up trial next year? If so, would you work with different or the same grapes? Would you retry the same sur lie methods or new ones?*

**Sunseri:** I am actually thinking of doing a similar trial this year with Semillon. I have grapes coming in next week from Napa. I do a Semillon experiment every year that highlights American oak versus French oak, and I might mix in some beta-glucanase to see if it has an effect with the different oak barrels. **WBM**

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\* The Research Oenovation Collective (ROC) is a non-profit applied research platform that assists in the advancement of practical winemaking by providing a collaborative platform for applied research and innovation. Learn more about the organization at [rocwine.org](http://rocwine.org).

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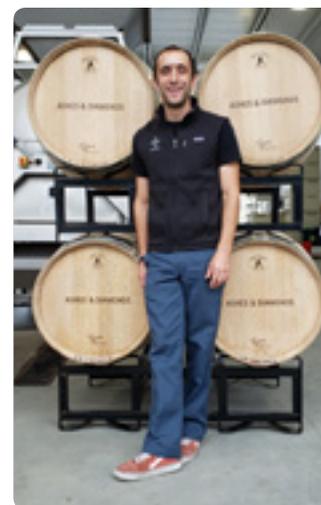
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# Site-specific Pruning Simplified

Pruning affects the upcoming season and vine's health—but it doesn't need to be complicated to be precise.

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Dr. **Mark Greenspan** has more than a quarter-century of scientific viticulture research and viticultural field experience. He specializes in irrigation and nutrition management, yield and canopy management, vineyard climate and microclimate, vineyard design and vineyard technology. He is the founder of Advanced Viticulture, Inc. based in Windsor, California ([www.advancedvit.com](http://www.advancedvit.com)), providing consulting, technology, vineyard management and vineyard development for wineries, winemakers and wine growers devoted to producing premium wines. Please direct queries to [mark@advancedvit.com](mailto:mark@advancedvit.com) or 707-838-3805.

**I'M NOT GOING TO** go ahead and say that I don't think pruning is taken seriously enough. So why is it that I see poorly pruned vineyards so often? I think that most growers and viticulturists know very well how to prune grapevines and could do a great job of it on their own—if that were possible. But most growers and viticulturists do not have the ability to prune the entirety of their vineyards on their own, so they employ a labor force to prune, just like any other manual vineyard task. All vineyard operations are important, but pruning is just a little more important because pruning affects not only the upcoming growing season's vine balance and productivity, but potentially the longer-term ability of the vine to either build or maintain its health and productivity.

While there is certainly no problem handing over the pruning tasks to skilled laborers, it is important that the wishes of the grower or viticulturist is communicated effectively to the pruning crew, and that the crew is sufficiently supervised in order to control the quality and consistency of the job. I feel, however, that the message needs to be clear and somewhat simplified. Not to disparage anyone's intelligence but, frankly, I think sometimes pruning plans are made overly convoluted to the point of becoming paralyzing in their complexity.

There are many methods and technologies that can be used to assist pruning decisions. Pruning formulae used to be popular (and are undoubtedly still used), where the number of buds retained per vine is based on an equation using the pruning weight of the vine. Usually, this is done on a block-by-block basis, but ideally, it is done on a more localized level. Technologies, such as **LIDAR** and lasers, are used to map the biomass of a vineyard on a fine spatial scale, which could add to the ability to prune to a vine-specific prescription.



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Forgive me for sounding like a luddite, but unless we are pruning by machine (a perfect way to integrate those aforementioned technologies), human pruning crews are doing the job. And how are you going to communicate, on any practical level, that vine 1 needs to be pruned one way, and vine 2 another and, vine 3 a different way, etc.? The answer to that is not complexity; it's simplicity. That doesn't mean we aren't pruning precisely. It just means we are employing some fundamentals of pruning that can be communicated to pruning crews and can be executed by them. The better pruners will adopt this and could, thereafter, prune any vineyard without much instruction. I'd like to give you what I believe to be my essentials for pruning.

### Rule 1 Through 10: No Skinny Stuff

I'm not going to wait to the end of this article to state what I think is probably the most important practice, and that is to prune back to sufficiently thick, dense wood. This applies both to cane-pruned and spur-pruned systems. Don't leave skinny wood! Why am I emphasizing this so much? It's because I see it happen way too often, especially in cane-pruned vineyards, where it is the most detrimental and the most noticeable. Dormant buds and early-emerging shoots rely on stored carbohydrate in the woody tissues nearby. They cannot and do not produce their own photosynthetic energy until some leaves expand and become functional. Carbohydrate is stored in the permanent structure of the vine as starch during dormancy in the winter.

As the weather warms, the starch is broken down into simpler sugars. These sugars have a limited ability to move because there is little sap flowing, other than by root pressure, so the emerging buds and shoots need to feed off local carbohydrate storage. Leaving skinny wood starves the buds and young shoots for energy when they need it most.

It seems that whenever I look at a vineyard that I have not worked with before, I see excessive amounts of this skinny wood. In cane-pruned vines, this slows bud emergence, and sometimes buds don't burst at all. Shoots that are starved of energy early in their growth usually remain stunted throughout the season. Fruit on the short shoots lag in maturation relative to fruit on stronger shoots, and short-shoot fruit is commonly dropped during one thinning pass or another. This is also true for spurs, though the effects are less dramatic because there is more permanent vine tissue near the buds of spurs than canes. Nevertheless, the same is true for spurs. Canes should be pruned back to a point where the girth of the cane is sufficient. Skinny spurs should be pruned back to one bud or even to the basal bud.

The effects are not short-term. I find that weak wood begets weak wood, and that means that the weak wood will leave weak shoots and canes that will be skinny the following year. In fact, I believe that excessive buds retained at pruning will weaken the vine over time and could potentially create ancillary problems, such as greater disease susceptibility.

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What do I use as a rule of thumb? I like to prune to wood that is no less than 1 centimeter in diameter (three-eighths of an inch). Sometimes, we can cheat just a little but not by much. I hear “pencil width” often used as a guideline, and I suggest that pencil width is an insufficient girth to use as a reference. Unfortunately, pencil width is a convenient reference because many people can intuitively “sense” it, whereas three-eighths inch or 1 centimeter is more difficult to recognize. Nevertheless, I believe it is a good rule to prune by.

Leaving thicker, stronger wood will produce more uniform and stronger shoots and canes. Vines that have been overtaxed by overly generous pruning (i.e., leaving more buds than they should have) continue to be weak. I find that pruning weak vines severely, maybe even including cutting back cordons, can allow them to regain strength if they are not diseased. A little short-term pain is rewarded with a healthy and more productive vine in the longer term.

The beautiful thing about this one simple rule? It requires no technology. Just a good eye that can recognize thick and thin wood. This rule is also site-specific. Each vine can be assessed on its own merits and pruned accordingly, which means that this is a low-tech way to prune on a vine-by-vine basis, without needing complex pruning formulae or GPS-determined locations.

There are exceptions to every rule, of course. Thick canes are good unless they are shade canes or so-called bull canes. Thick canes with long internodes and that are possibly also flattened/oval-shaped, rather than round in cross-section, are often poor choices for cane-pruning. Good pruners should know that. Also, just because a cane is thick doesn't mean it should be stretched excessively long. Cane length can be longer for thicker canes, but don't be greedy. Eight to 10 buds per cane will usually do; any more can still lead to uneven budbreak, especially in some varieties, like Cabernet Sauvignon.

## Timing

There are many aspects of timing, but often the overriding issue is the logistics of just being able to get through the pruning season in time. There are reasons to prune both early and late. Budbreak timing will be affected by the timing of pruning. However, I doubt that a shift of any more than seven to 10 days of difference will be achieved by pruning in December versus late February. Yet, that could be enough of a shift to influence a decision. Early pruning could be used where ripening is difficult for a particular variety or vineyard block. Advancing the ripening a little may make the difference between ripe fruit in October or a mercy pick in November. However, early budbreak has its pitfalls. Susceptibility to spring frosts is an important consideration as is susceptibility to poor weather during bloom and fruit set. Both risks diminish if the season is pushed back a little later, at least with typical weather patterns in the North Coast. Trunk diseases are also an important consideration. An early prune will expose vines to fungal spores much longer than a later prune. Most pruning wound protectants are effective for a short time, but they may not remain that way during the long period between pruning time and budbreak. Hence, they may need to be applied twice for early-pruned vineyards.

In other words, early pruning is really only beneficial if fruit ripening is difficult in a particular situation. Otherwise, later is better. Many growers use the double-pruning approach: They use machines or people to long-prune their vineyards early in the dormant period and then follow up late-winter with the final pruning. This is only effective for spur-pruned vines and provides good protection against trunk diseases while also reducing spring frost risk and risk of poor fruit set due to poor spring weather.

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### Finer Aspects of Pruning

There have been more and more discussions about some of the finer aspects of pruning; and although I have not been through the discussions offered by **Simonit and Sirch**, I urge you to take a look at a recent article on that very subject authored by **Judit Monis** in *Wine Business Monthly*<sup>1</sup>. The lessons are beautiful in their simplicity, which is something I can get behind. Avoid large flush cuts to older wood because they will die back and create zones of desiccation that will interfere with the vascular system of the trunk or cordon. Also, avoid making cuts to both sides of a vine structure, as the dead wood will create a convoluted path for sap flow in the live wood. These poor



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practices not only reduce the health of the vines, by inhibiting sap flow, but also make them more susceptible to pathogen attack.

OK, you say, then what about the 100-year-old head-trained Zinfandel and Carignane vines so highly prized and so long-lived? Good question. Many of those vines beg the question, “How are they still alive?” In truth, many of those vines are barely alive and thrive only because they are pruned so severely that they are balanced. Can you buy that explanation? Hope so, because that’s all I’ve got.

That said, I usually like to see trunk and cordon suckers, if any, pruned flush to the trunk, only because we want to remove the basal buds that will push another sucker the following season. If the wood is only one-year-old, the desiccation zone into the trunk will be minimal.

Pruning is not simple. Good pruners get to be good with years of experience. I see no need or benefit in making things more complicated for them despite all of the technology we have now to make it so. **WBM**

#### Reference

<sup>1</sup> Monis, Judit. A Pruning Technique for Improved Vine Health and Longevity. *Wine Business Monthly*. February 2018.

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# From Blaze to Bottle: Smoke Gets in Your Wine

Smoke from a wildland fire incident does not affect all vineyards equally. Testing fruit and making microfermentations ahead of harvest can help you determine if all is well—and whether steps will need to be taken to address smoke taint or you should just leave fruit in the vineyard and take a loss.

*Glenn McGourty*

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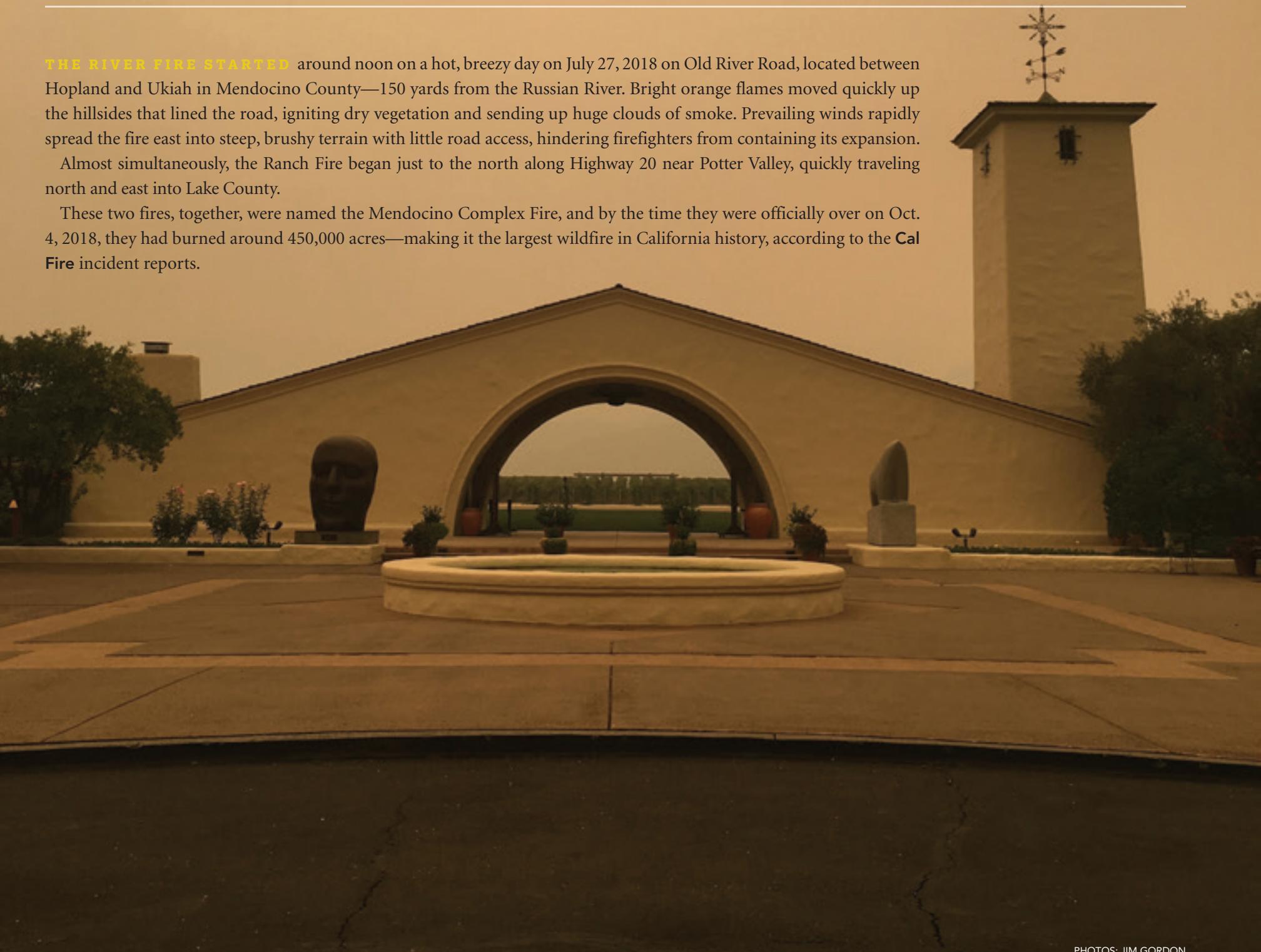
**Glenn McGourty** is the winegrowing and plant science advisor for the University of California Cooperative Extension Offices in Lake and Mendocino County. He received an A.B. degree in botany from Humboldt State University in 1974 and an M.S. degree in plant soil and water science from the University of Nevada, Reno in 1979. McGourty joined UC Cooperative Extension in 1987, and works with winegrape growers, wineries, nurseries, landscapers and vegetable growers. He is known for his work on alternative farming systems, cover crops, clonal trials of the major winegrape cultivars of the region, and Mediterranean winegrape cultivars.

