



THE CRUSH

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[FEATURE STORY]

New Tools to Monitor Grapevine Water Status

VINE SENSOR, PHONE APP OFFER MORE EFFICIENCY AND DATA

By Ted Rieger

New commercial products were launched this year in California vineyards to estimate grapevine water status for irrigation management as easier-to-use alternatives to the traditional pressure chamber tool (also called a "pressure bomb"). The companies behind the products originated from university research teams – one from Cornell University in New York and one from the University of California, Davis (UCD) – that developed technologies to assist with irrigation management. These technologies allow growers to gather more vine water status data from more locations and gather information more efficiently with less labor, and potentially at lower cost, than taking pressure bomb readings.

FLORAPULSE VINE SENSOR

Davis-based FloraPulse produces and supports sensor technology, also called micro-tensiometers, installed in grapevine trunks to provide continuous measurement of stem water potential (SWP), with data automatically transmitted to the grower for irrigation decision-making. The sensor was developed using microchip technology by a Cornell research team that included now emeritus plant science professor Dr. Alan Lakso, chemical and biomolecular engineering faculty member Dr. Abraham Stroock, and mechanical engineering Ph.D. student Michael Santiago. Santiago subsequently helped found FloraPulse to license the patents and commercialize the technology and serves as company CEO.

Field trials were conducted with the sensors in California vineyards and orchards from 2017-2019, with more extensive beta testing in 2019. The technology has improved based on field trials. The 2020 product is faster, more reliable and with improved quality control and pre-release testing. The product is being sold as an annual subscription service that includes the sensor probe, datalogger, installation



Installed FloraPulse sensor in a vine trunk at a UCD field trial. Photo: Ted Rieger

supplies, cloud-based cellular data, and user interface with records and graphs. FloraPulse will replace sensors after one season of use, but is evaluating whether they can perform over multiple seasons.

Sensors can be installed in vines with a trunk diameter of 2 inches or larger. The sensor probe is installed into the plant xylem (water carrying tissue) by drilling a shallow hole into the vine trunk through the bark, and inserting the probe to make sensor-xylem contact. The insertion hole is sealed to keep the probe from being pushed out by xylem water pressure, and the insertion site is wrapped with insulation material around the trunk. Sensors should be placed on indicator vines already used for pressure chamber readings. Santiago said a sensor can be installed by a customer in just a few minutes, and FloraPulse provides an installation manual and video. The sensor can provide accurate readings on any grapevine regardless of variety or rootstock, as long as the vine is healthy and not diseased.

[FEATURE STORY]

The system includes a datalogger with a battery charged with a small solar panel. The datalogger box can be attached anywhere near the vine, such as to a trellis wire or vine post, as long as the solar panel has sunlight exposure. The datalogger uses a cell modem to automatically transmit data every 20 minutes. In a limited release, systems were sold and installed this year at vineyards in Napa Valley, Southern California, Washington and Chile.

Santiago said, "An advantage to having daily data on midday and pre-dawn SWP is the ability to correlate that irrigation actually happened and had the intended effect on plant water status. After irrigation, the plant should recover to a higher SWP. Lack of recovery may indicate a plant health issue or a problem with the irrigation system." ►www.florapulse.com

TULE VISION APP

Tule Vision is a smart phone app developed by Tule Technologies, a service provider since 2015 of surface renewal monitoring systems to track evapotranspiration (ET) in vineyards and provide irrigation management recommendations. Tule commercialized surface renewal technology developed at UCD by a research team led by Dr. Andrew McElrone of the UCD Department of Viticulture and Enology. Dr. Tom Shapland, a former UCD researcher on McElrone's team and a partner and co-founder of Tule Technologies, helped develop Tule Vision as another product for growers.

Tule Vision is free for current customer subscribers for acreage with existing Tule sensors, or it can be purchased based on acreage per year for all other customers.

Explaining the basics, Shapland said, "The grower or viticulturist in the field takes a short video using a smart phone of the vine canopy for a few vines in a row capturing the fruit zone to the shoot tips on the sunny side of the canopy, essentially what a viticulturist would do in the field to visually assess vine stress." The video is uploaded to a web-based app managed by Tule that provides a leaf water potential (LWP) reading in bars. The readings and photos can be viewed by the entire vineyard team for monitoring and decision-making.

Shapland said the Tule Vision database and model is built upon tens of thousands of vine images collected over six growing seasons since 2014 and was developed using artificial intelligence (AI). For accurate results, readings must be taken when the canopy is fully lit, as the model was developed based on images taken between 8 a.m. and 5 p.m.

