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This newsletter shows why three vintners chose to self-assess their operations for sustainability through the California Sustainable Winegrowing Alliance (CSWA) program and how they have benefited. The process can begin at a CSWA workshop or online at www.sustainablewinegrowing.org. The program is open to all California vintners and winegrape growers.

“There are a lot of great resources and sometimes grant money for wineries looking to be more actively involved with sustainability programs,” says Nick Palumbo of Palumbo Family Vineyards & Winery. He has a partnership with Temecula’s Rancho California Water District, and installed a \$40,000 weather station and soil moisture monitoring system in his vineyard to assess the amount of water being used for irrigation. After two years, the system’s equipment will be his; he will only have to pay the fee for the monitoring service. Palumbo encourages California wineries to contact their local power companies and water districts to see what programs are available.

To hear more from Nick Palumbo about sustainable farming, check out his Tedx talk at: <http://www.youtube.com/watch?v=whtVbJL6Fs>

The Business Case for Self-Assessment

Self-Assessment Helps Design Energy-Saving Winery at Palumbo

WHEN NICK PALUMBO of Temecula’s Palumbo Family Vineyards and Winery put up a new winery building in 2008, he used 2x8 framing in the walls and ceiling versus the traditional 2x4 in order to maximize the amount of insulation he could place between the studs. The decision cost him a little more in construction, but the savings in air cooling needs were almost immediate.

“I was able to downsize my A/C units so the equipment cost was lower,” says Palumbo. “Plus, the first summer the building was up, my energy costs for that building during the hottest month were about \$200 compared to around \$1000 for similarly-sized buildings with traditional construction.”

The decision to use 2x8 framing was no accident. As Nick says, it was due in large part to his winery’s participation in CSWA’s self-assessment process, which Palumbo has completed three times since 2002.

“Self-assessment opens your eyes,” says Palumbo, whose winery earned a Certified California Sustainable Winegrowing credential in 2012. “It makes you think about the long-term implications – cost wise and environment wise – of

short term decisions. I definitely found dollar value by going through the process, especially in terms of water and energy efficiency.”

Palumbo also found value when it came to his region’s Santa Margarita River Watershed Monitoring Program, which audits and promotes the overall health of the watershed and surrounding ecosystem. “When the inspector came to interview me and saw the SWP self-assessment book he just got a big old smile on his face. The next week he even came back for a visit with his wife.”



TOP: For his family winery, Palumbo makes decisions for the long term and the next generation. **ABOVE:** Extra insulation in the design of the new winery resulted in vast energy savings for air conditioning.

"Sustainable winegrowing is key to a successful wine business, motivated work force, and improved environment. With the mantra of continuous improvement, California continues to lead the way in sustainability in the global wine business"

STEVE SMIT, CONSTELLATION BRANDS AND CSWA CHAIRMAN



HIGHLIGHTS SPRING 2014

Assessment Process Carves Out Time to Problem Solve

Improving Irrigation Efficiency at Alexander Valley Vineyards

WHEN MARK HOUSER, Vineyard Manager for Sonoma's Alexander Valley Vineyards, noticed that the irrigation drip lines and emitters in the winery's 150-acre vineyard kept getting clogged, he decided to take care of the problem at the source.

To address the problem, Houser, who credits the CSWA self-assessment process for "making me think about sustainability differently," installed aerators in the reservoir to add oxygen and slow the algae growth. He then uses hydrogen peroxide to kill and sink

the algae. Digester packets are added to consume the algae at the bottom of the reservoir. The pay-off? In addition to the overall improvement to the irrigation system, the savings in time and labor have been "significant."

Currently in the process of completing Alexander Valley Vineyards' second CSWA self-assessment—the winery and its vineyards are applying for Certified California Sustainable

Winegrowing in 2014—Houser believes it is an undertaking that is well worth the effort. "It makes you set aside the time to think about everything you're doing. I'm always discovering new ways to apply what's in the SWP handbook to my operation. It's very practical."



Alexander Valley Vineyards plans to certify its operations through the California Sustainable Winegrowing Alliance.

"The issue was the reservoir," says Houser. "We'd get an algae bloom, then our filter system would get dirty, and that caused obstruction down the line. We were constantly in the vineyard identifying where the blockages were in order to fix them."

More Water-Saving Techniques at Alexander Valley Vineyards (AVV)

Like many winegrowers, AVV Vineyard Manager Mark Houser uses a pressure chamber device to measure the water potential of vine plant tissue and help determine when irrigation is needed. "Sometimes we're able to push off irrigating by several weeks in some blocks," says Houser. "That's a significant water savings."

When the winery does irrigate, it uses timers which turn on the water between the hours of 7 pm and 7 am when electricity rates are lower and the water is more readily absorbed into the soil. "Since nighttime doesn't have the evapotranspiration we get in the daytime heat, our CSWA self-assessment has helped us estimate that the savings is between 15-20% in water volume."



Pressure chamber instruments are widely used in the field to measure vine water status.

THE CALIFORNIA SUSTAINABLE WINEGROWING ALLIANCE (CSWA) program has broad reach within the industry with 1,800 wineries and vineyards, representing 72% of California's winegrape acreage and 74% of the state's case production participating in CSWA's Sustainable Winegrowing Program.

In 2010, CSWA added voluntary Certified California Sustainable Winegrowing (CCSW-Certified), which requires an annual assessment, meeting 50 vineyard and 32 winery prerequisites and doing a third-party audit. Sixty-seven wineries and 194 vineyards are CCSW-certified with more applications in process. See: www.sustainablewinegrowing.org.

