



**WINE INSTITUTE**  
THE VOICE FOR CALIFORNIA WINE

# Sustainable Winegrowing Practices

Spring 2005

## California Vintners Share Notes on Adopting Sustainable Practices

**B**ack by popular demand, Wine Institute's newsletter on the Code of Sustainable Winegrowing Practices has returned to provide updates on the program and feature Institute member results and experiences. This newsletter will be published on a quarterly basis. About 1,060 wineries and vineyards statewide have been involved in 110 Code workshops and received workbooks since the program started in 2002. The following are comments from some of the participants with a special look at solar energy use at California wineries.

### Managing Soil at Lucas & Lewellen Vineyards

**L**ouie Lucas is a viticultural pioneer in Santa Barbara County and a third-generation grape grower who has been farming grapes for 40 years. Vintners statewide have sought out his grapes for award-winning wines, so in 1996, Lucas and his partner Judge Royce Lewellen started Lucas and Lewellen Vineyards. They grow 25 varieties on 400 acres with nine different trellis systems. Though the estate was already using most of the best practices in the Code of Sustainable Winegrowing workbook, Lucas found reviewing the book to be useful.

"It's an all-inclusive, well thought out book that stimu-

lates thinking," says Lucas. "The workbook is a reminder of things that we should be doing. It shows how winegrowers have been the leaders in sustainability."

The workbook's soil management chapter resonated the most for Lucas, as it reflects what he is doing with his vineyards including: attention to proper pH; adding amendments such as limestone, gypsum, potassium, copper, zinc, boron and phosphorus; use of green manures and green waste compost; growing a cover crop of natural clovers and weeds instead of the barley and vetch that he once used for erosion control.

Lucas also adds nutrients in the drip irrigation system and uses foliar nutrient sprays. He gathers information to learn about the soil's water-holding capacity



Photo courtesy of Lucas & Lewellen Vineyards

Vintner Louie Lucas (at right) inspects how the vines are developing alongside the natural clover and weed cover crop.

and erosion potential. He applies a pesticide to the vines only when he has to, but he uses pesticides containing natural compounds that won't leave chemical traces.

"Soil is only as good as its weakest point. Fertility

is critical for healthy vines, which are more resistant to pests, diseases and drought," says Lucas. Winegrowers are quality minded, he explains, because their products have brands, often with their names on the labels.

### The "Green Team" Gets Results at Kunde Estate Winery & Vineyards

**A**ttendance at a Code of Sustainable Winegrowing workshop led Kunde Estate Winery & Vineyards in Sonoma Valley to embark on a comprehensive effort to expand best practices throughout its winery and 800 acres of vineyards.

"The Kunde family has been growing grapes for a century, so it is inherent nature for them to be a front runner as a good steward of the land," says Vineyard Manager Jerry Mackling. To enhance its environmental performance, the family formed a "green

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(continued from page 1) team,” comprised of winery and vineyard staff from every department to meet regularly to set goals and improve best practices ratings. As a result, Kunde is now involved in the Sonoma Green Business Program to reduce energy use and increase recycling and other winery efficiencies.

In the vineyards, Mackling installed three weather stations to provide data for helping to make decisions on treating potential mildew growth on an “as needed” basis, rather than spraying according to the calendar. He consequently eliminated one to two sulfur dustings

and one fungicide treatment.

Mackling has also reduced spraying to eliminate spider mites. He has trained a vineyard worker to trap gophers instead of bait them, resulting in an average of 25 gophers a day being caught when they trap. For weed control, Mackling decreased RoundUp use by 33 percent by applying it on a narrower strip, 12 inches wide, under vine rows.

Kunde Estate also maintains extensive riparian and aquatic habitat throughout its total 2,000-acre property, consisting of oak woodlands, grasslands, and bird



The renowned Wildwood Vineyards at Kunde Estate uses mowed grass and bell bean cover crops to prevent erosion and add nutrients and organic matter to the red volcanic soils.

refuges. These wildlife corridors have attracted a wide variety of animals, birds and beneficial insects,

and created an ecological balance that has helped lower the overall incidence of pest pressures.

