



Lake County Winegrape Growers

Sustainable Winegrowing Newsletter

Sustainable Winegrowing- The Big Picture

By Erica Lundquist, Ph. D.
LCWC Viticulturist

During day to day vineyard operations, it is often difficult to see your enterprise as part of a larger ecosystem, watershed or airshed. With the organizational and financial assistance of the California Sustainable Winegrowing Alliance (CSWA) the LCWC has been able to offer several meetings in the past year that cover "big picture" aspects of sustainability as well as give examples of techniques and resources to put this information into practice. In these and in neighborhood meetings, growers continue to use the Sustainable Winegrowing Workbooks as a way to assess sustainability improvements and as the basis for action plans to improve sustainability.

In August of 2005 Joe Browde, CSWA Program Director, helped to organize a variety of presentations on air and water quality-related topics for our field day held at the Clear Lake Grange in Finley. During two presentations, growers learned about ways to reduce fuel use, and therefore costs and potential air pollution. Gopal Shanker, President of Wine Business Strategies, spoke on solar power for vineyards and Bill Green from the Center for Irrigation Technology at California State University Fresno gave a demonstration of pump efficiency testing and opportunities for cost sharing. Growers also learned about the use of natural enemies for mite control from Kim Gallagher of Sterling Insectary and heard an update on the Irrigated Lands Conditional Waiver from Chuck March, Lake County Farm Bureau Executive Director.

Dr. Ann Thrupp, Acting Director of the CSWA, brought together a great program looking at vineyards as part of the ecosystem. The LCWC and CSWA co-sponsored this meeting held in December at the Clear



Growers learn about pump efficiency testing.

Lake Grange in Finley. Carol Mandel from the Natural Resource Conservation Service (NRCS) talked about watershed management, UC Berkeley Faculty member Adina Merenlender talked about wildlife habitat in and around vineyards, and Michael Costello from Cal Poly San Luis Obispo discussed an ecosystem approach to pest management. Updates on related government programs were given by local NRCS conservationist, Korrin Smith, and Central Valley Regional Water Quality Control Board Irrigated Lands Program Director, Bill Croyle.

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In March 2006 two water quality field meetings were held highlighting soil conservation at Greg Graham's Red Hills vineyard and stream bank management at Mike Thompson's Big Valley vineyard. Carson Cox and Joe Browde of the CSWA helped pull together the programs for these meetings, and remarkably, they were scheduled for the one sunny day in March. Other topics at these meetings included cover cropping by UCCE Lake and Mendocino Counties Viticulture Advisor, Glenn McGourty, NRCS technical resources and funding opportunities by Korrin Smith, Lake County NRCS Soil Conservationist, and a permit coordination process being developed by the local Resource Conservation Districts by Linda Juntunen.

The Sustainable Winegrowing Workbooks continue to provide an important framework for assessing sustainability and planning improvements. The

Ecosystem Management meeting as well as neighborhood meetings hosted by Walt and Madelene Lyon, Nick Buttita, and Dana O'Gorman, offered opportunities for growers to reassess the sustainability of their vineyard operations. The CSWA will continue to assist with reports for participating growers on their scores relative to county and state scores. The CSWA also plans to provide on-line vineyard assessment. All of these resources provide information for growers to develop plans to put the big picture of sustainability into action.

Please contact me, Erica Lundquist, LCWC Viticulturist, at (707) 245-8384 or erical@lakecountywinegrape.org if you have questions about the program or would like to host a neighborhood workbook meeting.

FREE AGAIN!

Get your Vine Mealybug traps and Pheromone now

By Chuck Morse, Deputy Agricultural Commissioner

The Lake County Department of Agriculture is once again encouraging growers to obtain Vine Mealybug (VMB) traps from them by the end of June. The VMB is a pest that has dire consequences if it is allowed to become established in a vineyard. We hope that even more growers will participate in the program this year. Early detection is critical to giving the vineyard owner/operator a chance at control measures and possible eradication. The Lake County Department of Agriculture will continue to deploy and service over 100 traps countywide in all of the major growing regions. We will have all of our traps out by the end of June. The trapping season runs from July to first rains *and* significant cool-down in early winter. A very important part of the overall detection effort are the traps that growers deploy and then return to the Ag. Dept. for reading. Working together, we can effectively double the trapping data for the county and you, as growers, will know what is (or hopefully is not!) in your vineyard. The knowledge gained either way is very important. We will coordinate with growers to assure that the same vineyard is not trapped with a grower trap (or traps) as well as a county program trap (or traps).