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**THE RIVER FIRE STARTED** around noon on a hot, breezy day on July 27, 2018 on Old River Road, located between Hopland and Ukiah in Mendocino County—150 yards from the Russian River. Bright orange flames moved quickly up the hillsides that lined the road, igniting dry vegetation and sending up huge clouds of smoke. Prevailing winds rapidly spread the fire east into steep, brushy terrain with little road access, hindering firefighters from containing its expansion.

Almost simultaneously, the Ranch Fire began just to the north along Highway 20 near Potter Valley, quickly traveling north and east into Lake County.

These two fires, together, were named the Mendocino Complex Fire, and by the time they were officially over on Oct. 4, 2018, they had burned around 450,000 acres—making it the largest wildfire in California history, according to the **Cal Fire** incident reports.



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Smoke settled throughout North Coast wine regions during the 2017 fires.



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2017 fire in Sonoma County, Calif.

Thanks to heroic efforts of numerous fire departments dispatched from around the state and western U.S., few homes and buildings were destroyed. But the smoke from the fire greatly affected winegrapes and subsequent wine quality in some vineyards within close proximity to the burned areas. Importantly, not all vineyards and grapes suffered from smoke damage, but it was difficult to determine if fruit has been compromised in quality when exposed to wildfire smoke, and whether smoke taint flavors would come through post-fermentation. Yet some wineries rejected all fruit from Lake County and Potter Valley without any accepted metric-based reasoning, creating huge problems for growers who could find no immediate home for their 2018 crop.

To that end, the **Lake County Winegrape Commission's** (LCWC) board chair and winegrape grower **Broc Zoller** made an astute point: "Some wineries seemed to think smoke follows geographic boundaries."

According to the LCWC and **Mendocino County Farm Bureau**, when all was said and done, about \$41 million worth of fruit was rejected by contracting wineries. As a result, that fruit had to either be custom crushed, sold to different customers or left behind in the vineyard (due to either apparent damage from the wildfires or no customer for the fruit.)

The LCWC pondered how to help growers through this debacle. Legal action against wineries who refused to honor contracts didn't seem prudent or affordable. Instead, the commission spearheaded a study to establish exactly how uniform smoke damage was to vineyards in their county's wine-growing areas and what metrics could be used to determine if fruit quality was compromised.

"The feeling among the growers was that the Lake County Winegrape Commission wanted to make a contribution to the science of knowing when winegrapes have been significantly damaged during a wildfire smoke event,"

said Debra Sommerfield, LCWGC president. "When we started this project, the metrics were very unclear; there are practically no standards on smoke damage in winegrape purchase contracts. Some wineries rejected fruit outright, others were taking fruit but weren't sure if they could make acceptable wine out of it."

A work group of local growers and winemakers was formed, which included author and **UC Davis Extension** enologist **Anita Oberholster**. After several meetings and phone conferences with smoke taint specialists from the **Australian Wine Research Institute** (AWRI), the group formed their specific research questions:

1. How effective is winegrape analysis in predicting the concentration of volatile phenols and glycosides when fermented into wine?
2. Given that lab analysis is expensive, are microvinifications (small-lot winemaking) a quick and effective way of testing for

potential smoke taint in smoke-affected vineyards?

3. Were all Lake County vineyards equally affected by wildfire smoke?
4. What factors during a wildfire and the release of smoke are correlated to smoke flavor compounds in fruit for a particular vineyard?

## The Nature of Smoke Damage to Winegrapes

Large volumes of smoke are produced during forest and brush fires that can travel great distances and settle into valleys and low-lying areas. Smoke makes up about 1.5 to 2 percent by weight of the material that has burned. Smoke contains particulates (including tar, ash, carbon and partially burnt fuel fragments), and many gases (CO<sub>2</sub>, CO, N<sub>2</sub>O, S<sub>2</sub>O, NH<sub>3</sub>, CH<sub>4</sub>, NOX, ozone and other non-methane hydrocarbons). Fresh smoke contains volatile phenols and glycosides that will affect fruit. These chemicals tend to dissipate fairly rapidly in the atmosphere (in about 1 to 2 hours). Vineyards close to actively burning fires or in the path of fresh smoke are more likely to be affected by smoke taint. Smoke that travels long distances is often mostly comprised of suspended carbon particulates and is less likely to affect fruit and the resulting fermented wine (Krstic, 2007). Air quality in these cases may still be greatly degraded by the smoke.

Lignin in wood is the primary source of phenolic compounds that cause smoke flavors in winegrapes and wine following a wildfire event. There are two principle groups of phenolic compounds found in fruit exposed to smoke: volatile phenols (guaiacol, 4-methylguaiacol, phenol, cresol isomers and syringol derivatives) and glycosides (non-volatile glycoconjugates) which are similar compounds bound to sugar molecules (phenol rutinoides,

methylguaiacol rutinoside, guaiacol rutinoside and cresol rutinoside). Normally, enzymes known as glycosyltransferases bind glucose to trans-resveratrol, a naturally occurring phenolic compound and metabolite in grapevines that serves as part of their defense systems. This sugar-bond occurs in whole berries and in resulting wines. Smoke compounds, being phenols, may substitute for resveratrol and are released by hydrolysis during fermentation or after winemaking.

The combination of these chemical groups gives the classic “smoke taint,” as it is both aromatic and tactile in the mouth—you may smell smoke or other off-flavors, but there is also a drying of the mouth when they are present in high concentrations. According to Oberholster, “At lower concentrations, smoke taint reminds you of *Brettanomyces* (Brett)-affected wines. There is a shortness of fruit and a kind of dryness in the mouth that you know isn’t normal. There may be barely perceptible aromas that aren’t normal as well.”

The volatile phenols guaiacol and 4-methylguaiacol are detected in the fruit by gas chromatography, so it is possible to sample fruit before harvest to make picking decisions. Both are chemicals associated with smoked food flavoring. These compounds are found in oak barrels—a natural result of the toasting process—and impart smoky flavors in a final wine. On their own, these two chemicals have flavor profiles described as bacon, burnt bacon, smoky, leather, spicy, phenolic, salami and smoked salmon, which don’t sound so bad. While these compounds aren’t necessarily the sole cause of smoke flavors, they are highly correlated to many other compounds that cause smoke taint, such as the glycosides. The problem is that there are more than 70 other compounds in forest fire smoke that can also produce very undesirable flavors and odors that are often described as, “like licking an ash tray, burnt garbage, a burnt potato, a campfire that has been drenched with water.”

There are protocols in place to test fruit before picking to help understand if the resulting fermentations are likely to have smoke flavors. Whole berry test results indicate that guaiacol and 4-methylguaiacol levels between 0.5  $\mu$  and 2.0  $\mu$ /kg are moderately affected and will require special handling and treatment in the winery to reduce smoke flavors. Fermented wines often have guaiacol levels 5 to 10 times higher than berries (Herve et al., 2011). (Note: 1.0 $\mu$ =1 part per billion.) Based on our experiences, guaiacol levels above 5  $\mu$ /kg in the berries are almost certainly going to have major problems when fermented, especially in red fruit since winemaking depends on skin contact, and skin is where the greatest concentration of smoke compounds are found. If you can minimize skin contact to the juice during harvest, you will also minimize the smoke tastes in the wine. If whole-berry test results indicate smoke compound concentration levels are low, some wineries have found success using flash détente, ultra-filtration, reverse osmosis, carbon fining and filtration, and other smoke-compound removal techniques.



Rejected grapes following the 2017 fires ferment on the vineyard floor in Lake County, Calif.

Testing the fruit for volatile phenols (guaiacol, 4-methylguaiacol) and glycosides (cresols, syringol) is both expensive and not completely predictive, as standards are not well-defined for damage based on smoke chemical concentration. Microvinification, even with partially ripened fruit, is an inexpensive and fairly accurate method to quickly determine if fruit has a potential smoke taint problem (AWRI, 2015). Resulting wine samples are more accurately assessed for volatile phenols and glycosides, since fermentation concentrates these compounds found in the berries. These volatile phenols are taken up by the grape berry during a smoke event and metabolized into their various glycosidic forms (glycosides), especially, as mentioned, within the skin of the berry. Therefore, the glycosides in berries, juice and wine can be used as smoke exposure markers. These compounds are referred to as “bound smoke compounds” and may be metabolized during fermentation by yeast. Additionally, sensory analysis of sample wines can be extremely effective in identifying fruit that will have problems when processed.

## The Lake County Smoke Flavors Trial

Lake County offered a somewhat special opportunity to study wildfire smoke, since the area where most vineyards are planted is a basin formed by mountains and hills around Clear Lake, which tends to form a unique air quality region in a relatively small space. Following wildfire smoke exposure, 13 Cabernet Sauvignon vineyards were selected for sampling from around the viticultural areas of Lake County in a transect that covered 15 miles. This included Upper Lake, High Valley, Big Valley, Kelseyville Bench, Red Hills, Lower Lake and Guenoc Valley.

## Guaiacol and 4-methyl guaiacol concentration, berries and wine

TABLE 1: First sampling August 27, 2018.

Sample Number	°Brix at Harvest	Berry Guaiacol (µg/kg)	Berry 4-Methyl guaiacol (µg/kg)	Wine Guaiacol (µg/L)	Wine 4-Methyl-guaiacol/ (µg/L)	Wine Sensory Analysis Rating* (0-5)
1	18.7	0	0	2	<1	0.7
2	15.8	0	0	2	<1	1.0
3	19.3	0	0	3	<1	1.8
4	23.3	0.9	0	7	<1	1.4
5	17.4	0.6	0	4	<1	1.4
6	20.4	1.5	0	9	2	1.5
7	20.2	0	0	1	<1	1.3
8	21.9	7.4	2.3	26	8	3.8
9	19.2	3.2	0.6	17	4	2.5
10	22.3	2.7	0.6	20	5	2.1
11	18.5	0	0	2	<1	0.9
12	18.3	0.6	0	5	<1	1.9
13	19.8	0	0	3	<1	0.9
14	20.6	3.3	0.8	13	4	3.1

TABLE 2: Second sampling, September 27, 2018.

Sample Number	°Brix at Harvest	Berry Guaiacol (µg/kg)	Berry 4-Methyl guaiacol (µg/kg)	Wine Guaiacol (µg/L)	Wine 4-Methyl-guaiacol/ (µg/L)	Wine Sensory Analysis Rating* (0-5)
1	22.7	0.7	0	3	<1	1.0
2	22.7	0.6	0	4	<1	1.0
3	24.0	1.2	0	4	<1	0.8
4	24.7	2.0	0	8	1	1.6
5	24.2	1.8	0	6	1	1.8
6	27.8	3.3	0.7	13	2	2.6
8	24.5	18.0	5.9	40	12	4.3
9	26.2	6.3	1.5	20	4	3.2
10	26.3	5.1	1.1	21	5	2.0
11	21.0	0.3	0	2	<1	0.8
12	20.5	1.9	0	6	1	1.4
13	23.0	0.7	0	4	<1	0.2
14	24.4	4.7	1.2	18	5	2.9

\*Sensory analysis ratings

<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
no defects	barely perceptible defects	slight defects, mostly in mouth feel	noticeable defects in mouthfeel and aroma	serious defects in mouth feel and aroma	very bad aroma, would rather not taste this wine

Fruit was sampled and micro-vinified during late *veraison* (Aug. 31, 2018) and again before harvest (Sept. 27) using AWRI protocol. A control vineyard unexposed to wildfire smoke was sampled outside of the area in Napa Valley. Sub-samples of fruit from each vineyard were analyzed immediately and locally by **ETS Laboratories** for guaiacol and 4-methylguaiacol. Five-gallon wine lots were then microvinified, stabilized and bottled for each vineyard for both sampling dates. The wine samples were sent to the AWRI and analyzed for volatile phenols and glycoside compounds (guaiacol and 4-methylguaiacol, methyl cresol, 4-methylsyringol, o-cresol, p-cresol, syringol, syringol gentiobioside, methylsyringol gentiobioside, phenol rutinoid, cresol rutinoid, guaiacol rutinoid and methylguaiacol rutinoid).

A 14-member tasting panel, composed of winemakers and growers, evaluated both sets of the wines for smoke flavors on Nov. 27, 2018 and again on April 17, 2019. Wines were rated on a 0 to 5 scale with 0 defined as no defects; 1 defined as barely perceptible defects, but *something* seems to be affecting the wine; 2 defined as slight defects, mostly in mouthfeel; 3 defined as noticeable defects in mouthfeel and aroma; 4 defined as serious defects in mouthfeel and aroma; and 5 defined as very bad aroma and would rather not taste this wine. Data were then correlated between smoke compounds and tasting panel results; summarized results are reported for each wine.

Spatial data from the vineyards, including GPS waypoints, elevation and distance from actively burning areas were collected and used as metadata to create a Geographic Information System (GIS) layer. Environmental data (temperature and prevailing wind speed and direction) were collected from weather stations (n = 77) in Lake and Napa counties near the locations of study vineyards (n = 28) from July 27 through Aug. 12, 2018. (This was the period determined to have maximum smoke inundation.) For each weather station, a mean value for each variable was determined for the data range. Weather station location and data were imported into **ArcGIS Pro** (ESRI,

Redlands, Calif.). A spatial interpolation (inverse distance weighted, default settings) was conducted on each environmental variable and resulting raster values were extracted at the location of each study vineyard. Data were imported into **RStudio** (v. 1.1.463) and merged with chemical analysis data, sensory analysis ratings, elevation and distance to fire perimeter for each vineyard. An initial model was built with sensory analysis ratings (n = 14 vineyards) as the dependent variable and all other variables as independent variables.