## Expanding Sustainable Practices at Retzlaff Estate

For 25 years, Dr. Bob and Gloria Taylor have handcrafted their award-winning, limited production wines without pesticides on the 14 acres of their Retzlaff Estate in Livermore. When they attended a Code of Sustainable Winegrowing workshop, they realized they were already doing many of the practices, but they still found the Code workbook to be proactive.

“Community relations was the number one important practice we got out of the workbook,” says Dr.

Taylor. Through letters and over-the-fence conversations about their organic farming methods, the Taylors gained cooperation from neighbors and the city of Livermore to use soft chemicals, approved by California Certified Organic Farmers, on the property lines.

Installation of a bird box was another practice successfully adopted. It was occupied almost immediately by an owl that had nine offspring, significantly reducing the gopher and squirrel population. Dr.

Taylor used to spend a couple weeks a year setting traps and bait, but now doesn’t spend more than a day doing this. Hawks inhabit a raptor house less frequently, but starlings are never in sight when a bird of prey is there.

While replanting a few acres, Dr. Taylor checked the Code workbook in considering the site’s physical characteristics. He chose closer row spacing to balance the vigor of the valley floor soils, and vertical shoot positioning and north-south row orientation for the best sun exposure and maximum fruit quality.

The Code workbook influenced the Taylors’ purchase of a tractor for cultivation. They opted for a smaller, fuel-efficient vehicle that would not cause soil compaction. Because of the tractor’s limited horsepower, however, work is carefully scheduled around soil conditions to cultivate effectively.

“Sustainable methods are smarter, and the time and money saved are great motivating factors,” says

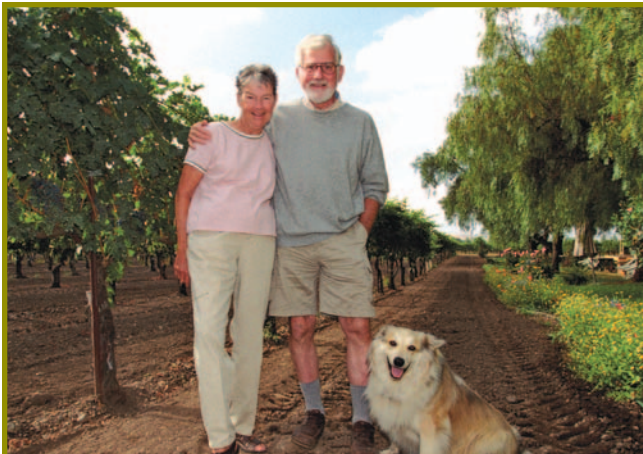
## ARCHIVED ISSUES:

Topics for “Highlight of the Month” publications are as follows and can be viewed in their entirety online at [www.wineinstitute.org/communications/highlight/cover.htm](http://www.wineinstitute.org/communications/highlight/cover.htm)

- Cover Crops
- Reduce, Reuse and Recycle
- Regulated Deficit Irrigation
- Canopy Management
- Wildlife Corridor sand Habitat
- Communicating with Neighbors and the Community
- SustainablePest Management
- Assessing and Reducing Energy Needs
- Composting
- Controlling Erosion
- Protecting Air and Water Quality
- Attracting and Retaining Good People
- Developing an Action Plan

Mrs. Taylor. “Wines made this way also have a great selling point because the public appreciates and demands these environmental-friendly products.”

Photo courtesy of Retzlaff Vineyards



Bob and Gloria Taylor clean their vineyard berms of cover crops in midspring to save water and promote balanced vine growth.



## California Wineries: Harvesting Power from the Sun

A growing number of California's wineries are using the sun as a clean, reliable, and cost-effective energy source. Over the past five years, California's energy supply has been both vulnerable and increasingly expensive. Given the wine community's commitment to sustainable practices, combined with the promise of lower energy bills and the availability of rebate and tax incentives, solar energy makes both environmental and economic sense.