Shapland said, "The model performs best with, and the database was built upon, the more common varieties. People are mainly using it for cabernet sauvignon, chardonnay, pinot noir, zinfandel and merlot." He said the model can be used

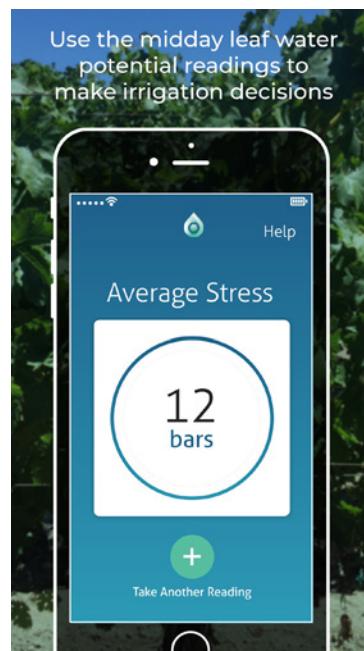
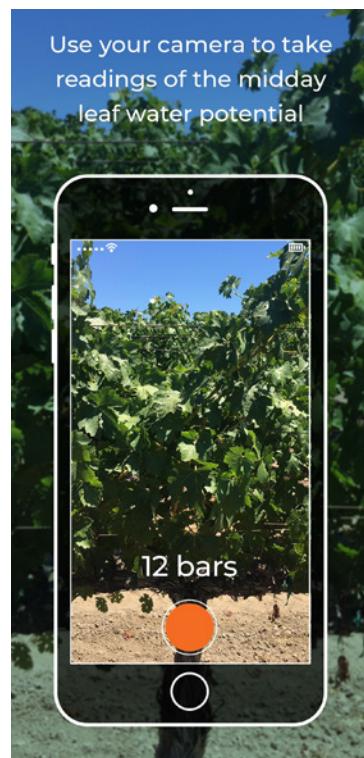
for all grape varieties, but with less common varieties the readings may be a bit more or a bit less than an actual pressure bomb reading.

The model was validated through beta testing during the 2019 growing season with Tule customers who made comparisons with pressure bomb readings from the same vines. "The pressure bomb is considered the gold standard for vine water stress, but truly, the gold standard is the grower's experience and intuition," Shapland said. "I put this model into the hands of some of the best viticulturists last year to test it against their intuition." Advantages are that growers can monitor more acreage, and a larger area of each vineyard, than they previously could with a pressure bomb, and without the more laborious workflow requirements.

Randy Heinzen, president of Vineyard Professional Services (VPS) in Paso Robles, said his company began beta testing Tule Vision in August 2019. VPS has taken readings for the 2020 growing season since April, using it alongside other tools such as a leaf porometer. VPS has used 24 Tule surface renewal stations across 3,000 acres of vineyards managed in the Central Coast for several years. This season, 12 VPS staff members are taking 30 to 50 Tule Vision readings a day. Although test vines had not shown water stress as of early summer, Heinzen looks forward to evaluating Tule Vision across a full irrigation season in comparison with other monitoring technologies and visual vine inspections.

"This tool can be used to take readings anytime, anywhere, by anyone with a smart phone that is already used by people in the field," Heinzen said, "and it allows data collection with more frequency and with more data points, compared with other sensor tools that may be fixed in one location."

►www.tuletechnologies.com



Transformative Consequences of COVID-19

UNCERTAIN POST-PANDEMIC FUTURE FOR WORKPLACES, ECONOMY AND INDIVIDUALS

By John Aguirre

What next?

I've been asking myself this question. COVID-19 has disrupted life far beyond what I could have ever imagined. Downtown Sacramento, where I live and work, remains a ghost town. I shy away from others. Handshakes and hugs with friends are awkwardly avoided.

I would like to believe all will return to normal once a COVID-19 vaccine becomes widely available, hopefully early next year or sooner. However, I think the consequences of COVID-19 on our social and economic futures will be profound and enduring.

A surging stock market suggests we have yet to see the true contours of our economic future. Retail shopping and the restaurant industry are confronting an economic apocalypse. Retailers like Pier 1 Imports, J.C. Penney, Nieman Marcus, Brooks Brothers and others have all filed for bankruptcy. The restaurant industry has fared worse.

According to the National Restaurant Association, April's sales volume of \$29.9 billion at eating and drinking places, in inflation-adjusted terms, represented the lowest since February 1983. In recent years, May was typically the top sales month for restaurants, but this year, May sales were more than 40 percent lower than what would have been expected in the absence of the pandemic. In total, the National Restaurant Association estimates total lost revenue from food and drink sales for March through May at foodservice and drink establishments – as well as in lodging, arts/entertainment venues, education, healthcare and retail sectors – likely surpassed \$120 billion.

In an analysis prepared for CAWG, Jon Moramarco estimates COVID-19 will result in a decline of \$3.58 billion in retail sales of California wine. That translates into \$437 million in lost revenue for the 2020 winegrape crop. *See page 6 of this issue for more details.*

We can see in real time the devastating consequences of COVID-19 on the restaurant and retail sectors of the economy; however, other changes wrought by the pandemic may lead to potentially long-lasting economic changes. At CAWG, we have discussed the possibility of more working from home and downsizing our office space requirements – which could mean substantial financial savings. The forced experiment in staff

working remotely has proven that we can maintain productivity with less office space. If we are having these conversations at CAWG, what of the many large businesses that fill towering office buildings in urban centers throughout the United States?

If a lot fewer workers make the daily commute to city centers for work, what does that mean for the offices, restaurants and businesses that serve those workers? What does the future look like for the home values of people, like me, who reside in downtown areas?

The consequences to the beverage alcohol market may also be significant and long lasting. Fewer business lunches and after work get togethers will likely mean beverage alcohol sales will look very different two years from now than just before the pandemic.