FIGURE 1: Relative amount of volatile phenols and glycosides in 14 vineyards in the Lake County area demonstrating that as the concentrations of guaiacol increase, so do all other compounds

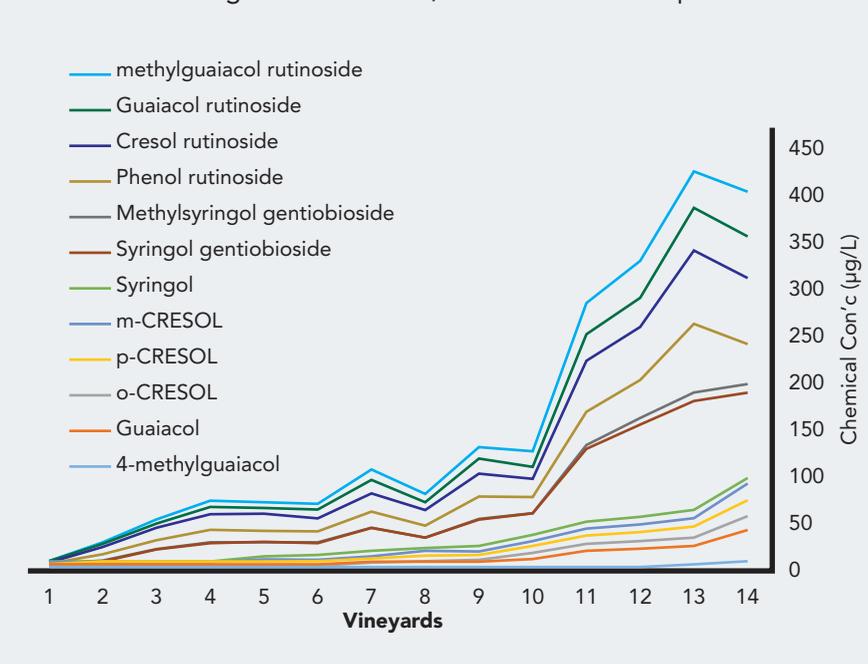
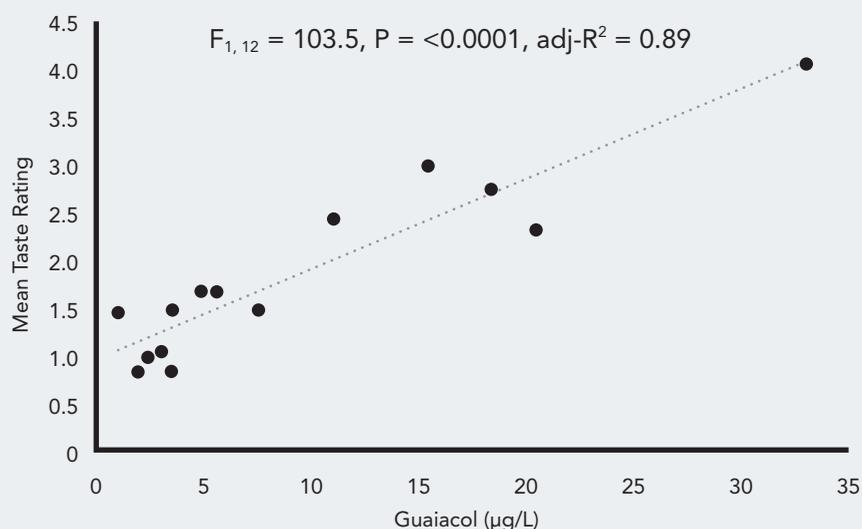


FIGURE 2

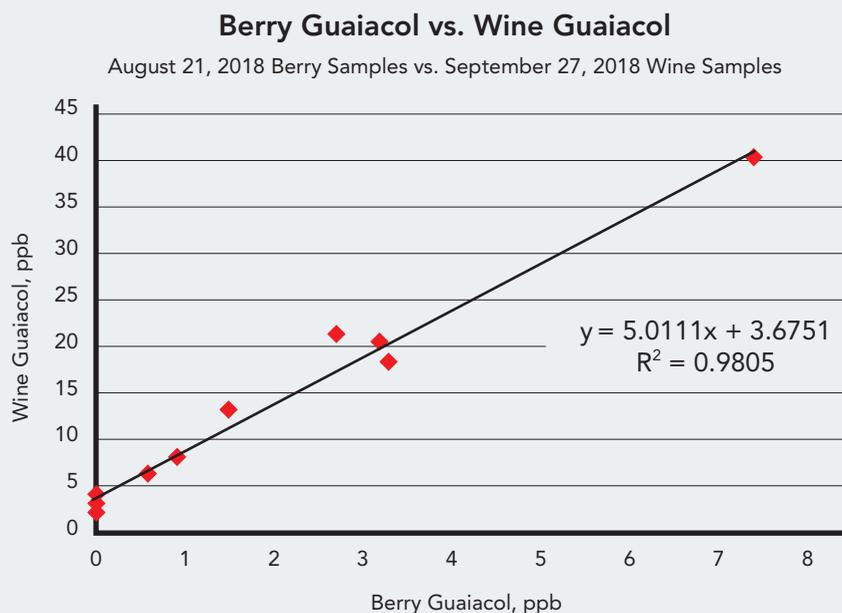


## Results

Both fruit and wine samples in our study showed a wide range of volatile phenol and glycoside concentrations, which indicates that smoke damage to the fruit was not uniform across the vineyards sampled (FIGURE 1). Guaiacol concentrations ranged from  $<0.5\mu$  to  $>8.8\mu$  for berries and  $<1.0\mu$  to  $>36.1\mu$  for wine. (Note:  $1.0\mu=1$  part per billion.) The concentrations of both volatile phenols and glycosides increased as fruit ripened, as well as in the wine sampled at the later date when compared to the first sampling date (TABLE 1, TABLE 2).

Statistical analysis of data found an extremely high correlation of guaiacol concentration in berries to guaiacol concentration in wine ( $R^2 = 0.98$ , FIGURE 3). Additionally, guaiacol concentration in fruit from each vineyard was also highly correlated to the sensory analysis of the corresponding wines made from that fruit ( $R^2 = 0.82$  for Aug. 31 samples and  $R^2 = 0.75$  for Sept. 27 samples, FIGURES 4 and 5). Our study confirmed that berry analysis of guaiacol and other smoke compounds can be very predictive of smoke taint in wine when the fruit is fermented.

FIGURE 3



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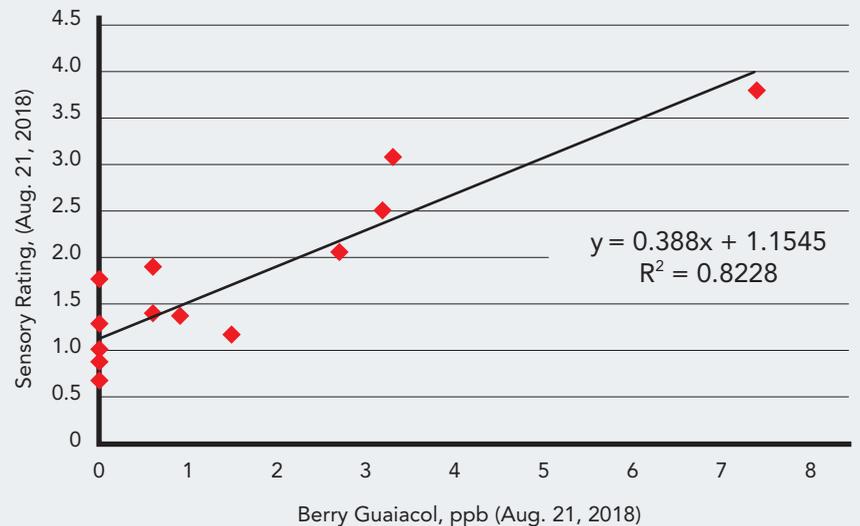
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FIGURE 4

Berry Guaiacol vs. Sensory Rating

August 21, 2018 Samples

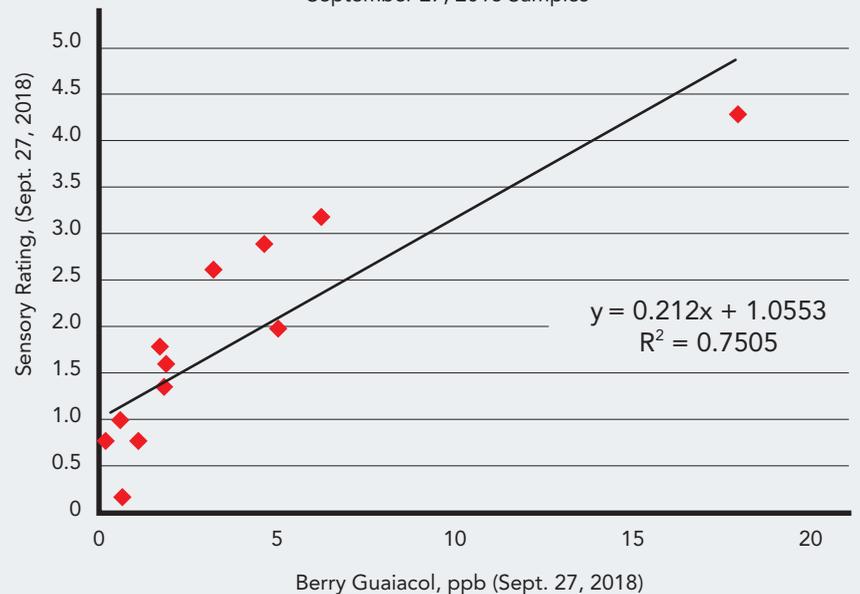


Preliminary correlation analysis of chemical compounds suggested the different volatile phenol and glycoside compounds were highly correlated, therefore only guaiacol was included in the model (FIGURE 1). A stepwise linear regression was conducted on the sensory analysis model; this indicated the best model included only guaiacol as the independent variable (F1, 12 = 103.5, p <0.001, adj-R2 = 0.89). A second model tested the relationship between guaiacol in samples and environmental variables, distance from fire perimeter and elevation. Guaiacol was log transformed to fit model assumptions, and a stepwise linear regression was conducted. The best fit model included distance from fire perimeter, mean daily temperature, prevailing wind speed and prevailing wind direction (F4, 23 = 8.777, p = 0.0001, adj-R2 = 0.54). Our wine sample from Napa Valley had little off flavors and no volatile phenols were detected (TABLE 1). On the other hand, some sites close to the edge of fires and immediately downwind were very heavily affected and contained high concentrations of smoke flavor compounds. Elevation was not found to be significantly correlated to smoke flavors in wines.

FIGURE 5

Berry Guaiacol vs. Sensory Rating

September 27, 2018 Samples





Fire damaged grapes in Lake County, Calif. 2017

## Discussion

Based on our data analysis of this study, berry sampling and guaiacol/4-methylguaiacol analysis are useful for a quick evaluation of whether or not fruit from a particular vineyard may have the presence of volatile phenols that can potentially result in smoke-affected fermentations. The concentrations of these chemicals found in the fruit are highly correlated not only to those in the wine, but also to the sensory analysis of the wine itself in our study. Regardless, microvinifications are extremely useful for being able to produce a more accurate analysis of smoke compounds when fruit is processed into wine. As yeasts and bacteria ferment the must, determination of both volatile phenols and glycoside concentrations can be made in the laboratory from the fermented sample, as more of the volatile phenolic compounds are hydrolyzed from the glycoside. In addition, wines can be evaluated for mouthfeel, aroma and taste. Even when fruit is picked and micro-fermented at low sugars, potential major problems are surprisingly easy to recognize in wine samples when fruit has been damaged by smoke, allowing winemakers to take corrective measures when processing fruit to reduce smoke flavor impacts, or reject the fruit outright.

Wine sensory analysis done by our tasting panel, based on guaiacol concentrations, indicated that concentrations below 6  $\mu\text{l}$  were somewhat difficult for everyone to detect smoke flavors. At 10  $\mu\text{l}$  guaiacol or above, there was more agreement that the wine sample had a potential smoke taint issue. It is important to remember that these guaiacol concentrations are part of a complex of smoke compounds following wildfire smoke exposure that are flavoring the wine, and it is not the guaiacol alone causing smoke aromas, flavors and taint.

In this particular wildfire incident study, results indicated that not all vineyards were equally affected by smoke. Wind direction and speed, temperature and vineyard proximity to active fires are the factors that are most highly correlated to smoke damage to fruit. Smoke generated in the first one or two hours from a wildfire is more likely to be damaging to nearby vineyards, whereas smoke that has traveled some distance and for a longer period of time away from the fire is more likely to contain suspended particulate matter (less than 10 microns) and less of the volatile phenols and glycosides that can be taken up by fruit. Consequently, even though the vineyard may be enveloped in smoke, little damage is done to the fruit when the source of the smoke is from distant fires. Some of the Lake County vineyard sites sampled had very low levels of volatile phenolic compounds in the fruit and no perceptible smoke flavors in sample wines, even though smoke had settled on them for days.

## Conclusions

Since the increase of guaiacol concentration is highly correlated with the increase of other volatile phenols and glycosides, simple chemical analysis of the microvinifications for guaiacol will also aid picking decisions and wine treatment protocol to minimize off-flavors.

This study will help to better understand when vineyards are most at risk to wildfire smoke damage, and how microvinifications may be a reliable and quick way to predict fermentation outcomes before harvest in vineyards affected by wildfire smoke. While our sample size is limited, it represents considerable time, effort and expense to generate the data that we have presented. We hope that similar studies in the future will help to set contract standards to guide wineries and growers when winegrapes have been affected by wildfire smoke. **WBM**

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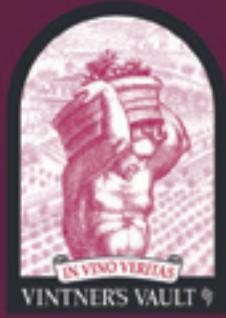
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# Larger Wineries Take a Chance on Aluminum Bottles

Growth in canned wine sales prompt some wineries to innovate with resealable, single-serve versions.