Please stop by the Department of Agriculture, 883 Lakeport Blvd. in Lakeport, to pick-up your VMB traps and pheromone completely free of charge. These traps have been purchased by CDFA and distributed to the counties specifically for this purpose. We have literature on how to assemble the trap and we will answer any questions you might have. Come in when you get the chance, M-F, 8AM to 5PM (our front counter is closed from 12 to 1 for lunch). We hope you will take advantage of this free program to monitor for a significant vineyard pest that is a real threat to any vineyard in Lake County.

For questions or more information, please call Chuck Morse at the Lake County Department of Agriculture – 263-0217.

Grower Profile-

Dave and Monica Rosenthal



Growing winegrapes in Lake County is a family business for the Rosenthals. It started in 1972 when Dave Rosenthal's parents, Pat and Janet Rosenthal, purchased Hoodoo Creek Ranch in Middletown. At the time, the ranch had 22 acres of abandoned vineyard that Dave, his brother Roger, and his parents brought back to life as weekend farmers. Currently Pat and Janet Rosenthal have 19 acres of vineyard, Dave and Monica have 19 acres of vineyard, and their children, Russell and Rebecca, are the third generation to help in the family vineyards.

Dave and Monica Rosenthal have helped to build the success of Lake County as a winegrape region. Dave served eight and Monica two years on the Board of Directors of the Lake County Winegrape Commission. As board members they were able not only to represent small growers, but also to bring a wider knowledge of the winegrape industry from their experience at Buena Vista Winery and from Dave's experience with the wine bulk market and major brokerage firms. They were recognized for their many contributions to the success of Lake County winegrape growing in 2003 when they were elected Growers of the Year.

Looking back on the family's start in winegrape growing, Dave remembers "We knew nothing about growing grapes and learned with help from Lake County growers like Myron Holdenreid and from University of California publications." Dave's high school experience as

a weekend grape grower inspired his next step in life. He attended U.C. Davis to study viticulture and wine making. Since the University did not offer a double major he settled for a degree in Fermentation Science. Graduating in 1979, he began working at Konocti Winery in 1980, again leaving time for weekend farming.

In 1985 Dave went to work as Enologist for Buena Vista Winery, where he was promoted to Assistant Winemaker and then to Winemaker. Recognizing Lake County's potential to produce excellent Sauvignon blanc, Dave helped to establish Buena Vista's Lake County Sauvignon blanc program. At Buena Vista Dave met Monica, who was working there in public relations and marketing. They were married in 1989, and in 1995 moved back to Lake County when Dave went to work as Winemaker for Redwood Valley Cellars. There he is Winemaker for Girasole, Barra of Mendocino, and Braren Pauli labels as well as a large custom crush operation. Monica's interest in grape growing was the impetus for Dave and Monica to plant their first vineyard in 1997.

The Rosenthal family vineyards are distinguished for their high level of hands on farming and technical expertise. The elder Rosenthals continue to work in their vineyards daily, as does Monica when she is not involved with children's or community activities. Dave attends most of the wine industry and academic meetings to keep up to date in both viticulture and winemaking. They put this expertise into practice with innovations such as a Smart-Dyson trellis to balance their Cabernet Sauvignon vines, which has won them high acclaim from the wineries that purchase their grapes. The Rosenthals maintain a diverse operation with five varieties; Sauvignon blanc, Zinfandel, Cabernet Sauvignon, Cabernet Franc, and Viognier. They even have three acres of the original vineyard, head trained Zinfandel planted in 1937, that currently goes into a Robert Mondavi vineyard designate program.

Asked what makes Lake County special as a winegrowing region, Dave mentions that the climate and dry mountain air allow production of excellent winegrapes while at the same time reducing pest pressure. Monica emphasizes that Lake County is unique. "We don't have to be Napa or even North Coast. We have a lot going for us, including a wonderful quality of life."

Powdery Mildew Control in Organic Vineyards

**By Patrick Rodgers
Rodgers Agricultural Consulting**

The continual battle against powdery mildew is the curse of every grape grower's existence. In some years weather cooperates more than others for its control, but no year is free of its challenge. Conventional growers have an expanding array of treatments for prevention and control and even clean up duty if something gets out of hand. Organic growers, however, have a much more limited arsenal and therefore must be very proactive and cognizant of timing issues. This article will try to explain the strategies, timing and materials for successful powdery mildew control in organic vineyards.