We can't predict the full array of consequences of COVID-19 for our personal and economic lives, but we need to prepare for the full range of possibilities. What we do know is the future is a lot more uncertain. Will a long-term recession unleash deflationary pressures? Or, will massive government intervention and deficit spending spark spiraling inflation?

The pandemic has made clear our nation's system of delivering health care has huge gaps. Will policymakers respond by imposing new burdens on employers to provide health care coverage or hike taxes to fund universal access to care? No one knows for certain, but I can assure you significant changes to health care policy are in store for our future.

I don't mean to be a downer. Instead, I think we simply need to be realistic about the fact there is no return to normal. When we emerge from the COVID-19 pandemic, the future will be much different than what we imagined a year ago. We can take hope from the fact that when we have been challenged like this in the past, many among us will be quick to innovate and adapt to new circumstances, and we should have faith that a new era of economic prosperity will follow. But, don't make the mistake of thinking we are returning to normal anytime soon.



Races to Watch in November

ELECTION WILL INCLUDE NEW FACES, SURPRISES AND POSSIBLE SEAT FLIPS

By Michael Müller

California's primary elections are historically held in June. However, this year California was a Super Tuesday state. The top two vote-getters in the February primary advanced to the general election in November. Below are some key races to watch:

5TH SENATE DISTRICT (SAN JOAQUIN / STANISLAUS)

In February, Mani Grewal (D), Assemblymember Susan Talamantes Eggman (D-Stockton) and Jesús Andrade (R) faced off in what was seen as a three-way race for the top two. Jim Ridenour (R) and Kathleen Garcia (R) were recruited to run in an effort to pull votes away from Andrade so that Grewal could make the top two. However, in a big surprise, Ridenour finished second behind Eggman, while Grewal finished third. Eggman chairs the Assembly Agriculture Committee.

13TH ASSEMBLY DISTRICT (SAN JOAQUIN)

Kathy Miller (D) was recruited by Democrat leaders to run in this race. However, she barely made the top two, with only a 30-vote lead over third place and elimination. She will face Carlos Villapudua (D) in November. Miller is endorsed by the California Democratic Party and several labor organizations. Villapudua is the former CEO of the San Joaquin County Hispanic Chamber of Commerce and is endorsed by Assemblymembers Adam Gray (D-Ceres) and Jim Cooper (D-Elk Grove).

35TH ASSEMBLY DISTRICT (SLO / SANTA BARBARA)

Incumbent Jordan Cunningham (R-San Luis Obispo) is facing Democrat Dawn Addis. Democrats hold a 2 percentage point edge in voter registration. This, combined with Democrats anticipating a large anti-Trump voter turnout, could create problems for Cunningham. Democrats are viewing this seat as one they could flip from Republican to Democrat.

38TH ASSEMBLY DISTRICT (LA / VENTURA)

This is a seat that flipped from Republican to Democrat in 2018 and will flip back to Republican in November. This is because two Republicans made the top two in February. CAWG PAC got out in front on this race and supported Suzette Martinez Valladares (R), who finished first in February, besting second place finisher Lucie Lapointe Volotzky (R) by a nearly 2-1 margin.

21ST SENATE DISTRICT (LA / SAN BERNARDINO)

Incumbent Sen. Scott Wilk (R-Santa Clarita) received 54 percent of the vote in February. This is not a wide margin, as Democrats are expected to have a high turnout in November and voter

registration is 39 percent (D) and 31 percent (R). Wilk will face Democrat Kipp Mueller in November.

42ND ASSEMBLY DISTRICT (RIVERSIDE)

Former Assembly Republican Leader Chad Mayes left the Republican Party in 2019 and is leading in his reelection bid as an independent. He will face Republican Andrew Kotyuk in November. This is a tough race to predict as it is traditionally a Republican seat. A high Democrat turnout could help reelect Mayes.



68TH ASSEMBLY DISTRICT (ORANGE)

Incumbent Steven Choi (R-Irvine) faces a significant challenge from Democrat Melissa Fox. Much like AD35, Democrats see this as a seat to flip from Republican to Democrat. This is based on party registration of 35 percent (R) and 33 percent (D) and a high anti-Trump turnout.

72ND ASSEMBLY DISTRICT (ORANGE)

This should be a safe Republican seat. However, incumbent Tyler Diep (R) lost his reelection bid in February. Former Sen. Janet Nguyen (R) will face Diedre Nguyen (D) in November. Voter registration in AD72 is 35 percent (R) and 34 percent (D). This Nguyen-Nguyen scenario could see this seat flip to Democrat.

29TH STATE SENATE DISTRICT (ORANGE)

This seat flipped from Republican to Democrat in 2016, then flipped back again in 2018 in a recall. Now Sen. Ling Ling Chang (R) is running for reelection in former Sen. Josh Newman's (D) seat, who was recalled. Chang received only 47 percent of the vote in February and Democrats are looking to flip this back again in November. Voter registration in SD19 is 38 percent (D) and 31 percent (R).

37TH STATE SENATE DISTRICT (ORANGE)

Much like SD29, Democrats are looking to flip this from Republican to Democrat in November. Incumbent Sen. John Moorlach (R-Costa Mesa) received only 47 percent of the vote in February and will face off against Dave Min (D) in November. Voter registration in SD37 is 35 percent (R) and 34 percent (D).