Kerana Todorov

Kerana Todorov is the staff writer/news editor for *Wine Business Monthly*. She can be reached at [ktodorov@winebusiness.com](mailto:ktodorov@winebusiness.com).

**WALK INTO ANY WINE-SPECIFIC** retail store in the United States and the chances of finding wine in an aluminum bottle, or a can with a re-sealable cap, are very slim. But brands, like **Treasury Wine Estates' Sterling Vineyards**, **E&J Gallo** and **Mercer Wine Estates** in Prosser, Wash., are among those that are beginning to invest in this new aluminum bottle concept.

Gallo's offerings include **Apothic** Red Winemaker's Blend in a single-serve format. The twist-cap, 250 ml aluminum bottles are sold in two-packs for \$9.99. This year, Treasury Wine Estates' Sterling Vineyards launched a new line of wines sold nationwide in 375 ml resealable aluminum bottles for \$7.99 each.

**Christian Borges**, a négociant who produced 600 cases of the California-appellated **Variat** in 2019, said that his wine, produced at a Napa Valley custom-crush facility, is bottled in aluminum and topped with a screw cap. The California-designated Cabernet Sauvignon sold between \$16 to \$20 per bottle, and the Sauvignon Blanc retailed between \$14 and \$18.

## Piggybacking Off Canned Wine

"We saw an opportunity when the growth of canned wine took off. Innovation is at our core. We knew we needed to do something different by launching the sleek, modern aluminum bottle," said **Kris Ann Brady**, brand director for Sterling Vineyards. She added that the packaging also complement's the company's branding. Their tagline reads: "Always Polished, Never Dull."

Sterling released its aluminum-packaged Cabernet Sauvignon, Rosé and Chardonnay in January 2019. The tall and narrow bottles feature a brushed texture, accented by a colored cap coded to each wine within: The purple cap, for instance, designates a Cabernet Sauvignon while pink denotes Rosé and yellow, Chardonnay.

Sterling Vineyards anticipates its aluminum bottles will be popular at sporting and concert events, grab-and-go convenience occasions and among consumers who seek an alternative size option.

"We are always looking for ways of innovating Sterling Vineyards and realized we needed to bring something fresh, new and exciting to attract (legal-drinking-age) Millennial consumers and expand into different occasions. The aluminum bottles were one way to do so," according to a statement from the company.



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Mercer Wine Estates started selling pop-top cans similar to soda cans about two years ago. The company then quickly realized it wanted to offer a re-sealable product, said **Brenda Mercer**, public relations director at Mercer Wine Estates. “We started producing the twist-top, re-sealable cans at the beginning of 2019,” Mercer said in October. About 12,000 cases of their canned wine, labeled ICAN, have been produced so far, she said.

Why aluminum? “We wanted to offer a more environmentally sustainable package,” Mercer said. They did so after reading that 75 percent of all aluminum produced remains in use. “We felt like it was a good time to put our quality fruit and wine into this format,” Mercer said.

A seal, made of a small amount of plastic that burns off in the recycling process, sits around the top outside of the ICAN can, Mercer explained. The interior lining is also recyclable, and is approved by the **U.S. Food and Drug Administration**. She also noted that this sustainable liner keeps the wine from giving off “a metallic flavor.”

The ICAN brand includes a Chardonnay and a Rosé, both of which are sourced from Mercer Wine Estates’ Horse Heaven Hills vineyards above the Columbia River in Washington. The wine is produced at its facilities in Prosser.

Like Sterling Vineyards, Mercer Wine Estates expects ICAN customers are people on-the-go, and the company sought to offer a product that’s easy to carry. Also like Sterling’s aluminum bottles, Mercer’s ICAN wines are 375 ml—half the size of a standard bottle. “They pack easily into ice chests, backpacks, picnic baskets,” Mercer said. “They are also resealable so can be enjoyed over a period of time. We think they are great for the beach, pool, golf course, hiking, picnics, outdoor concert venues, camping.”

As of October, the ICAN was sold in 12 states. Mercer Wine Estates’ sales team and in-house designer, **Cally Mercer-Burgett**, designed the label. “We were striving for an outdoorsy, weekend vibe—and I think she nailed it,” Mercer said. “We wanted to use a screw cap wine can similar to a wide-mouth **Coors Light** can because they are so easy to use and re-use.”



### Packaging Pros and Cons

Aluminum is lighter than glass and packages are smaller, which means a decrease in storage and transportation costs. Borges, owner of Variat, noted a case of his 750-ml aluminum bottles weighs in at just 24 pounds.

“Aluminum is lightweight, stackable and shippable and will not break,” said **Matt Meenan**, spokesman for the **Aluminum Association**. “Aluminum cans and bottles also provide a 360-degree ‘billboard’ for art and branding,” he added.

But Brenda Mercer said the new packaging format comes with its challenges, including the bottling process. Currently, the wine is shipped to Modesto, where it is bottled, but Mercer Wine Estates has invested about \$500,000 in a new

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bottling line for its Prosser facility. **Zalkin** and **Codi Manufacturing Inc.** were the two main manufacturers, said **Sean Kendall**, general manager at Mercer Wine Estates. The goal, he said, is to have the line up and running by the end of March.

But bottling lines set up to fill aluminum bottles—or a can with a re-sealable screw cap—are not all that common.

Sonoma-based **Free Flow Wines**, which is known for filling wine in kegs and cans, has received queries about accommodating aluminum bottles as well. However, the company does not offer that service, noting that the package itself (the aluminum bottles and screw caps) costs more than a standard aluminum can.

**Paul Tincknell**, a consultant based in Healdsburg, Calif., said aluminum bottles are not very popular in the wine industry for a few reasons. One issue is the federal **Alcohol and Tobacco Tax and Trade Bureau's** definition of "standards of fill," which the wine industry must adhere to: 187 ml, 500 ml, 750 ml, 1 L, 1.5 L and multiples of liters.

Most consumers find the 187 ml bottle too small and the 500 ml too big, Tincknell said. While the ideal sizes for single-serves are 250 ml and 300 ml bottles, those cannot be sold individually, he explained. They have to be sold in multiples. As of this writing, the TTB is reviewing these rules.

Like Mercer, Tincknell noted the lack of lines that fill wine in aluminum bottles. "Changing a bottling line for another container format can cost hundreds of thousands of dollars even for small wineries," Tincknell said. It could cost millions for larger facilities.

Where there has been success is in wine-based cocktails. **Bin to Bottle** in Napa started filling aluminum bottles in May 2019 at the request of a client. The custom crush wine company also fills cans and glass bottles.

As of November, Bin to Bottle had filled 60,000 cases of 375 ml aluminum bottles of **GAZE Wine Cocktails** blends from **Vintage Wine Estates**. **John Wilkinson**, managing partner at Bin to Bottle, said in November. The bottles are made by **Exal** using roll-on pilfer-proof closures (ROPP). Bin to Bottle planned to fill 4,000 to 5,000 cases of aluminum bottles a week beginning late November.

## Sales of Aluminum Cans on the Upswing

**Robert L. Williams Jr.**, founder and partner at **WICresearch.com**, has reported about the growth in the number of wine-in-can products—though no data about the sale of aluminum bottles is reported, the bottles are made of the same material and the success of wine in can has spurred the interest in its bottle-shaped counterpart. As of August 2019, 375 winemakers in 28 separate countries were producing 1,000 different SKUs of canned wine, said Williams during the **Wines & Vines Packaging Conference** in Yountville held this past summer.

Williams spoke at the conference after attending the **First Annual International Canned Wine Competition** in July at the Mendocino Fairgrounds in Boonville, Calif., where Mercer Estates' ICAN Chardonnay won a gold medal. Williams has not researched screw-top cans. The way he sees it, screw-top cans present a needed option for consumers: "Drink now, drink a bit later."

While aluminum bottles are an option for wine drinkers who prefer not to drink wine out of a can, the packaging does matter: An aluminum bottle project a decade ago failed because the bottle looked like a bottle of shampoo, Tincknell recalled. **WBM**



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Why the American wine industry is struggling in the modern beverage alcohol marketplace

John Stallcup

**WHAT DOES THE FUTURE** hold for brand wine in the United States? To answer that question, we must first define what brand wine is. By brand wine, I mean the branding of wine as a category (still wine purchased in the United States), in terms of the current image of wine as perceived by U.S. beverage alcohol consumers. Brand image differs from brand identity; the former being how consumers perceive a product or category, and the latter referring to how companies want consumers to perceive their product or category.

## The Wine Market in Numbers

The **Wine Intelligence** U.S. Landscapes 2019 report found there was a “marked decline” in the frequency that wine was consumed among people under the age of 35. Neither the wine category nor any of the leading wine companies have invested in brand marketing over the past 40 years in the same strategic, consistent, brand equity-building manner as those in either the beer and/or spirits sectors.

According to **Danny Brager**, senior vice president of beverage alcohol practice for **Nielsen**, the U.S. retail market, 90 percent of wine sells for less than \$20 per bottle. These “beverage wines” are purchased with the same basic objective as having a beer or a mixed drink. You want to consume a beverage that helps you relax and, at times, be refreshed. All the beverage needs to do is taste good enough. The wine that sells for more than \$20 can be deemed “experience wine.” Experience wines tend to cost more and are those that you sniff, swirl and spend some time focusing on. In a **Silicon Valley Bank** wine blog post entitled “Wine Consumption Probably Won’t Return to ‘Normal,’” **Jon Moramarco**, managing partner of **bw166 LLC**, reported that, on average, the cost per serving of wine is \$2.15 per 5 oz. glass, \$1.28 per 12 oz. bottle of beer and 93 cents for a 1 oz. shot of spirits.

**Forbes** senior contributor on finance **Zack Friedman** reported that, as of 2018, outstanding student loan debt totaled \$1.5 trillion. A 2016 study by the **Pew Research Center** found 33 percent of those between the ages of 25 and 29 lived with their parents or grandparents. A near full employment, low wage, multiple-part time job economy has helped to create the highest percentage of young adults in their late 20s living with their parents in 75 years.

When you combine a significantly higher cost per serving for wine, as compared to beer or spirits, with the burden of debt, low wages and a slow growth economy, then wine is in an inferior position as the most expensive beverage alcohol category. From an overall economics point of view, wine is not likely to increase share among the current cohorts entering their 30s, 40s and 50s—the prime years for beverage alcohol consumption.

## How is Brand Wine Currently Perceived by U.S. Consumers?

In addition to individual beer and spirits brand images, each beverage alcohol category has its own brand image. Several factors combine to create a brand image; some of these factors you have control over and some you don’t, which emphasizes the importance of the strategic choices you make regarding branding and marketing efforts. Branding occurs in many ways, including, but not limited to, personal interactions and the impacts of traditional media and digital media.

About a decade ago, Dr. **Liz Thach** of **Sonoma State University** (SSU) and I co-created and fielded a video survey of Millennial wine consumers that asked a preset list of questions about the wine category. At that time, the two most common words the Millennial research subjects used to describe the wine category were “snooty” and “snobby.” The Millennials interviewed all attended SSU—not exactly a hostile environment for wine.

Today, when you review the 2019 *Forbes* list of the 100 most valuable brands across all products and companies there are three beer brands: **Budweiser**, **Corona** and **Heineken**. There are no wine brands. The 2018 **Interbrand** 100 Best Global Brands list includes Budweiser, **Jack Daniels**, Corona and **Johnnie Walker**—but no wine brands.

At the **Wine Industry Technology Symposium** in October 2019, **Alex Kessler**, consumer insight and business intelligence manager at **O’Neill Vintners & Distillers** pointed to company research that demonstrated only 31 percent of restaurant patrons order wine first when they dine out; the other 69 percent choose beer or spirits. “The main reasons for choosing wine last are that wine is expensive, people prefer the cocktail experience and wine is intimidating,” Kessler said. (Editor’s note: *Wine Business Monthly* produces the Wine Industry Technology Symposium.)

Wine Intelligence issued its Global Wine Brand Power Index 2019 (March 13, 2019), a report that reflects a sample of 360 million wine consumers across all markets. It indicated that the drops in the overall index scores are driven by one key shift: the decline in wine brand awareness.

“It’s interesting to see that wine brands, as a whole, have a challenge on their hands to hang onto their spot within consumers’ minds,” said Wine Intelligence chief executive **Lulie Halstead**. “The high-ranking brands in this list tend to have distinctive imagery, solid and consistent branding and tend to be the ones doing well, or very well, across multiple markets.” The highest ranking brands include **Yellow Tail** and **Casillero del Diablo** with **Jacobs Creek** and **Woodbridge** in the top ten.



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When asked if wine consumers could recall any wine advertisements, 99.99 percent of the time they could not recall even one.

### Advertising Budgets

In a 2015 study conducted by University of Texas professor Gary Wilcox entitled “Beer, Wine or Spirits? Advertising’s Impacts on Four Decades of Category Sales,” researchers found that the spending on advertising can be related to consumers’ choice of brands and/or categories of alcohol beverages.

The study analyzed the total expenditure by beer, wine and spirits on “measured media” from 1971 to 2011, a period of 40 years. Measured media included: print, outdoor, network TV, spot TV, cable TV, syndicated TV, network radio, spot radio, internet, Spanish TV and FSI coupons. During this period, the beer category invested more than \$27 billion on measured media, 6.5 times more than the wine category. Spirits invested more than \$10 billion—2.5 times more than the wine category.