CALIFORNIA SUSTAINABLE WINEGROWING ALLIANCE NEWS

CSWA Sustainability Assessment Workshops

CSWA holds workshops to help participants learn how to self-assess with the Sustainable Winegrowing Practices (SWP) Online Workbook and the online metrics tools that help track water use, energy use, greenhouse gas emissions and applied nitrogen use. Workshops also cover how to participate in the voluntary Certified California Sustainable Winegrowing program.



Additional CSWA workshops target specific education topics such as water use, and are held both via webinar and in-person throughout California. A calendar of workshops is at: www.sustainablewinegrowing.org/workshopcalendar.php Information is also available by emailing: info@sustainablewinegrowing.org.

Generating Baseline Data to Quantify Water/Energy Savings

Self-Assessment Key to Continuous Improvement at Trefethen Family Vineyards

SUSTAINABILITY has always been entrenched in Napa Valley's Trefethen Family Vineyards' farming practices. "We were recycling water back in my

program provides for applying metrics to different practices allow you to actually measure rather than estimate gallons of water and kilowatts used."



Harvesting at night has become industry standard practice in keeping grapes cool, reducing refrigeration costs, and keeping workers from picking in the heat of the day.

grandfather's day," says Hailey Trefethen, the third-generation vintner who oversees her winery's sustainability efforts and programs.

But while being green is in Trefethen's DNA, Hailey says that CSWA's self-assessment process—which the winery has undergone four times since 2004, including 2012 when it earned Certified California Sustainable Winegrowing—has been essential for realizing the goal of continuous improvement.

"Self-assessment forces you to take a step back from day-to-day operations and really look at what you're doing," says Trefethen. "The tools the CSWA

"We receive data that allows us to compare our usage year to year," says Trefethen. "We are able to quantify our efforts in terms of both conservation and associated cost savings and make improvements to those efforts every year."

The winery has completed two major sustainability projects within the last year. It is now 100% solar powered and has also installed water flow meters throughout the winery as well as its 480 acres of vineyards.



Among the reasons that Trefethen chose a barley cover crop was because it does well in drought conditions and provides good biomass.

"Continuous improvement and a long-term approach is part of the one principle always guiding us—quality, quality, quality."

JEAN CHARLES BOISSET
BOISSET FAMILY ESTATES



HIGHLIGHTS SPRING 2014

New Video Case Studies Show Efficiency and Savings of Sustainability

CSWA HAS ADDED 10 new short videos to its video archive featuring vintners and growers explaining the efficiencies and savings of sustainable winegrowing practices. Go to: www.sustainablewinegrowing.org/CSWA-video.php

USING SELF-GENERATION FUEL CELLS IN VINEYARDS & WINERIES

Fuel cells run 24/7, save energy and reduce greenhouse gas emissions at Stone Edge Farm and Trinchero Family Estates. PG&E provides financial incentives for installation.

IMPROVING PUMP EFFICIENCY IN VINEYARDS

Save up to 33% in energy savings through pump efficiency. PG&E program helps test and repair pumps and offers cash incentives for retrofits.

ENERGY EFFICIENCY CHALLENGES AT HISTORIC ASTI WINERY

Treasury Wine Estates implemented energy efficient upgrades at its historic Asti Winery through PG&E's Savings by Design Program.

FARMING WITH BIODIVERSITY: BONTERRA ORGANIC VINEYARDS

Learn how biodiversity protects natural resources, controls erosion, increases soil fertility, reduces pest/disease pressures, improves grape quality and more.

THE VALUE OF SELF-ASSESSMENT

Hear testimony from Constellation,

Treasury Wine Estates, Clos LaChance and Allied Grape Growers on the value of self-assessment using the 3rd edition CSWA workbook.

SUSTAINABILITY PERFORMANCE METRICS AT BOISSET FAMILY ESTATES

Learn why Boisset Family Estates uses CSWA's performance metrics tool to measure and track their use of water, energy and nitrogen.

REDUCING GREENHOUSE GASES WITH VINEYARD PRACTICES

Nord Vineyard Services has implemented vineyard management practices identified by researchers and experts to reduce greenhouse gas emissions.

SOLID WASTE MANAGEMENT AT TRINCHERO FAMILY ESTATES

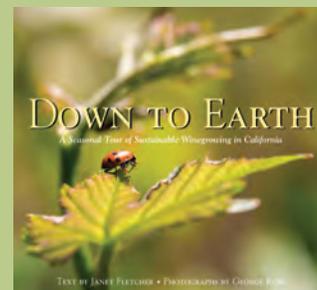
Trinchero Family Estates manages waste through recycling efforts, waste audits, composting, employee engagement and suppliers who use recycled materials.

CONSERVING WATER AT J. LOHR VINEYARDS & WINES

J. Lohr tripled production and maintained the same water use level by tracking usage and engaging employees to make suggestions to improve practices.

USING PIGS AT SONOMA WINE COMPANY

Sonoma Wine Company uses Pipeline Inspection Gauges (PIGs) or sponge balls to clean transfer lines, reducing water use 10-15% a month.



New Down to Earth Book

Wine Institute has released a new book, *Down to Earth: A Seasonal Tour of Sustainable Winegrowing in California*, a consumer-friendly guide to environmentally and socially responsible practices that shows how sustainability influences California vintners and growers throughout the year in growing and making wines. The book was written by Janet Fletcher and photographed by George Rose, both award-winning journalists.

The 256-page book is \$40 and available for purchase at www.discovercaliforniawines.com/downtoearth. Its release coincides with Wine Institute's "Down to Earth" month celebration in April when visitors can enjoy dozens of green-themed events at wineries throughout California.

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