USDA Updates CFAP Data

As of July 15, USDA's Coronavirus Food Assistance Program (CFAP) has approved \$5.9 billion in payments to nearly 410,000 producers nationwide. California has received \$300.7 million of that amount (breakdown below).

Winegrapes are currently not on the CFAP list of eligible specialty crops, but CAWG and other groups continue to be engaged in efforts to allow winegrape growers access to direct assistance.



CALIFORNIA PAYMENTS / APPROVED AND ENROLLED APPLICATIONS:

Specialty: \$69.7 million / 2,336 applications

Non-specialty: \$4.2 million / 541 applications

Livestock: \$55.8 million / 2,588 applications

Dairy: \$180 million / 859 applications

►CFAP DATA DASHBOARD: farmers.gov/cfap/data

USMCA Entered into Force July 1

The United States-Mexico-Canada Agreement (USMCA) entered into force on July 1, replacing the decades-old North American Free Trade Agreement. For wine and spirits, the three countries agreed to avoid technical barriers to trade through non-discrimination and transparency regarding sale, distribution, labeling, and certification of wine and distilled spirits.

"This long-awaited day brings much needed certainty to farmers, ranchers, and business owners across America, who can continue to build upon the strong partnership we have



with Mexico and Canada," said Sen. Pat Roberts, chair of the Senate Ag Committee. "I thank [Lighthizer and Doud] for their perseverance in finalizing and improving this trade deal. I hope this success continues as the administration works to conclude trade agreements in other countries around the world."

One week after the agreement went into effect, President Trump and Mexico President Andrés Manuel López Obrador met at the White House for a ceremony to celebrate USMCA's implementation and sign a declaration between the two countries. It was López Obrador's first foreign trip as president. Canadian President Justin Trudeau did not attend.

►USMCA WEBSITE: trade.gov/usmca

Interior Requests Funding for California Water Storage Projects

The Department of Interior has requested \$108.8 million in funding for California water storage projects (FY 2021) under the Water Infrastructure Improvements for the Nation (WIIN) Act. The WIIN Act – signed into law in December 2016 – provides for improvements to rivers and harbors of the United States, for the conservation and development of water and related resources, and for other purposes. The request was sent to the chair of the House Subcommittee on Energy and Water Development, and Related Agencies. Among the Bureau of Reclamation funding recommendations: \$15 million for the Shasta Dam and Reservoir enlargement project, \$71 million for the Friant-Kern Canal, \$7.8 million for the Las Vaqueros Reservoir, \$3 million for the Delta Mendota Canal, and \$4 million for the Sites Reservoir.



Proposed AVA in Tehachapi Mountains, Plus New Grape Variety Names

The Alcohol and Tobacco Tax and Trade Bureau (TTB) on June 26 published a proposed rule in the Federal Register for the establishment of the approximately 58,000-acre Tehachapi Mountains AVA in Kern County. It does not lie within, or contain, any other viticultural area. The proposal is in response to a petition from Julie Bell of Per la Vita on behalf of local vineyard owners and winemakers. There are six commercially-producing vineyards and one winery within the proposed AVA. Comments on this proposal must be received on or before Aug. 25, 2020.

►PROPOSAL: govinfo.gov/content/pkg/FR-2020-06-26/pdf/2020-13138.pdf

The TTB has administratively approved the use of two new grape variety names: mourtaou (as a synonym for cabernet pfeffer) and treixadura. Wine bottlers can use these names, as well as other names granted administrative approval, to label American wines pending TTB's next rulemaking.

►INFO: ttb.gov/wine/grape-variety-designations-on-american-wine-labels



\$437M in Lost Sales for Winegrape Growers

MORAMARCO ANALYSIS SHOWS THE SEVERE IMPACT OF COVID-19 ON THE INDUSTRY

California winegrape growers could suffer at least \$437 million in lost sales from this year's grape harvest due to COVID-19 related economic disruptions. According to a CAWG-commissioned analysis by Jon Moramarco, managing partner of bw166 and editor of the Gomberg-Fredrikson Report, increased sales of wine at off-premise retailers will not offset lost wine sales via on-premise channels and direct from wineries to consumers through wine clubs and tasting rooms. Off-premise includes supermarkets, liquor stores, club stores and wineries; on-premise includes restaurants, hotels and stadiums.

The volume of California wine sales over the 12 months from March 2020 to February 2021 is expected to decline by 9.21 million cases from the same 12-month period in the prior year. This translates into \$437 million less sales revenue for growers.

Moramarco notes that lost sales revenue due to COVID-19 would come on top of the \$395 million in reduced sales revenue expected to occur as a result of excess wine inventory following the large winegrape crop in 2018 and slowing consumer demand for wine. Growers' losses from March 2020 to February 2021 could total \$832 million.

"Moramarco's analysis makes clear what many California growers already know: growers will experience significant economic hardship following this year's grape harvest," CAWG President John Aguirre said. "California growers are accustomed to cyclical markets, but the COVID-19 pandemic threatens to turn a down year into a financial catastrophe for many of them."