*Photo courtesy of PowerLight Corporation*



Fixed panels are mounted a few inches above the roof of Rodney Strong Vineyards' barrelhouse, ensuring that the system does not detract from the building's architecture while extending the life of the roof by shading it from UV rays and thermal exposure.

### Rodney Strong's Solar Commitment Gains Cost Savings and Positive Relations

In the fall 2003, Rodney Strong Vineyards in Healdsburg installed a 766 kW solar array, possibly the largest in the wine industry. Located on 80,000 sq. feet of underutilized space on the roof of the winery's barrelhouse, the system's 4,032 solar electric modules generate on-site electricity to help reduce

the winery's demand for energy from the utility grid.

Rodney Strong estimates the gross cost of the system to be about \$4 million, with more than half covered by rebates and tax incentive programs, and a payback period of less than 10 years assuming modest energy price increases over time. The solar system and lighting upgrades are expected to reduce annual energy use by 45 percent and annual electricity costs by 50 percent.

According to CEO Tom Klein, "Warm, sunny climates, flat-roof winery buildings, and technology improvements make solar an ideal energy source for our industry. The winery also has received positive feedback from neighbors, employees and consumers expressing appreciation for its energy choice."

Last October, Rodney Strong Vineyards received recognition for its effort in using on-site renewable energy. The U.S. Environmental Protection Agency gave the winery a Green Power Leadership Award.

### Sierra Vista Winery Invests for the Future with Solar Energy

Located at an elevation of 2,800 feet in the Sierra Nevada foothills, Sierra Vista Winery installed a 14.4 kW system covering 1,500 square feet of roof of the winery operations buildings. Over 50 percent of the \$100,000 gross cost of the system was covered by various rebates and tax incentive programs, with an anticipated payback period of 7-10 years. The solar panels

have the added benefit of shading and protecting the roof of the building, reducing summer cooling expenditures and extending the life of the roof. Net metering enables Sierra Vista to be credited for the excess electricity produced by their solar system, effectively spinning the meter backwards. Consistent monitoring is required to identify problems that require ser-

vice or component replacements.

"As a family-owned business interested in passing the winery on to future generations, solar was an attractive investment because of the 25-30 year lifespan of solar panels. This alternative energy source is also consistent with our sustainable farming principles," says Sierra Vista owner Barbara MacCready.

### Wine Institute Members With Solar Systems

- Cooper-Garrod Estate Vineyards  
Saratoga, CA
- Domaine Carneros  
Napa, CA
- Fetzer Vineyards  
Hopland, CA
- Frog's Leap Winery  
Rutherford, CA
- Green & Red Vineyard  
St. Helena, CA
- Mount Eden Vineyards  
Saratoga, CA
- Ridge Lytton Springs  
Healdsburg, CA
- Rodney Strong Vineyards  
Healdsburg, CA
- Seavey Vineyard  
St. Helena, CA
- Sierra Vista Winery  
Placerville, CA
- V. Sattui Winery  
St. Helena, CA
- Western Wine Services  
American Canyon, CA

...and dozens of more wineries are in the process of installing solar systems. Members: please call Wine Institute if you have installed a system not listed here, 415/356-7535.

### Rebates & Incentives

California Energy Commission, Emerging Renewables Program Rebates  
[www.consumerenergycenter.org/erprebate/index.html](http://www.consumerenergycenter.org/erprebate/index.html)

Database of State Incentives for Renewable Energy  
[www.dsireusa.org](http://www.dsireusa.org)

PG&E Self Generation Incentive Program  
[www.pge.com/selfgen](http://www.pge.com/selfgen)

Southern California Edison Self Generation Incentive Program  
[www.sce.com/RebatesandSavings/SelfGenerationIncentiveProgram](http://www.sce.com/RebatesandSavings/SelfGenerationIncentiveProgram)