	Total \$	Percentage of Total
Total	\$42,071,894,000	100%
Beer	\$27,663,116,000	65.8%
Spirits	\$10,114,468,000	24.0%
Wine	\$4,294,310,000	10.2%

“BEER, WINE OR SPIRITS? ADVERTISING’S IMPACTS ON FOUR DECADES OF CATEGORY SALES,”  
2015 UNIVERSITY OF TEXAS

The study did not take into consideration the quality and/or impact of the advertising. Most adults in the U.S. can recall several beer commercials and spirits ads. When asked if wine consumers could recall any wine advertisements, 99.99 percent said they could not recall even one.

There is evidence that demonstrates a comic book series in Asia (*Drops of God*), rap music videos, a “60 Minutes” episode (The French Paradox) and three motion pictures viewed mostly in reruns (*Sideways*, *Bottle Shock* and *Disclosure*) have had as much, or even more, positive impact on wine sales, brand equity and tasting room visits as any wine industry-planned marketing effort.

In addition, the study of advertising’s impacts on beverage alcohol does not consider the deep bench of talent and the intellectual property, or “institutional memory” of the effective marketing programs, frames, memes or tactics built up over 50 years of marketing in both beer and spirits. The leading beer and spirits brands historically perceive measured media expenditures as investments. The wine category tends to categorize and think about marketing as a per-case expense, like freight or excise taxes.

Here are some interesting data points of total measured media expenditures from 1971 through 2011 included in the U.T. study.

- Spirits brands were not allowed to advertise on TV until 1996.
- Over the 40 year period, spirits spent the most on print advertising with 73.3 percent of the total.
- Over the 40 year period measured, beer spent the most on network TV with 89.6 percent of the total.
- Over the 40 year period, beer spent the most on spot radio with 79 percent of the category total.
- Although Hispanics make up 17.6 percent of the U.S. population, the wine industry only invested 0.002 percent of their media budgets on Spanish language TV over the 40 year period.
- The highly effective Corbett Canyon radio campaign accounted for nearly 20 percent of the total network radio spend for the wine category for the 40-year period from 1971 up to 2011.

In 2017, wine made a big entry into television advertising at one of the most-watched broadcasts of the year: Yellow Tail became the first wine brand in nearly 40 years to advertise during the **Super Bowl**, which about 111 million Americans tuned in to.

In his 2018 *Media Insider* article “TV Advertising Has A Marketing Problem,” author **Dave Morgan** stated: “Those who believe that TV as a marketing medium is passé or no longer relevant seem to forget that TV advertising delivers massive scale. ‘Judge Judy’ delivered more audience ad minutes (more people in the U.S. watching more video ad time) in just two 30-minute episodes than all of the video on **Google’s YouTube** in all of America in one day. Yes—all videos, in all of the U.S., all day long.”

The wine industry is currently focusing a great deal of effort on digital marketing, including social media. But the evidence on successful brand-building using social media is not promising. Research by **Keller Fay** found just 7 percent of word-of-mouth occurs online; the other 93 percent is conducted face-to-face or on the phone.

### Where Social Media Fits In (or Doesn’t)

The 2016 *Harvard Business Review* article by **Douglas Holt** “Branding in the Age of Social Media” covers this issue in detail.

“On YouTube, musicians **Rihanna**, **One Direction**, **Katy Perry**, **Eminem**, **Justin Bieber** and **Taylor Swift** have built massive audiences. On **Twitter**... teams such as **FC Barcelona** and **Real Madrid** (...are far more popular than the two dominant sports brands, **Nike** and **Adidas**). On **Instagram**, you’ll find more of the same. These celebrities are all garnering the super-engaged community that pundits have long promised social media would deliver. But it’s not available to companies and their branded goods and services.... Interacting with a favored entertainer is different from interacting with a brand of rental car or orange juice... The idea that consumers could possibly want to talk about Corona or Coors in the same way that they debate the talents of Ronaldo and Messi is silly.”

After a decade of effort and billions of dollars spent, companies are still struggling to come up with a branding model that works in the chaotic world of social media. If the best-run brands in the world are having difficulty building their brand equity with social media, is it reasonable to assume the wine category—with no heritage of brand marketing excellence—can thread the needle of social media marketing?

In the U.S., consumers drink across all three categories of beer, wine and spirits, but only between 7 to 13 percent of these consumers identify as only drinking wine. Given share of voice equals share of market over time, wine’s 10 percent share of voice mirrors the wine only percentage share of market.

The evidence indicates the wine category employs far more tactical-sales driven, short-term marketing than long-term brand building. Over the last 40 years, the wine industry invested most of its marketing dollars on in-store point-of-sale/point-of-purchase, wine writer public relations, package design and events—not the traditional components of the marketing matrix beer and spirits employed.

## Next Steps

The wine industry has primarily focused on the tactical parts of the marketing matrix for good reason: it is hard to be profitable in the wine business, distribution is severely constrained, wine has less margin as a category. Skilled, experienced, consumer brand marketing talent isn't cheap, and the wine industry tends to only talk to itself. Recruiting a talented consumer packaged goods (CPG) professional is difficult because, historically, the wine category is not looked upon favorably by brand marketing professionals.

From the outside looking in, there are several potentially effective strategies that could successfully position “brand wine” in the future. The wine category needs to collaborate to do as many of them as possible in order to create the needed change in narrative, tone of voice and consumer perception.

A couple of places to start are to stop denigrating sweet wine drinkers. “Food and wine pairing” as a marketing tactic is a double edged sword at best—consider “flavor balancing” as a more easily understood and applied technique.

Many wine consumers feel the need to apologize when they drink inexpensive wines (defined as those priced less than \$15). The “beverage wine” side of the wine business (those wineries that produce the millions of gallons of wine consumers drink “everyday”) need to change the narrative and tone of voice for the category. The perception of wine as snooty, snobby, elitist, confusing and unwelcoming is driven by the higher-end wine brands. They tend to define the narrative with an elitist tone, affecting the entire wine category by default.

The current brand image of the wine category seems to be one that pushes consumers away, reducing adoption and loyalty. Wine, as a category, should decide what friendly, welcoming, informal narrative and tone of voice works for the younger generations. Create the taglines, framing and vernacular that resonates with all consumers. Take those well-researched words and phrases we use to describe wine, make them accessible and use them in all communication. Think **Levi's**, **Target** or **Patagonia**. Lose the **Lamborghini**, **Bulgari** and **Chanel**.

There are some good signs on the horizon. **Meomi**, **Woodbridge** and **Stella Rosa** are running television ads. It feels like it is time for another **WineVision** get together (ala **Rich Cartiere**) to identify specific action items and get to work as an industry.

Marketing does not have to be expensive. I created and executed a regional TV ad campaign that drove hundreds of visitors to a tasting room for a total cost \$2,000.

When we get beverage alcohol consumers to feel and think different about wine, the whole category will win. As with most business categories the **Peter Drucker** quote “Strategy is a commodity, execution is an art” applies. **WBM**

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# Retail Sales Analysis

## Wine Sales Steady as Sauvignon Blanc Grows

Wines Vines Analytics

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

### Sales Value Steady in October

Off-premise table wine sales were stable in the four weeks ended Nov. 2, staying even with a year ago at just over \$1 billion, according to scan data tracked by **Nielsen**. Sales rose 1 percent in the 52 weeks ended Nov. 2, however, totaling \$14.4 billion.

### Sales Volume Drops 3 Percent

Off-premise table wine volume fell 3 percent versus the previous year in the four weeks ended Nov. 2, totaling 11.8 million 9L cases. The decline in the latest 52 weeks was more modest at just 1.5 percent, with volume totaling just short of 160 million 9L cases.

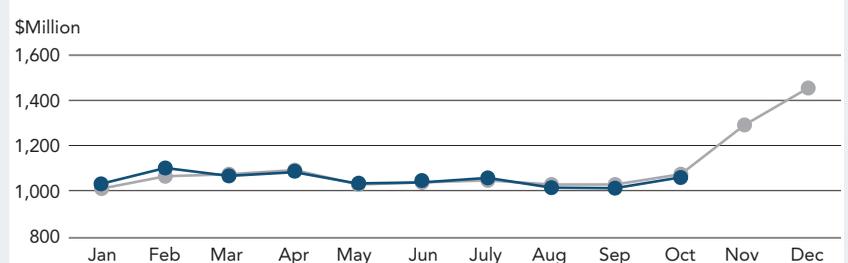
### Sauvignon Blanc Leads Growth Among White Varietals

Growth of white table wine sales through off-premise outlets Nielsen tracked matched that of table wines as a whole in the 52 weeks ended Nov. 2, rising 1 percent to nearly \$6 billion. Case volumes dropped just 1 percent to 70.2 million cases. The performance positioned them between the red wines, which saw sales stable to \$7.4 billion in the latest 52 weeks, and rosé, sales of which registered strong growth of 4.9 percent to \$1.1 billion.

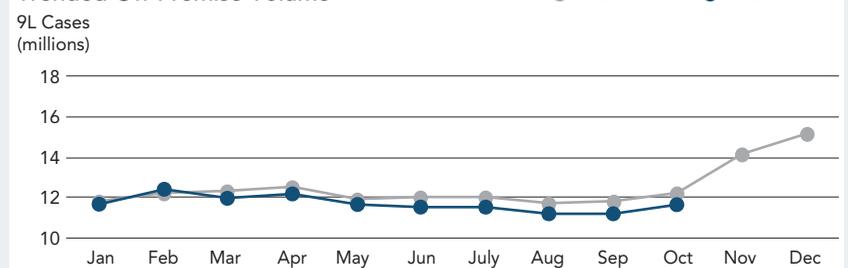
Within the segment, Sauvignon Blanc saw the strongest growth in the latest 52 weeks with sales rising 7 percent to \$987 million. The tally ranked it as the third most-popular white varietal tracked by Nielsen, after Pinot Gris and Chardonnay, the top varietal with sales of more than \$2.5 billion but flat growth. The growth of Sauvignon Blanc has been powered by imports, particularly from New Zealand. Yet the per-bottle price of the varietal isn't cheap; it averaged \$9.49 in the latest 52 weeks, well above Riesling at \$7.61, or Chardonnay at \$7.14 (Chardonnay posted the strongest per-bottle price increase, however, at more than 2 percent).

While the top three white varietals Nielsen tracked all saw sales grow in the latest 52 weeks, the smaller varietals all saw sales decline. Riesling sales took the hardest fall, dropping 6 percent to 234 million. **WBM**

Trended Off-Premise Value

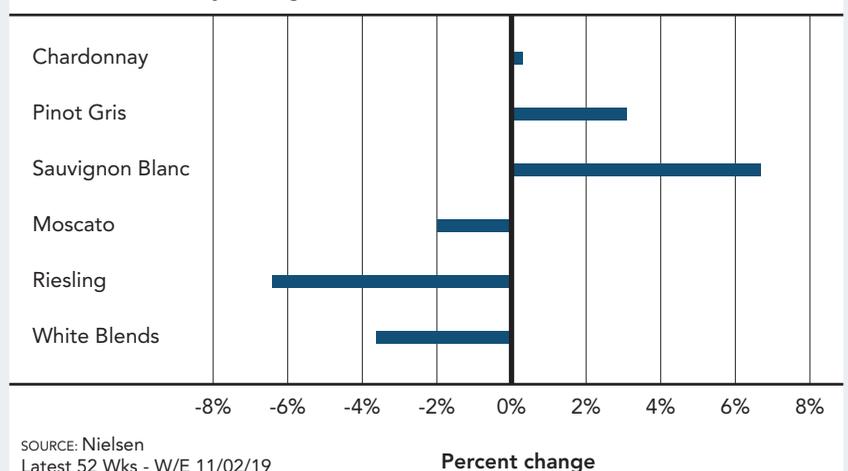


Trended Off-Premise Volume



SOURCE: Nielsen. Latest 4 Wks - W/E 11/02/19

White Varietals by Change in Sales Value



SOURCE: Nielsen Latest 52 Wks - W/E 11/02/19

### Methodology

Sourced from Nielsen, these figures represent off-premise retailer wine sales to the consumer aggregated across a variety of channels nationwide, including grocery, drug, mass merchandisers, convenience, dollar, military, as well as a selection of warehouse clubs, and liquor channel geographies and liquor channel retail chains. Nielsen figures are updated and released every four weeks.