CAWG Board Chair Mike Testa said, "I've never seen so much uncertainty in the marketplace. Growers are struggling to find a home for their fruit, vineyard acres are being pulled out and our winery customers are experiencing extraordinary challenges. For many growers, getting paid this year is no sure thing. It is essential that the U.S. Department of Agriculture recognizes the harm COVID-19 has caused our markets, and winegrape growers need to be included in the next round of financial assistance for agricultural producers."

CAWG distributed a press release about the analysis, which was covered by numerous media outlets: wine industry, agriculture, policy / politics and mainstream.

Year	California Grape Crush					
	Tons Purchased (000)	Value (USD Million)	Winery Tons (000)	Est Value Winery Tons (USD Millions)	Tons Crushed (000)	Total Value (USD Millions)
2010	3,286	\$1,781	697	\$720	3,983	\$2,501
2011	3,239	\$1,897	632	\$658	3,871	\$2,556
2012	3,626	\$2,662	758	\$977	4,383	\$3,639
2013	3,858	\$2,729	838	\$1,040	4,696	\$3,769
2014	3,331	\$2,462	808	\$1,006	4,139	\$3,468
2015	3,203	\$2,139	662	\$769	3,865	\$2,908
2016	3,454	\$2,581	734	\$994	4,188	\$3,575
2017	3,460	\$2,675	762	\$1,061	4,222	\$3,735
2018	3,629	\$3,009	872	\$1,345	4,501	\$4,354
2019	3,116	\$2,454	959	\$1,306	4,075	\$3,760
2020 Projected Availability	3,400	\$2,720	950	\$1,283	4,350	\$4,003
COVID-19 Impact	(100)	(\$291)	(50)	(\$146)	(150)	(\$437)
2018 Carryover Impact	(335)	(\$304)	(100)	(\$91)	(435)	(\$395)
2020 Projected Winery Needs	2,965	\$2,125	800	\$1,046	3,765	\$3,171

*Data obtained from the California grape crush reports.
The value in the grape crush report only represents purchases from growers unaffiliated with wineries.
Winery tonnage is total crush less tons purchased.
Value of winery tonnage based on average by district by varietal.
The 2020 estimates illustrate the potential losses to address the COVID-19 impacts as well as excess inventory from 2018.
The COVID-19 impact has a much higher value per ton due to the sales channels most affected.*

12 Month COVID-19 Impact on Volumes of California Wines - 9L (Thousands)					
Price Bracket	Off Premise	On Premise	Wine Club	Tasting Room	Total
Under \$4.00	5,944	-3,962	0	0	1,981
\$4.00 to \$7.00	6,725	-6,029	0	0	696
\$7.00 to \$10.00	2,578	-2,795	0	-373	-590
E. \$10.00 to \$12.00	1,474	-2,042	0	-454	-1,021
F. \$12.00 to \$15.00	1,568	-2,875	-44	-523	-1,873
G. \$15.00 to \$20.00	1,327	-3,185	-133	-1,327	-3,317
\$20.00 to \$50.00	785	-3,287	-219	-1,643	-4,364
\$50.00 Plus	63	-508	-21	-254	-719
Total 9L CA Wine	20,464	-24,682	-417	-4,573	-9,208

12 Month Retail Value Impact of COVID-19 - USD (Millions)				
Price Bracket	Off Premise	On Premise	Wine Club	Total
Under \$4.00	\$221	(\$147)	\$0	\$74
\$4.00 to \$7.00	464	(416)	0	48
\$7.00 to \$10.00	302	(328)	0	(69)
E. \$10.00 to \$12.00	219	(303)	0	(151)
F. \$12.00 to \$15.00	280	(514)	(8)	(335)
G. \$15.00 to \$20.00	304	(729)	(30)	(759)
\$20.00 to \$50.00	308	(1,287)	(86)	(1,709)
\$50.00 Plus	60	(482)	(20)	(241)
Total CA Wine	\$2,157	(\$4,205)	(\$144)	(\$1,392)

COVID-19 Impact (Grape share of Retail Value Impact)	(\$437)
2018 Carryover Impact	(\$395)
Total California Grape Grower Risk	(\$832)



►FULL ANALYSIS: cawg.org (resources tab / COVID-19 wine industry analysis)

CA Lawmakers to USDA: Add Winegrapes to CFAP

CONGRESSIONAL DELEGATION WANTS WINEGRAPE GROWERS TO GET DIRECT AID

More than 25 members of Congress on July 6 sent a letter (below) to U.S. Department of Agriculture (USDA) Secretary Sonny Perdue requesting that winegrape growers receive financial aid through its Coronavirus Food Assistance Program (CFAP).

Beginning May 26, CFAP intended to provide up to \$16 billion in direct payments to agricultural producers who suffered losses due to COVID-19 related market and supply chain disruptions. As of July 14, winegrapes were not among the nearly 90 commodities listed under CFAP specialty crops. ►INFO: farmers.gov/cfap/data

The delegation's letter follows a May 19 letter from CAWG and the California Farm Bureau Federation to Perdue, which also urged USDA to allow winegrape growers access to COVID-19 assistance.

"The letter from the California congressional delegation is a tremendous boost to our efforts to seek vital financial assistance for winegrape growers," CAWG President John Aguirre said. "We applaud and appreciate the leadership of Rep. Mike Thompson (D-Napa) in crafting the letter and garnering support from his colleagues."