### Solar Electric Systems

Akeena Solar, Inc  
[www.akeena.net](http://www.akeena.net)

PowerLight Corporation  
[www.powerlight.com](http://www.powerlight.com)



# THE CODE OF SUSTAINABLE WINEGROWING PRACTICES

The Code of Sustainable Winegrowing Practices (SWP), introduced in 2002 by members of Wine Institute and the California Association of Winegrape Growers (CAWG), has earned the California wine community a reputation as the wine world's leader in the adoption of practices that are environmentally sensitive, socially responsible and economically feasible. The organizations formed the California Sustainable Winegrowing Alliance (CSWA), a 501(c)(3) non-profit organization a year later, to promote the benefits of sustainable winegrowing practices, enlist industry commitment and assist in implementation.

In just over three years, the SWP program has held over 110 self-assessment and action plan workshops in all major wine regions of the state, attended by 1060 winery and vineyard enterprises. Workshop partici-

pants evaluate their operations using a 490-page workbook of best management practices, developed by a Joint Committee of 50 members from Wine Institute, CAWG and other key stakeholders.

In October 2004, CSWA issued its first report measuring the level of sustainable practices among vintners and growers on a statewide basis. The report is the first time an entire industry sector has used a common assessment tool to document the adoption of sustainable practices among its members and reported the results publicly. The evaluation results collected from the initial round of workshops are contained in the report, and represent 40 percent of California's 260 million case production and 25 percent of its 529,000 wine acres.

The SWP program is now using the lessons learned to improve implementation, add more sus-

tainable practices content, build new and existing partnerships, and continue measuring the adoption of the practices.

**WORKSHOPS.** While the initial program goals for participation were exceeded, vineyards and wineries that have not yet participated will be targeted for self-assessment workshops. In addition, action plan workshops are now being developed to help vintners and growers increase SWP adoption and improve scores in individual chapter areas. Grants for workshops and related activities have been provided by: American Farmland Trust for integrated pest management; Natural Resources Conservation Service (NRCS) to address air and water quality; and National Fish and Wildlife to undertake ecosystem management.

**PARTNERSHIPS.** Wine Institute, CAWG and CSWA are reaching out to potential partner organizations to seek funding, share resources and knowledge, and develop incentives for SWP participants. In addition, the 2004 Sustainability Report findings will be reviewed with viticulture and enology research institutions to identify priority research gaps and encourage mission-driven research that speeds SWP adoption.

**WORKBOOK.** The development of a new chapter on air quality will be funded by the NRCS grant and involve the Joint Committee and internal and external reviewers of the SWP

workbook. The next edition of the workbook will include the air quality chapter, as well as updates. The SWP program is also planning to translate specific chapters of the workbook into Spanish to make it accessible to more vineyard and winery employees.

**REPORTING.** By publicly documenting winegrowing practices through the publication of interim and full sustainability reports, the SWP program can demonstrate progress and challenges, and serve as a model for other sectors.

Governor Arnold Schwarzenegger recently awarded CSWA the state's top environmental award, the Governor's Environmental and Economic Leadership Award for 2004. California Council for Environment and Economic Balance also named Wine Institute, CAWG and CSWA recipients of the 2005 Edmund G. "Pat" Brown Award for the program's demonstration of the ideals of environmental and economic balance. The California wine community has the opportunity to further solidify its leadership position in the competitive global market place by demonstrating continual improvement in the adoption of sustainable practices.

To learn more about the program and view an online workshop calendar visit [www.sustainablewinegrowing.org](http://www.sustainablewinegrowing.org), [www.wineinstitute.org](http://www.wineinstitute.org), or [www.cawg.org](http://www.cawg.org). Information is also available by calling the Communications Department at 415/356-7535.

*Photo courtesy of Sierra Vista Winery*



Like many California wineries, Sierra Vista Winery in Placerville decided to use solar energy because it matched the winery's goals for sustainable winegrowing.

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