**Nielsen Table Wine Category Segments** MARKET: Total US xAOC+Conv+Military+Liquor Plus PERIOD: Week Ending November 2, 2019

nielsen		Dollar Value				Dollar Value % Chg YA		9L Equivalent Volume				9L Equivalent Volume % Chg YA		Avg Equivalent Price Per 750ML	
		Latest 52 Wks - W/E 11/02/19	Latest 4 Wks - W/E 11/02/19	Latest 52 Wks - W/E 11/02/19	Latest 4 Wks - W/E 11/02/19	Latest 52 Wks - W/E 11/02/19	Latest 4 Wks - W/E 11/02/19	Latest 52 Wks - W/E 11/02/19	Latest 4 Wks - W/E 11/02/19	Latest 52 Wks - W/E 11/02/19	Latest 4 Wks - W/E 11/02/19	Latest 52 Wks - W/E 11/02/19	Latest 4 Wks - W/E 11/02/19		
<b>TOTAL TABLE WINE</b>		<b>14,389,569,725</b>	<b>1,069,536,189</b>	<b>0.9</b>	<b>-0.3</b>	<b>159,703,320</b>	<b>11,816,474</b>	<b>-1.5</b>	<b>-3.0</b>	<b>7.51</b>	<b>7.54</b>				
<b>PRICE TIERS BY CONTAINERS</b>	BOX	1,417,953,109	111,625,875	5.5	4.3	33,999,929	2,614,801	2.0	0.1	3.48	3.56				
	\$0-\$3.99	577,665,841	43,914,160	-1.0	-1.9	19,983,771	1,497,996	-2.4	-4.3	2.41	2.44				
	\$4+	839,824,329	67,297,149	10.5	8.2	14,007,782	1,109,273	9.0	6.2	5.00	5.06				
	Total Table Wine Glass	12,696,509,333	936,335,528	0.2	-1.1	122,390,028	8,950,984	-2.6	-4.0	8.64	8.72				
	Value Glass \$0-\$3.99	644,283,188	47,409,838	-6.6	-7.1	15,976,708	1,172,502	-8.5	-8.0	3.36	3.37				
	Popular Glass \$4-\$7.99	3,122,462,550	226,444,635	-5.1	-6.2	47,288,001	3,404,650	-5.8	-7.2	5.50	5.54				
	Premium Glass \$8-\$10.99	3,295,897,435	244,797,333	-2.5	-5.0	29,122,035	2,153,698	-2.8	-6.0	9.43	9.47				
	Super Premium Glass \$11-\$14.99	2,838,425,070	213,804,678	6.1	5.3	18,875,881	1,413,781	6.4	5.5	12.53	12.60				
	Ultra Premium Glass \$15-\$19.99	1,418,443,687	106,870,226	6.8	5.8	7,041,983	524,257	8.3	6.7	16.78	16.98				
	Luxury Glass \$20-\$24.99	586,477,860	41,619,641	6.4	5.6	2,298,638	158,241	8.2	5.4	21.25	21.91				
Super Luxury Glass \$25+	779,297,598	53,884,809	3.1	1.9	1,715,237	112,819	7.3	1.4	37.85	39.79					
<b>IMPORTED</b>	IMPORTED	3,795,140,697	273,664,490	0.5	-0.3	39,825,032	2,870,026	-1.2	-2.9	7.94	7.95				
	ITALY	1,204,638,212	86,624,060	1.9	1.6	10,489,795	743,914	-0.1	-1.0	9.57	9.70				
	AUSTRALIA	718,636,940	54,422,114	-1.7	-3.4	11,786,307	872,484	-2.3	-4.7	5.08	5.20				
	FRANCE	463,563,255	30,029,540	2.4	3.4	2,923,763	189,177	-0.6	-1.1	13.21	13.22				
	CHILE	255,177,211	19,414,128	-1.8	-1.6	3,869,888	294,072	0.1	-0.1	5.49	5.50				
	SPAIN	158,825,243	11,852,509	-5.5	-8.3	2,025,349	152,409	-3.5	-8.4	6.53	6.48				
	GERMANY	76,897,696	5,191,404	-7.6	-8.7	733,212	49,187	-8.2	-10.0	8.74	8.79				
	NEW ZEALAND	499,449,693	36,049,520	8.6	8.5	3,609,722	257,109	8.8	7.3	11.53	11.68				
	ARGENTINA	327,710,288	23,785,509	-6.1	-7.7	3,582,454	258,026	-7.4	-8.3	7.62	7.68				
	SOUTH AFRICA	22,979,283	1,652,489	-7.7	-6.1	201,291	14,041	-6.7	-6.7	9.51	9.80				
	PORTUGAL	39,388,620	2,545,538	-2.2	-13.9	415,017	25,628	-7.5	-20.8	7.91	8.27				
<b>DOMESTIC</b>	DOMESTIC	10,594,429,029	795,871,699	1.1	-0.3	119,878,288	8,946,448	-1.6	-3.1	7.36	7.41				
	CALIFORNIA	9,537,600,766	718,490,047	1.0	-0.4	111,214,614	8,321,086	-1.7	-3.2	7.15	7.20				
	WASHINGTON	611,036,438	43,940,821	-0.8	-2.5	5,085,738	360,076	-1.6	-3.7	10.01	10.17				
	OREGON	213,620,162	16,537,060	13.2	11.5	1,103,102	84,351	13.9	12.7	16.13	16.33				
	TEXAS	32,669,954	2,317,876	0.9	-5.1	389,250	26,954	-2.0	-9.8	6.99	7.17				
	NEW YORK	37,048,748	2,254,440	0.7	4.2	480,149	31,226	-5.9	-1.9	6.43	6.02				
	NORTH CAROLINA	40,669,366	2,896,934	2.3	-0.3	423,082	30,146	1.3	-0.8	8.01	8.01				
	INDIANA	23,553,609	1,600,890	-0.1	-4.3	259,248	17,573	-1.3	-5.6	7.57	7.59				
	MICHIGAN	22,318,911	2,462,006	-0.2	5.6	239,541	27,187	-1.5	-0.9	7.76	7.54				
	<b>TYPES</b>	RED	7,398,436,213	565,668,205	0.2	-1.5	73,249,108	5,563,140	-2.2	-4.2	8.42	8.47			
WHITE		5,876,783,823	429,926,058	1.1	0.8	70,225,848	5,137,869	-0.9	-1.7	6.97	6.97				
PINK		1,113,063,318	73,931,059	4.9	2.7	16,215,908	1,115,328	-0.7	-3.6	5.72	5.52				
<b>VARIETALS</b>	TOTAL CHARDONNAY	2,545,200,801	189,112,898	0.3	-0.4	29,717,771	2,199,074	-1.9	-3.0	7.14	7.17				
	TOTAL CABERNET SAUVIGNON	2,684,660,526	206,473,070	3.2	2.3	24,827,757	1,916,170	1.0	-0.1	9.01	8.98				
	TOTAL PINOT GRIGIO/PINOT GRIS	1,337,429,624	98,975,232	3.1	3.1	17,321,111	1,290,681	2.0	1.9	6.43	6.39				
	TOTAL PINOT NOIR	1,094,263,916	83,777,089	2.5	0.4	8,392,506	636,003	-0.1	-3.4	10.86	10.97				
	TOTAL MERLOT	707,743,829	51,893,595	-6.6	-8.0	9,731,067	707,906	-8.5	-10.4	6.06	6.11				
	TOTAL SAUV BLANC/FUME	986,989,626	72,523,418	6.7	7.1	8,668,358	639,202	5.8	5.9	9.49	9.45				
	TOTAL MUSCAT/MOSCATO	638,105,099	43,721,989	-2.0	-3.8	9,636,951	665,374	-3.8	-5.5	5.52	5.48				
	TOTAL WHITE ZINFANDEL	270,475,125	18,900,477	-7.7	-9.8	5,428,127	378,728	-9.1	-11.0	4.15	4.16				
	TOTAL MALBEC	252,496,927	18,768,317	-6.5	-8.5	2,369,190	174,910	-7.4	-9.4	8.88	8.94				
	TOTAL RIESLING	234,125,774	15,991,264	-6.4	-7.5	2,564,373	173,191	-7.9	-10.0	7.61	7.69				
	TOTAL ZINFANDEL	223,085,095	17,670,963	-3.0	-5.4	1,588,688	127,483	-4.7	-6.5	11.70	11.55				
	TOTAL SHIRAZ/SYRAH	144,347,515	10,504,575	-7.9	-11.4	1,638,207	116,276	-10.1	-12.9	7.34	7.53				
	WHITE BLENDS (ex. 4/5L)	222,671,976	15,818,821	-3.5	-1.3	2,726,433	196,977	-2.9	-1.4	6.80	6.69				
	RED BLENDS (ex. 4/5L + CHIANTI)	1,858,194,862	144,580,905	0.6	-2.4	17,053,208	1,326,890	-0.6	-3.8	9.08	9.08				
	ROSE BLEND	558,511,226	35,003,001	17.0	15.8	4,767,232	310,503	16.4	11.6	9.76	9.39				
<b>GLASS SIZES</b>	750ML	10,395,290,913	767,061,526	1.3	-0.3	82,350,923	6,030,533	-0.6	-3.1	10.52	10.60				
	1.5L	2,029,648,561	148,978,391	-4.6	-4.3	34,735,569	2,535,454	-5.8	-5.3	4.87	4.90				
	3L	59,839,712	4,322,198	-8.3	-6.8	1,526,280	107,953	-11.7	-11.3	3.27	3.34				
	4L	75,552,734	5,556,948	-9.3	-8.8	2,385,023	174,263	-11.8	-9.7	2.64	2.66				
	187ML	102,380,251	7,562,242	-5.4	-6.4	1,238,444	89,865	-7.6	-9.3	6.89	7.01				
	375ML	18,901,526	1,570,877	8.3	11.3	72,776	6,075	7.8	15.3	21.66	21.57				
<b>BOX SIZES</b>	ex. 4/5L	934,713,585	75,014,842	9.5	8.2	16,577,770	1,311,998	7.8	5.9	4.70	4.77				
	1L	30,859,472	2,344,384	10.2	-0.8	461,147	34,562	7.7	-2.7	5.58	5.65				
	1.5L	26,955,264	2,139,016	2.6	-0.2	531,507	41,285	2.6	-3.1	4.23	4.32				
	3L	669,645,485	53,278,053	8.8	7.4	12,882,533	1,015,169	8.0	6.1	4.33	4.37				
	5L	483,237,063	36,610,955	-1.5	-2.7	17,422,092	1,302,801	-2.9	-5.1	2.31	2.34				
	TETRA	238,577,307	19,645,161	12.5	11.5	3,168,388	256,035	8.3	6.8	6.28	6.40				

Source: Nielsen

## CFOs Talk Shop: Looming Threats, Data Demands and New Solutions

Panel discusses the hottest topics in the financial world

Erin Kirschenmann



Erin Kirschenmann is managing editor for *Wine Business Monthly* and has been with the magazine since 2012. In addition to production responsibilities for the monthly trade magazine, she writes about wine industry trends, including business, technology and sales and marketing topics for *WBM* and *Winebusiness.com*. She graduated from Sonoma State University with a bachelor's degree in communications with a journalism emphasis. She can be reached at [erin@winebusiness.com](mailto:erin@winebusiness.com).

**AS THE CARETAKERS OF** a company's future, CFOs have their fair share of concerns about how world forces will affect their businesses. From stagnating consumption to grape gluts, there is some apprehension in the wine industry over just how promising the future looks. Though many of the issues and trends that worry CFOs are out of their control, there are also some promising signs that have emerged over the last year to guide them in their quest to build sustainable business models.

At the **Wine Industry Financial Symposium**, held October 1-2, 2019 at the **CIA at Copia**, a panel of experts discussed the financial issues they're currently facing and searching for solutions to. Moderated by **Ian Malone**, director and founding member of **Aspect Consumer Partners** a panel featuring **Art Jeannet**, CFO and executive vice president at Wente Family Estates; **Shandra Knego**, CFO and senior vice president at **Bundschu Company**; and **Jim Collins**, CFO at **JaM Cellars**, talked about data, recessions and consumption trends, as well as the practices they have put into place to safeguard their operations.

### Data-driven Decisions

The CFO's role is changing, according to Malone, because data, when properly implemented, can be used to make stronger decisions across all departments of a wine business. Simply put, data drive informed decision-making and more accurate forecasting. It's now the CFO's prerogative to ensure that data are collected, analyzed and acted upon; many of the data-driven departments, such as marketing and sales, now report to the CFO for that reason.

JaM Cellars, makers of the wildly successful Butter Chardonnay brand, have used insightful data to compete against the vast array of domestic and international brands that vvy for consumer attention. Today, copycat brands and private labels have popped up to ride Butter's coattails. In this saturated marketplace, the use of data is a strategy that has helped JaM Cellars, even as total wine consumption volume decreased over the last year.

"As growth continues to slow, we've got to have enough data to be able to maximize whatever profit we can make from our best brands and be able to call it on the ones that aren't doing it," Collins said. "That's why we've really worked on a system that will take all this disparate data and put it in front of us so that we can use it to plan."

JaM Cellars implemented a **VIP SRS** tool in the summer of 2019 that reports daily depletion reports on all that "disparate data" and month-end inventory from its many wholesaler warehouses across the country. Collins and his colleagues are then able to use that information to do some financial remodeling.

By moving all of the information onto a single platform, he is able to see the bigger picture when it comes to the Butter brand and make moves that will propel the SKU forward.

Part of the reason for this effort is to help reach the next generation. "All I see everywhere in the wine press is the problems with Millennials and why we're having problems with them buying our products. I hate to tell you the problem isn't with them: it's with us," Collins said. In order to make brands relevant to the demographic and drive sales from them, the wine industry needs to know more about that age group, he said, and data are a key function in that effort.

But as Knego pointed out, having the data is just the first step. According to her, data is simply hindsight, a record of what has already happened in the various sales channels. From there, it's up to an organization, and often the CFO, to use it to create insight and foresight.

"I can definitely attest that this is not just for big companies anymore. As a matter of fact, it's probably critical for any business," she said. "You really need to have a data-driven culture that's going to embrace analytics, and that culture is not going to be created by just having one person on your team that's talking about data."

Creating insight and foresight does not have to be a one-man, or even a difficult, job. There are technologies and software available with far better forecasting capabilities than the commonly used **Excel**. Knego pointed out that Excel simply shows you what you want to see; it's not necessarily a reliable source of insight.



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## **Looming Threats, Data Demands and New Solutions**

Now, even the most basic tools take historical information, identify patterns and trends and provide predictions for future results. The software Knego uses presents her with the “best case,” “worst case” and “likely case” scenarios, as well as the probability of each for every model she runs. It’s been helpful for her when working with her sales teams to set goals and budgets for the coming year.

“If you use a tool like this, you can say, ‘Well, your best-case scenario based on statistics and analysis is that you might hit \$9 million, not the \$10 million you say you can sell. Your likely scenario is that you’re going to come in at \$8 million.’ It allows you to have an intelligent conversation about the data and the forecasting, and then you can take it that next step and say, ‘Well, if we really need to be at \$9 million, how can we make that happen? What are the levers and the tools that we need to give to this person in order to get there?’” she said.

## **Recession Preparation**

There has been a lot of discussion and press about if and when the United States’ economy will enter into a recession. It’s not easy to predict when the next one will occur, and often economists don’t know a recession has started until we’re already in one. If the standard definition of a recession is negative growth for two quarters, Malone said that the California wine industry is already in one or, at the very least, on the verge of one.

In addition to a general economic slowdown, the large 2018 and 2019 harvests affected inventory planning at many wineries, which led, in part, to a pretty strong slowdown in the spot market for grapes and bulk wine. The rise of the “healthy” beverage trend (low-calorie, low-alcohol, low sugar, etc.) is also taking sales away from wine, which was already slowing in volume sales. These very real concerns have many CFOs looking at contingency plans for their business models—essentially recession plans.