Dear Secretary Perdue,

We the undersigned want to bring to your attention the serious economic challenges confronting California's 5,900 California growers of winegrapes. The COVID-19 pandemic has broadly undermined market prices for California winegrapes and we believe the U.S. Department of Agriculture should include wine grapes on the list of specialty crops eligible for direct payments in the Coronavirus Food Assistance Program.

For 2018, the California Department of Agriculture reported all forms of grapes (wine, table and raisin) were the state's most valuable crop, with a total farmgate value of \$6.25 billion. Grapes destined for wine, worth approximately \$4 billion, contributed the single largest share of total farmgate value for grapes.

The shutdown of key market channels, both domestic and international, for wine sales, due to COVID-19, has resulted in an overall decline in retail sales to consumers, reduced volumes of wine shipped to market and lower prices for bulk wine in inventories. These factors mean increased inventories of finished wine in 2020 and wineries are offering growers fewer contracts for the purchase of grapes and at lower prices for the upcoming crop harvest.

An analysis by noted wine industry analyst Jon Moramarco of bw166 concludes that California's winegrape growers will feel the full economic impact of COVID-19 when harvest begins in late-July of this year. According to Moramarco, COVID-19 related shelter-in-place mandates and economic closures will mean \$437 million less revenue for California's winegrape growers for the 2020 crop.

Growers' losses are driven by a decline in California wine sales. In total, Moramarco expects retail sales of California wine for the 12-month period from March 2020 to February 2021 to decline by \$3.58 billion. The decline in sales volume is due primarily to COVID-19 related closures and restrictions for such venues as restaurants, bars, hotels, stadiums and winery tasting rooms. Consequently, COVID-19 related impacts on the marketplace will reduce the total value of grapes purchased and utilized by wineries in 2020 by \$437 million, resulting in a nearly 11% decline in the total value of grapes sold this year.

Even as the nation's economy reopens, key market channels for California wine will continue to be affected by public health restrictions that prohibit large gatherings and events, dictate physical distancing requirements in public settings or impose capacity constraints for certain types of premises where wine is sold.

California's winegrape vineyards are the foundational element of a very robust and substantial portion of the state's economic landscape. Grower's losses, driven by COVID-19, will have significant consequences for our state. Sonoma State University recently concluded a report that indicates the combined effect of growers' losses and reduced sales of California wine will result in a contraction of \$9.6 billion for California's economy, and a potential loss of 42,376 jobs and \$586 million in state and local taxes stemming from COVID-19 related losses to wineries and growers.

We urge the inclusion of winegrape growers in the direct payments Coronavirus Food Assistance Program and other programs of assistance intended to aid growers affected by the COVID-19 pandemic.

Sincerely,

Mike Thompson, Dianne Feinstein, Kamala D. Harris, Julia Brownley, Jimmy Panetta, Jim Costa, Barbara Lee, TJ Cox, Ami Bera, Salud Carbajal, Doug LaMalfa, John Garamendi, Juan Vargas, Doris Matsui, Eric Salwell, Jared Huffman, Alan Lowenthal, Gilbert R. Cisneros, Jr., Jerry McNerney, Lucille Roybal-Allard, Anna G. Eshoo, Tony Cardenas, Josh Harder, Pete Aguilar, Mark DeSaulnier, Devin Nunes, Harley Rouda



CALIFORNIA
ASSOCIATION
of WINEGRAPE
GROWERS

CAWG 46TH ANNUAL MEETING —VIRTUAL—

July 16 / 10-11:30 a.m.
There's still time to register at cawg.org!

Welcome

CAWG President John Aguirre
CAWG Board Chair Mike Testa

Financial Report

CAWG Board Treasurer Gregg Hibbits

Pan American Insurance Services

A word from CAWG's longstanding insurance partner!
CAWG is proud to endorse the competitive quality insurance and exceptional customer service that Pan American provides.

President's Message

John Aguirre will review key issues of importance to California winegrape growers and provide an update on CAWG activities over the past year.

Federal Update

Speaker: Louie Perry, Cornerstone Government Affairs
Louie will provide an update on the response to COVID-19 and federal assistance for agriculture.

California Winegrape Growers Projected Losses Due to COVID-19

Speaker: Jon Moramarco, managing partner of bw166 and editor of the Gomberg-Fredrikson Report

Jon will review the findings from the COVID-19 industry study commissioned by CAWG. Learn about how California winegrape growers could suffer at least \$437 million in lost sales from this year's grape harvest due to COVID-19 related economic disruptions.

COVID-19 Hauling Considerations & Best Practices for Harvest

Speaker: Yvonne Sams, G3 Enterprises

G3 will discuss how to prepare for harvest to ensure that transportation of your grapes will not be impacted or delayed due to unforeseen COVID-19 requirements.

Chair's Report

Mike Testa, Coastal Vineyard Care

Mike will share insight from his first term as CAWG's chairman of the board.

Our meeting is offered at no charge to CAWG members, thanks to the generous support of our annual meeting sponsors.

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Agricultural Supply

COVID-19 Resources & News

CAWG COVID-19 Resources Webpage

Visit our website for a frequently-updated list of state, federal, ag industry and CAWG resources.