“I’ve been encouraging our ownership group and leadership team to take a ‘risk off’ perspective right now. I am worried about the economy,” said Jeannet. He’s not the only one: later in the conference, **Clarice Turner**, CEO of **Joseph Phelps Vineyards**, announced that she had developed a recession plan for her company and is ready to enact it should the economic tide turn.

So how exactly are the three panelists preparing? They’re asking a lot of questions of their companies, and their banks. “Do you have head room in your bank covenants? Are you prepared for an economic slowdown? Or are you even planning for a recession? Is your balance sheet built for a recession? I think these are the questions we need to be asking ourselves right now,” Jeannet said.

Knego also took inspiration from the last recession, in which she learned that maintaining a good relationship with her bankers helped her keep the Bundschu company solvent.

“In addition to ensuring that you have that working capital, ensure you also have a really strong working relationship with your bank. Looking back on the last recession, there were a lot of lessons learned about managing inventory and supply on a much tighter level, but also about having really strong relationships with your bankers so they can help you manage through it and be there to support you. It’s critical,” she said.

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## Risky Business: Insurers Backing Off New Policies

Weeks after the conclusion of the Wine Industry Financial Symposium, the Kincade Fire ravaged woodlands in the Alexander Valley and Northern Sonoma County, burning more than 80,000 acres and destroying more than 500 structures—most notably **Soda Rock Winery** and **Field Stone Winery**. It was the second time in three years that wildfires in Sonoma County made national news, and the implications of the longer fire season and susceptibility to more devastating events mean higher insurance costs.

Even before the Kincade Fire broke out, there was concern from many in the financial sector about what wildfire news had done not just to tourism in the area but also to insurance premiums and deductibles—and even whether insurers would cover homes and businesses in the area.

“I can say that in talking with both my peers and our brokers, the general liability insurers’ tolerances for risk level has completely evaporated,” Knego said. “When you have a business like ours, where we have an exposure to wildfires, that’s a major risk. We ran into a lot of difficulties in renewing our policies, and at the very end of the day, we found something because we have a great relationship with our broker.”

Gundlach Bundschu in Carneros is no stranger to the dangers of wildfires. In October 2017, when the three fires now known collectively as the “Wine Country Wildfires” broke out, the Bundschus lost their family home, as well as some of their hillside vines. They expressed their belief in good fortune that most of their property was spared; but as a winery in a well-publicized fire zone, Knego is naturally concerned about rising insurance costs.

“You’re going to see premiums that are five times the cost of your regular premiums, and your coverage is going to be a lot less,” Knego said. “I believe we’re going to see wildfires become an exclusion in the same way that earthquake events are. You’re going to have separate deductibles, or they are going to be entirely excluded.”

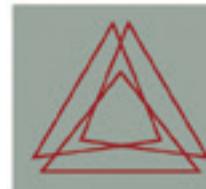
For some wineries, particularly the smaller, family-owned establishments, the rising cost of insurance—if it can even be obtained—will be enough to shut doors, but if insurance cannot be purchased, the costs to rebuild are also high enough to cause some to reconsider opening. Whether paying larger sums for less holistic coverage or to rebuild, wineries in wildfire zones can expect to see increased costs.

## The Good News

What are some of the trends CFOs are watching with a more pleasant demeanor? Well, not many. There are still concerns about the availability and cost of labor—Collins even increased the amount JaM Cellars pays for employee benefits from 50 to 90 percent in order to attract and retain good talent—as well as the new California Assembly Bill 5, which redefines contractor labor laws.

Despite all this, the three CFOs agreed that there can be a bright future for wine—if data are properly applied to a business’ strategy. **WBM**

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## Winemaking & Wineries

**J. Lohr Vineyards & Wines** promoted co-owner and trade and brand advocate **Cynthia Lohr** to the position of chief brand officer (CBO), reporting to founder **Jerry Lohr**. In this role, Lohr continues to collaborate with J. Lohr's internal teams on initiatives that impact the company's leading direct-to-consumer (DTC) sales and brand alignment and elevation strategies, respectively. Lohr first began her career with J. Lohr more than 30 years ago, having worked briefly in both the tasting room and quality control lab before leaving to gain valuable business and branding experience in the technology sector prior to her return to the winery 17 years ago.

**Coursey Graves** appointed **Lisa Allen** as the winery's first general manager. Allen will be responsible for daily operations for the Bennett Valley estate and the Healdsburg tasting room, as well as DTC sales and the winery's small distribution network. Allen joins Coursey Graves from **Young's Market Company** where she served as director of client services for **Trinchero Family Estates** managing sales and programming for the general market of California.

**TOR Napa Valley** appointed **Elizabeth Robertis** as its director of private clients. In this newly created position, Robertis will continue to elevate TOR's hospitality programs by leveraging relationships with existing mailing list members, partners, concierges and collectors. She will also host private tastings, dinners and events to drive DTC sales and increase revenue.



Elizabeth Robertis

Texas Hill Country-based **William Chris Vineyards** hired **Leah Derton** as senior director of marketing. Derton brings extensive experience in consumer marketing and advertising for various global brands, most recently having served as the senior brand manager for **YETI**, where she led brand strategy and communications for the outdoor lifestyle company. In her role as senior director of marketing, Derton will focus on driving brand awareness and loyalty for the William Chris wine portfolio.

**EPIC Wines & Spirits** (EPIC) appointed **Bill Young** as executive vice president of sales, effective Oct. 1. Young previously spent fifteen years with **Treasury Wine Estates** (TWE), most recently as general manager (California), where he was responsible for deploying an independent route to market model. In his new role with EPIC, Young will be responsible for sales divisions throughout all channels.



Bill Young

**Oak Ridge Winery** announced **Michael Onslager** as the company's new vice president of national sales. Onslager comes to Oak Ridge after twenty-one years in vice president roles directing sales, most recently for Napa Valley's **Rutherford Wine Company**.

Oak Ridge Winery also promoted **Noel Basso** to director of winemaking; he will oversee all winemaking and bottling procedures at the winery. Basso received his BS in food science and nutrition, with an emphasis on wine production from **California State University Fresno**.

**Archer Roose Collective** hired **Khaki Wennstrom** as its director of brand partnerships and events. She is the former director of business development for **SpikedSeltzer** (now known as **BON & VIV**). In her new role, Wennstrom will continue the growth and development of existing Archer Roose partners, as well as identify and foster new strategic opportunities with key regional and national entities.



Khaki Wennstrom

**Opus One Winery** hired **Daniela Franco** as its new human resources manager. Franco will be responsible for general human resources activities, recruiting and new hire processing, and administering benefit insurance and retirement plans.

**Constellation Brands, Inc.** promoted **Mallika Monteiro** to executive vice president and chief growth and strategy officer. As part of her expanded responsibilities, Monteiro will be responsible for consumer and category insights, innovation and new product development across the beer, wine and spirits segments. Monteiro will also serve as a member of Constellation's executive management committee.

**Hotaling & Co.**, the San Francisco-based premium spirits distiller and importer, has named **Dan Leese**, formerly CEO and founder of **V2 Wine Group**, as its new president and CEO, reporting to Hotaling & Co.'s board of directors. Leese has extensive experience in the US alcohol-beverage industry, including executive positions with **Brown-Forman**, **Beringer Blass Wine Estates** and V2.

**CRU Winery** hired **Nathan Stern** as the company's CEO. He has previously held executive positions at **Crimson Wine Group**, **Beverages and More** and **Treasury Wine Estates**. Stern's focus for CRU's growth includes expanding its wine club and DTC sales efforts as well securing wholesalers both nationally and internationally.

**Integrated Beverage Group** (IBG Wines) appointed **Andrew Smith** as its new chief sales officer. Under CEO **Ari Walker**'s leadership, Smith will lead IBG's global sales team within the three-tier system. Smith joins IBG after 12 years with **Palm Bay International** managed all aspects of sales and lead the business development and private label efforts of the company.

**Pfendler Vineyards** hired **Erica Stancliff** as the winery's new winemaker. Stancliff will complete the final blend of Pfendler Vineyard's 2018 Chardonnay and Pinot Noir and will oversee all aspects of winemaking, from harvest to bottling, beginning with the current 2019 vintage. She will also take an active role in Pfendler's three estate vineyards, overseeing the vineyard crew and monitoring the development of the grapes.



**Erica Stancliff**

**Frank Family Vineyards** hired **Frank Markovich** as Southeast regional sales manager. Markovich is based in Florida and will manage sales and distribution for the winery in Florida, Georgia, South Carolina and North Carolina. Prior to joining the Frank Family team, Markovich served as Florida-South Carolina regional manager at **V2 Wine Group**.

**Maison Louis Roederer** appointed **Nicole Carter** as the new president of **Merry Edwards Winery**, effective Oct. 15. In her role, she will be responsible for all business activities and will work closely with head winemaker **Heidi von der Mehden**.

Carter will also work with **Merry Edwards** to ensure a smooth and successful transition.

**Miller Family Wine Company** announced Master Sommelier **Will Costello**, who represents **Bien Nacido & Solomon Hills Estates** as brand ambassador, will be taking over wine export sales for those same brands. Costello will now hold the title wine export sales manager.



**Will Costello**

**Presqu'ile Winery** hired **Julie Simon** as its new executive chef beginning October 1. Simon will be creating the tasting room wine and food pairings, as well as developing special event menus and overseeing wine dinners, including those with guest chefs.

**Kanzler Vineyards** hired **Elizabeth Grattan Di Bartolo** as marketing manager. In this role, Grattan di Bartolo is responsible for allocation list communications, events, social media, graphic design, website management press and promoting the estate guest house. She was previously marketing coordinator for **VML** and **Truett Hurst** wineries.

**Rebecca Geschwender** joined **Rutherford Wine Company** as the vice president of sales, national brands. Geschwender came to Rutherford Wine Company from **Grgich Hills Estate** where she was director of sales. She has worked at other leading wine companies including **Diageo Chateau & Estate**, **Wine Warehouse** and **Southern Wine & Spirits**.

**Keith LaVine** also joined Rutherford Wine Company as the general manager, domestic operations. In this role, LaVine coordinates Rutherford Wine Company's overall domestic and private label business, including working closely with the production and sales team by providing analytical data and guidance. Lavine comes to Rutherford Wine Company with sales, distributor and winery management experience, including roles at **Sonoma-Cutrer Vineyards**, **Brown-Forman**, **Artesa Winery**, **Lynmar Estate Winery** and **Grupo Codorníu-Raventos (Aveniu Brands)**.

**Crown Point Vineyards** appointed **Simon Faury** as winemaker. A native of France, Faury brings extensive experience and knowledge to his new role with Crown Point: He earned his Master's Degree in viticulture and enology from the **University of Bordeaux** and has since worked in various wine regions around the world, such as Barolo, Bordeaux, Australia, Mendoza and Napa Valley. Most recently, Faury worked at Napa's **Merryvale Vineyards** as head winemaker.



**Simon Faury**

Pulido Walker appointed **Austin Gallion** as its new national sales director. Gallion joins Pulido Walker with nearly 20 years of high-end culinary, wine and hospitality experience. Most recently he was director of hospitality at **Vineyard 29** after working at **Miner Family Winery**, where he learned the wine business. He's a classically trained chef and holds a bachelor's degree in culinary arts from **Johnson & Wales**.

Pulido Walker also hired **Julia Wildt** as its new hospitality director. Wildt's background includes years of work for **The Thomas Keller Restaurant Group** at both **The French Laundry** and **Ad Hoc** and as director of hospitality at various Napa Valley wineries. She is a certified sommelier with the **Court of Master Sommeliers**, holds a Level 3 Certification from the **Wine & Spirit Education Trust** and received a bachelor's degree in culinary management from the former **Cordon Bleu Culinary School**.




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**Goose Ridge Estate Vineyards and Winery** hired **Will Wright** as its new national sales and marketing manager. With more than 25 years of experience in the wine industry, Wright joins the winery after eight years as a national accounts director at **Southern Glazer's Wine & Spirits**. In his role at Goose Ridge Estate, Wright will focus on expanding the reach of the Goose Ridge Wine portfolio, including Goose Ridge, g3 and Cascadian Outfitters, to major markets nationwide.



**Will Wright**

**A to Z Wineworks** promoted **Amy Prosenjak** to president and CEO. She is taking over for **Bill Hatcher** who has transitioned from CEO to chair of the board. Prosenjak joined A to Z shortly after its acquisition of **REX HILL** winery in 2007 as the company's CFO and was promoted to president in 2014. Throughout her tenure, she has worked closely with A to Z's four founders, **Bill Hatcher**, **Deb Hatcher** and **Sam Tannahill**.



**Matt Revelette**

**Siduri** hired **Matt Revelette** as its new winemaker, hand-selected by founding winemaker, **Adam Lee**. Revelette will assume all winemaking responsibilities for the winery as Lee transitions into a consultancy role with **Jackson Family Wines**, advising on many of the company's Pinot Noir programs across multiple portfolios.

Miller Family Wine Company also hired **Roxie Ward** as its new winemaker, working under the company's director of winemaking, **Clay Brock**. Ward brings over 20 years of experience to her new role having worked in various tasting room, cellar and vineyard positions at wineries throughout California, including **Paraiso Vineyards**, **Martini & Prati** and **Mumm**.

**Crimson Wine Group, Ltd.** appointed **Jennifer Locke** as its new chief executive officer, effective as of December 2, 2019. She succeeds **Patrick DeLong**, who left Crimson earlier this year after serving as CEO since 2014. Locke brings more than 20 years of wine industry experience in the Pacific Northwest. Based in Napa, she most recently was senior vice president of the direct-to-consumer team of **Treasury Wine Estates (TWE)** in the Americas.

After seven years as the winery's COO, second-generation family member **Mari Jones** has been appointed president of **Emeritus Vineyards**. In this role, Jones guides a team that includes winemaker **David Lattin** and vineyard manager **Kirk Lokka** and will be responsible for overseeing all aspects of Emeritus Vineyards. Her father, Emeritus founder **Brice Cutrer Jones**, will transition from president to chairman of the company, remaining and actively involved with the winery.

**Lambert Bridge Winery** promoted **Katie Fay** to director of marketing and hospitality and **Nicole Penney** to hospitality manager. Fay began working for Lambert Bridge as the retail sales and hospitality manager in 2018. In her new role, Fay will oversee all hospitality, marketing, and business development strategy for the winery. Penney began her hospitality career at **Mayacama Golf Club** and has also managed the hospitality programs at both at **Chalk Hill Winery** and, most recently, **Wren Hop Vineyards**.

**Constellation Brands** promoted **Amy Martin** to vice president, corporate reputation and corporate social responsibility (CSR). As part of her expanded responsibilities, Martin will lead the development and execution of integrated corporate branding, communications and social responsibility programs, including the company's environmental sustainability, community engagement and philanthropic initiatives.

## Associations & Education

**The American Wine School (AWS)** announced **Jill Zimorski**, Master Sommelier has joined the education staff of the Chicago-based wine education school. Zimorski will teach **WSET** classes at AWS's Chicago location.



**Jill Zimorski**

**Jennifer Mathieu** has been promoted to director of the **Alliance des Crus Bourgeois** after having worked for du Medoc since 2010. Her main task is to develop communication and promotion of the traditional Crus Bourgeois seal of approval in France and on the export market.

**Da Yang**, a **UC Davis** atmospheric scientist, has been awarded a 2019 Packard Fellowship in Science and Engineering from the **David and Lucile Packard Foundation**. Yang is among 22 early-career scientists and engineers nationwide to receive the prestigious award this year. Each will be awarded \$875,000 over five years to pursue their research. He is the first recipient of the Packard Fellowship in the College of Agricultural and Environmental Sciences at UC Davis.

The **Consorzio Tutela Lugana DOC** welcomed its new director, **Andrea Bottarel**. Bottarel has a degree in East Asian languages and cultures and one in viticulture and oenology. He has collaborated with several important foreign wineries in Germany, New Zealand and Canada and, since 2013, has been working as an Italian export manager.



**Andrea Bottarel**

**Wine Institute** appointed **Danielle Giroux** as its new director of California Wines Canada, responsible for marketing and promotion in the largest single-country market for California wines. Giroux brings 15 years of wine industry sales and marketing experience to the role, including marketing and communications strategy, brand development and event management. She most recently served as vice president, marketing at **Colio Estate**. **WBM**

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Amcor Capsules	www.amcor.com	63
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Boswell Co.	www.boswellcompany.com	24, 117
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BSG Wine	www.bsgwine.com	30
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Castoro Bottling Co.	www.castorobottling.com	152
CDR s.r.l.		47
Central Coast Insights (CCI)	www.centralcoastinsights.com	184, 185
Clearwater Tech, LLC	wine.cwtozone.com	33
ColloPack Solutions	www.collopack.com	159
Complete Welders Supply	www.completewelderssupply.com	139
Conetech, Inc.	www.conetech.com	80
Continental	www.continental-industry.com	44, 45
Cork Supply USA	www.corksupply.com	69
Corteva AgroSciences	www.corteva.us	172, 174
Craft Canning + Bottling	www.craftcanning.com	60
Creative Oak	www.creativeoak.com	153
Criveller Group	www.criveller.com	145
Custom Metalcraft	www.custom-metalcraft.com	145
DeLaval Cleaning Solutions	www.cleaningsolutions.delaval.com	131
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Diam Closures USA	www.g3enterprises.com	71
Duarte Nursery, Inc.	www.duartenursery.com	171
Eastern Winery Exposition	www.easternwineryexposition.com	161
Electro-Steam Generator Corp.	www.electrosteam.com	139
Enartis	www.enartis.com	84
ETS Laboratories	www.etslabs.com	210
Euro-Machines, Inc.	www.euromachinesusa.com	50
Fermentis	www.fermentis.com	85
Fly With Wine	www.flywithwine.com	190
Food & Wine Trails	www.foodandwinetrails.com	195
FOSS	www.fossanalytics.com	155
Free Flow Wines	www.freeflowwines.com	77
GAI America Inc.	www.gai-america.com	76
Gallo Glass Co.	www.galloglass.com	59
Garton Tractor, Inc.	www.gartontractor.com	93
Global Package, LLC	www.globalpackage.net	60
GOfermentor	www.gofermentor.com	40
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Infinity Foils, Inc.	www.infinityfoils.com	73
Innovation + Quality	www.winebusinessiq.com	168, 169
Kiesel Americas Inc	www.kieselamericas.com	129
La Garde	www.lagardeinox.com	5
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Lakeview Vineyard Equipment, Inc.	www.lakeviewvineyardequipment.com	123

Company	web address	page
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O'Connell Jetting Systems	www.oconnelljettingsystems.com	104
Onguard LLC	www.onguardgroup.com	53
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Owl Ridge Wine Services	www.owlridgewines.com	80, 81, 82
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Pygar USA Inc. / Felco	www.pygar.us	173
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Sanitary Stainless Welding	www.sanitarystainless.com	55
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Sartorius Stedim North America, Inc.	www.sartorius.com	149
Saverglass, Inc.	www.saverglass.com/en	2
Shelco Filters	www.shelco.com	152
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Spec Trellising	www.spectrellising.com	182
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StaVin, Inc.	www.stavin.com	193
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Tonnellerie Taransaud	www.taransaud.com	137
Tonnellerie Tremeaux	www.tonnellerie-tremeaux.fr	26
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Turrentine Brokerage	www.turrentinebrokerage.com	82
TW Boswell	www.twboswell.com	25
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UC Davis Wine Executive Program	www.wineexecutiveprogram.com	205
Unified Wine & Grape Symposium	www.unifiedsymposium.org	14, 15
Unitech Scientific	www.unitechscientific.com	48
US-FIP	www.americanwinepump.com	182
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Vacuum Barrier Corp.	www.vacuumbARRIER.com	32
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Vinoseal	www.vinoseal.us	11
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Zenport Industries	www.zenportindustries.com	92

**Barry Gnekow**, consulting winemaker, Vertical Palate Wine Company, Woodbridge, CA



There was the panel interview by Lance Cutler in the May 2011 issue with very high-end Napa Cabernet winemakers that extolled the use of traditional barrel head removal and barrel fermentation of those grapes—and labor cost was not a consideration. That led me to try to harness the recently-arrived-from-Europe flash technology in California for the same purpose: to increase the quality at a more reasonable price point. This also led to a collaboration with my younger winemakers and owners to discover a subtle but sublime phenomenon we call “going vertical” in the final blend. This was well-known amongst craft distillers but relatively unknown to winemakers until now. A patent has been obtained. All this is due to that *Wine Business Monthly* story.

**NAME AND TITLE:** Barry Gnekow, consulting winemaker

**WINERY NAME AND LOCATION:** For the last 20 years I've been working with family owned operations with young winemakers to help them grow and produce great wines that consumers want. Clients past and present include Educated Guess (Napa), Hahn Estates (Monterey), Jamieson Ranch (Napa), Klinker Brick (Lodi), Mettler (Lodi), Michael David Winery (Lodi), Roberts and Rogers (Napa), Rex Goliath (Central Coast), Smith and Hook (Monterey & Paso), Varda Vineyards (Sonoma).

**ANNUAL CASE PRODUCTION:** 1,000 to 1,000,000 depending on the brand.

**CAREER BACKGROUND:** After graduating from UC Davis, my career really began with a small start-up in, of all places, Silicon Valley, called J. Lohr. I was the third employee and did just about everything, from construction tear downs and lab analysis to plumbing installation, cellar work and, on occasion, giving tours. After a few years as assistant winemaker, I volunteered to go on the road—in effect the “national sales manager.” One of those years I spent more than 250 days traveling. When I was pulled back into winemaking after 3 years away, my whole perspective on winemaking had changed. When you've traveled 3,000 miles to stand in front of an important buyer who gives you 20 seconds to make your

case you learn only two things are on his mind: Does the wine taste good and will it sell? Everything else, from soil, climate and vineyards to barrels, family legacy and “signs from above,” is all BS as far as buyers are concerned—or as we were told in our college English literature classes, “creative writing.” If you have a successful brand with strong marketing, then you'll eventually follow the market to source grapes and vineyards from all over the state to follow those dynamics. I love helping family owned operations navigate these complexities of the wine business.

**WHAT HAS BEEN YOUR BIGGEST PROFESSIONAL CHALLENGE?** As the founder and creator of Ariel non-alcoholic wine (“the only non-alcoholic wine to win a gold medal against wines with alcohol”) I was trying to convince wine industry veterans that producing a non-alcoholic wine that tasted good was not an attempt at industry genocide. It's not for you! It's for them.

**VARIETALS THAT YOUR WINERY/VINEYARD IS KNOWN FOR:** Big reds and Bordeaux varietals that can move up the quality scale with an added red barrel ferment component to get those 90+ point scores—and be ready to ship to market earlier with integrated oak at a reasonable price point of \$20 per bottle instead of \$200 per bottle. It really works!

# Powerless

Jake Lorenzo is having a hard time focusing on the task at hand. Here I am on deadline, and the phone keeps blaring its emergency tones as PG&E plans to shut down our power yet again. This detective finds the proper concentration level elusive, and a finished column is in doubt. My mind wanders to esoteric questions like, “If a detective writes a column and it gets stuck in his computer when PG&E shuts off the power, does anyone get to read it?”

Jake Lorenzo could rail against the utility company. First, there were the Wine Country Fires and the Camp Fire. Who knows what that will cost PG&E? In the meantime, they just shut down our power for days at a time, saying they’re concerned about our safety and trying to protect us.

Jake Lorenzo has an idea. How about giving the shareholders a little less profit and do your due diligence on your electrical systems? Keep tree limbs away from your lines so winds don’t cause the wires to ignite them. Maintain your transmission lines as you are mandated to do so we don’t have another conflagration like the Camp Fire in Paradise, which killed 85 people, burned 18,804 structures and enflamed 153,336 acres, causing the entire Bay Area to breathe contaminated air for weeks.

Then again, this detective likes to look on the positive side of things. These power outages are giving us plenty of practice for a real emergency. Jakelyn’s mom has batteries stuffed all over the property. Not just one type either. We’ve got AA, AAA, C, D and 9-volt batteries hidden everywhere. I find batteries stuffed into my socks, clanging around my jacket pockets and wedged between our frying pans.

We have LED lanterns, solar lights and flashlights every 10 feet throughout the house. We have boxes of those Mexican prayer candles, which come in tubular glass jars with pictures of the Virgin or the Pope or Santo Toribio Romo and cost less than \$2 each. Some are even made in Mexico, but my detective’s eye discovered that most are made in China. Does that mean that Trump’s tariffs will raise the prices of candles, until we can’t afford light, when PG&E turns out the power?

We learned that spending a few days without phone service, television or the internet won’t kill us. We dug out our old boom box, filled it with six of Jakelyn’s mom’s C batteries and listened to CDs from artists like Frank Sinatra, Billie Holiday and Louis Prima. In the flickering candlelight of Mexican religious candles made in China, we dined on roasted chicken, potatoes seasoned with crab boil and a tomato salad with the last of the garden’s tomatoes.

Jake Lorenzo has spent so much time in his wine cellar that I was able to enter in complete darkness, feel my way to the desired section and let my fingers dance along bottles until I felt a mystical pull that convinced me to extract a particular bottle from its resting place. We exulted at our selection once I brought it into the light: We discovered to our immense pleasure that you didn’t need electricity to open a fine bottle of wine. Since we already had the candles lit, we decanted each and every bottle. It was fun, and we drank some nice bottles.

We had finished a lovely meal and consumed a couple bottles of wine, so we put on an Arthur Prysock CD and danced a little in the candlelight. Jakelyn’s mother is a heck of a dancer. I had shrewdly pulled out some liquor before it got dark, so we went outside, dragged some chairs into the yard and looked up at the stars while we sipped on a nightcap. Glenmorangie for her and Fuentesecca 15-year Extra Añejo for me. If you are stuck in the dark, might as well go whole hog.

We went to bed around 10 p.m. and had a good night’s sleep.

The next morning, I boiled some water and brewed up a batch of French press coffee. I walked out to my little winery, sterilized a siphon hose and took my time emptying my last barrel of 2018 Casa Carneros Pinot Noir. By 11 a.m., three friends showed up to cork and label those bottles. I cleaned out the barrel, and we filled it with 30 gallons of this year’s Casa Carneros Pinot. Still bubbling with malolactic fermentation, it was nevertheless clean and fruity tasting.

**Jake Lorenzo has spent so much time in his wine cellar that I was able to enter in complete darkness, feel my way to the desired section and let my fingers dance along bottles until I felt a mystical pull that convinced me to extract a particular bottle from its resting place.**

We sterilized the empty carboys and put them away. I unscrewed the clamps, holding the press in place on its pedestal, and we muscled it into its storage place in the winery, setting up the basket and putting the chock blacks inside. We officially called the 2019 harvest over as we popped some ice-cold Victoria cerveza from my ice chest.

The wind had died down, so we fired up the Weber. We started with a bottle of Roederer Sparkling Rosé while waiting for the coals to heat up. We settled on a simple Zinfandel tasting as we ate juicy hamburgers and finished the last of my homemade pickles. Jakelyn’s mom and I thanked all our friends for their help and sent them home with enough wine to make sure they’d return the next time we needed them.

I put up a pot of our Italian sausages cooking in fresh tomato sauce from the freezer. I seasoned it with garlic, onion, basil, salt and pepper and some left-over Zinfandel. Then I set it at a slow simmer so we could have a simple spaghetti for dinner. Power was supposed to return later that night; but if it didn’t, we were set. Good thing, because the next morning we were headed out for our annual Caboween holiday, which we could easily do in the dark.

**WBM**



ILLUSTRATION BY BOB JOHNSON

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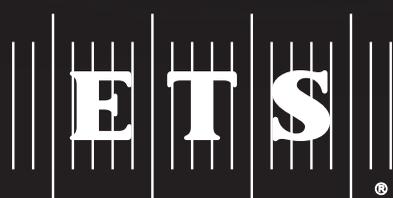
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