►WEBPAGE: cawg.org (resources tab/COVID-19)



COVID-19 Harvest Protocols

Workbook: Created by CAWG, Wine Institute and the California Sustainable Winegrowing Alliance, the workbook intends to help vineyards and wineries update their Injury and Illness Prevention Program to address COVID-19 and harvest activities. The health and safety protocols offer a series of general best practices and were based on guidance from state and federal government agencies. Please review with your legal department or outside counsel before using the workbook.

►WEBPAGE: cawg.org (resources tab/webinar recordings)

Potential Economic Impacts of COVID-19 on the California Wine Industry

Wine Industry: A report issued by Sonoma State University's Wine Business Institute shows that the California wine industry's loss due to COVID-19 "will have a ripple effect throughout the California economy because of the strong link to tourism, restaurant and related business sectors." The report measured lost business revenue based on direct, indirect and induced economic impacts:

- Direct (\$4.219 billion) + indirect (\$2.967 billion) + induced (\$2.421 billion) = \$9.607 billion
- Tax loss of \$586 million for state and local governments
- Total loss of 42,376 jobs in California across hundreds of industries

►REPORT: sbe.sonoma.edu/news

Economic Impact of the COVID-19 Pandemic on California Agriculture

Agriculture: This 64-page study – prepared by ERA Economics and commissioned by seven California ag groups – estimates that the direct economic impact of the COVID-19 pandemic on California agriculture is estimated between \$5.9 and \$8.6 billion this year. The study focuses on more than a dozen commodities/market segments, including grapes (wine, table, raisin). The report concludes, "The impact of the COVID-19 pandemic on California's wine industry will continue to evolve over the coming months as consumers adjust purchases, the export market adjusts, and the current year California crop is harvested."

►STUDY: cxfb.com/covid-19-information/

[CAWG & INDUSTRY NEWS]



New Standard for Outdoor Ag Operations During Hours of Darkness

Photo: Laetitia Vineyard & Winery

The new Cal/OSHA regulations for outdoor agricultural operations during hours of darkness went into effect July 1. This standard had been the subject of stakeholder meetings for the past several years. Initially introduced as a regulation in 2019, the standard would have required excessive and expensive light towers. CAWG worked with an ag industry coalition to substantially amend the standard to assure that it was workable for growers throughout California.

Nearly 200 people participated in a June 22 webinar, which 1) reviewed compliance issues and their significance for all ag night work and 2) explained the new requirements for task lighting, high-visibility garments, and other aspects of night work safety and how they apply to operations. The one-hour webinar and FAQs are available on the CAWG website.

►WEBPAGE: cawg.org (resources tab)

Viticulture Specialists Among 10 UCCE Retirees

Ten University of California Cooperative Extension farm advisors – all of whom have decades of experience – retired on July 1. Several of the retirees have specialized in viticulture or worked on vineyard-related issues during their careers. They include Rachel Elkins, Lake and Mendocino counties; Kurt Hembree, Fresno County; Glenn McGourty, Mendocino County; John Roncoroni, Napa County; Rhonda Smith, Sonoma County; and Beth Grafton-Cardwell.

►READ MORE: ucanr.edu/blogs/ANRnewsreleases/



PD/GWSS Board News: Referendum Passes, Assessment Approved

The Pierce's Disease & Glassy-Winged Sharpshooter (PD/GWSS) referendum passed with 78 percent approval of California winegrape growers. All winegrape producer entities that paid the assessment on grapes crushed in 2019 received ballots and 49 percent cast ballots (40 percent had to vote in order to validate the referendum). "In these trying times, we appreciate the support of the industry in passing this referendum," PD/GWSS Board Chair Domonic Rossini said. "The PD/GWSS Board is always focused on growers' best interests and ensuring our industry has the best research at its back to protect California vineyards from pests and diseases." The next referendum will be conducted in 2025.

The PD/GWSS Board advises CDFA on the use of winegrape assessment funds. Since 2001, it has invested more than \$47 million on research and outreach on PD, GWSS and other designated pests and diseases, including European grapevine moth, mealybugs, red blotch virus, fanleaf virus, leafroll virus and spotted lanternfly. During its July 7 meeting, the board voted to set the winegrape assessment at \$1 per \$1,000 of value for the 2020 harvest. The recommendation was approved by CDFA Secretary Karen Ross. The annual rate has averaged \$1.39 per \$1,000 of value since it was established in 2001.

►WEBSITE: pdgsss.net



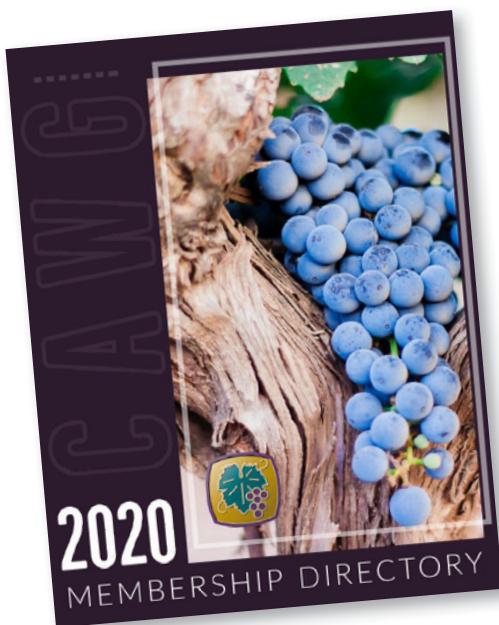
Value of CA Wine Sales in the US Grew 6 Percent in 2019 to Reach \$43.6B

Wine Institute recently released its 2019 year-end wine sales statistics. Highlights:



- **\$43.6 billion:** Retail value of California wine sales in the U.S. (\$40.2 billion in 2018).
- **241.5 million:** Nine-liter cases of California wine shipped in the U.S.
- **275.6 million:** Nine-liter cases of California wine shipped worldwide (U.S. and abroad).
- **\$1.36 billion:** U.S. wine exports (95 percent from California) reached this amount in winery revenues.
- **Five top-selling varietals by volume share:** Chardonnay (18.6 percent), cabernet sauvignon (15.1 percent), red blends (10.7 percent), pinot grigio/gris (10 percent), moscato/muscat (6 percent).
- **The top markets for U.S. wine exports:** European Union's 28-member countries (\$427 million); Canada (\$424 million), Hong Kong (\$113 million), Japan (\$92 million), China (\$39 million), South Korea (\$27 million), Nigeria (\$24 million), Mexico (\$19 million), Philippines (\$18 million), Dominican Republic (\$16 million) and Switzerland (\$15 million).

►READ MORE: wineinstitute.org/press-releases/



2020 CAWG Membership Directory Now Available in a Full-Color, Digital Format

The directory was emailed to members on July 15. If you did not receive the email, contact natalie@cawg.org.

Advertiser Index and Tabs: Quickly locate a specific advertisement! Scroll over the ad to link to their website, email or phone number.

Grower Members: View all CAWG grower members in alpha order.

Associate Members: View all CAWG associate members in alpha order. We encourage members to use those companies that support the winegrape industry!

All Things CAWG: View CAWG history, board of directors, staff and more!

Member Index: View grower members by Crush District and associate members by supply/service category.



Symposium Moves to Virtual Conference and Trade Show in January 2021

Due to concerns about COVID-19, organizers of the 2021 Unified Wine & Grape Symposium on July 14 announced the event will be presented online as a virtual conference on Jan. 26-28, 2021. In addition, Unified will host a virtual trade show throughout the three days, with an additional half day on Jan. 29 from 8 to 11 a.m. The Unified was originally scheduled to occur on Jan. 12-14, 2021 at Cal Expo.

The 2021 Unified Wine & Grape Symposium's LLC Managing Committee decided to host the show as a virtual online event after consulting with risk experts at Arup, an international design and engineering firm. The managing committee believes hosting Unified as a virtual event is the responsible decision under difficult circumstances. Industry members will be able to access vital business, research and marketing information, while avoiding the many challenges associated with the current COVID-19 pandemic.

"First and foremost, the Unified Symposium is about serving the interests of the people who make the wine industry so special. The decision to host the event online comes at a great cost, but the welfare of our attendees, exhibitors and the people of

California is our greatest priority," CAWG President John Aguirre said. "We will deliver an excellent event online and provide the quality of service our attendees and stakeholders expect."

For 26 years, the Unified Symposium has been the industry's leading trade show, drawing tens of thousands of guests from all over America and the world to learn about the emerging trends, new products and ways to be more efficient and successful. The 2021 virtual format will allow the same experts to exchange information, while being responsive to the new realities of a world facing a pandemic.

"There has been strong interest in continuing the Unified tradition of starting the new year by accessing this vital information," ASEV Executive Director Dan Howard said. "We've already met with our program committee and are confident that we can deliver the same invaluable content in a convenient and safe virtual format. Because of similar interest in the trade show, we've included that as well in our virtual format for 2021. It will be different, but in these uncertain times, we have to be flexible and innovative." ► unifiedsymposium.org

2021 Unified Program Development Committee Chairs

Mike Boer and Leticia Chacón-Rodriguez are the co-chairs of the 2021 Unified Symposium Program Development Committee. They will lead a group of more than 30 experts and industry leaders who work together on determining topics and speakers for Unified sessions.

Boer, a former CAWG board member, works for Grow West as the sales manager for the North Coast. Chacón-Rodriguez is the winery manager and winemaker for the UC Davis Department of Viticulture and Enology.



CAWG ASSOCIATE MEMBER SPOTLIGHT

Allied Grape Growers believes wholeheartedly in the importance of growers working together to accomplish their goals. Grower associations are vitally important for the overall economic health of growers. Associations work on the behalf of growers and represent them in many arenas, including marketing, regulatory, legislative, compliance, education, etc. Without associations, growers would be left to navigate these challenging environments without any support. Growers must continue to work together and support CAWG.

www.alliedgrapegrowers.org



QUALITY, INTEGRITY, STABILITY

CALENDAR



JULY

- 16 CAWG 46th Annual Meeting > *Virtual*
- 20 CAWG Regional & Board of Directors dinner, Santa Rosa > *Canceled*
- 21 CAWG Board of Directors meeting > *Virtual*



THE CRUSH is published for members of the California Association of Winegrape Growers.

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