All powdery mildew programs should begin early, when a grower has two to four open leaves per shoot. For the organic grower, this is critical. You need to make sure that green plant tissue is always prophylactically protected from mildew spores. Once you begin your first spray (more about this later) you must adhere to the intervals stated on the material's label, usually opting for the shorter interval (i.e. 10 days instead of 14). The reason for this strict adherence is that a grapevine can grow a tremendous amount in a week, and all that new tissue needs to be covered by plant protectant material. I feel strongly that these short spray intervals should be adhered to at least until bloom. After bloom and fruit set a grower can begin to rely more on tracking weather conditions and their effect on powdery mildew growth. If temperatures are high (above 85° F) and humidity is low, it is possible to extend your spray intervals to the longer limit. A great tool to track the weather and mildew pressure is the Gubler Thomas Powdery Mildew Model which is available from many weather and disease monitoring services. The bottom line though, is to have all parts of your vine protected from bud break to veraison and to remember that even with disease modeling, the interior of your vine can have a much different environment and be much more hospitable to mildew than the outside temperature may suggest.

As mentioned earlier, your first applications should be sprays. Applications of micronized sulfur materials have several benefits. They tend to be

more adherent to plant tissue because of smaller particle size, they are effective at lower temperatures, and their application intervals tend to be longer, all good attributes in a North Coast Spring. I've also found it helpful to add micronized copper to the mix as long as the springtime weather is wet and cool as it can help not only with mildew but also with botrytis and phomopsis prevention. For the organic grower, these materials are readily available with OMRI approved labels. A very important point to remember with all sprays is that complete coverage is essential. A grower could start with as little as 50 gallons per acre early in the season, but should steadily increase the gallonage as the vine produces more foliage, eventually reaching 150-200 gallons per acre for adequate coverage before veraison depending on the spray material used, and the vigor of the canopy.

As the spring weather warms and dries, and especially post-bloom, growers can move on to other materials. Sulfur dust is inexpensive, covers well and is an effective preventative as long as your vineyard is free of mildew infection. Again, application intervals should be minimized and temperatures should be observed as sulfur dust has the ability to burn leaves and fruit at temperatures over 95°. The downside of sulfur dust that I've observed as an organic grower is its tendency to encourage mite outbreaks. Many times sulfur dust applications coincide with warm weather and dust from cultivation, resulting in a decrease in vigor of leaf tissue and providing ideal conditions for mite populations to increase rapidly. As an organic grower, there are few things harder to control than a mite flare up. A good alternative to sulfur dust is mineral oil, which has the added benefit of being a mite suppressant. Mineral oil is easy to apply, covers well, and is attractive from a worker comfort standpoint (no burning eyes or skin). Be sure to increase your spray gallonage appropriate to your canopy as all parts of the foliage and fruit need to be well covered. Two cautions with oil: First, it can be phytotoxic in combination with sulfur, so be sure

intervals between these materials as stated on their labels are adhered to. Second, mineral oil can cause the skins of red grape varieties to become significantly darker. This in no way affects wine quality, but it occasionally needs to be explained to grower reps and winemakers.

In case the worst happens despite your best efforts as an organic grower to prevent mildew, there are products that can eradicate infections. These are products with potassium bicarbonate as their active ingredient. As with other materials, they must be applied at high gallonages with a sprayer or hand gun and be directed at the infection site. Usually by this point the goal is saving the fruit, so coverage of all parts of the cluster is absolutely necessary to kill all sources of current mildew infection. Growers need to be aware that even though these potassium bicarbonate materials are OMRI registered, there are some countries that prohibit their use, so check with your winery concerning export restrictions.

As organic growers, we're always attempting to minimize our need for pesticide applications by finding a better natural balance in our vineyards. Some viticultural practices that help to minimize mildew infections and make needed pesticide applications more effective are shoot thinning, shoot positioning if you have a trellis system designed for

it, and especially leaf removal. On the north or east side of vine rows where sun burn is not likely, removing three to five basal leaves per shoot at fruit set and exposing the newly formed bunches permits sunlight and airflow, powdery mildew's natural enemies. Remember that monitoring your vineyard on at least a weekly basis by looking inside the canopy, knowing the symptoms at all growth stages of powdery mildew (excellent illustrations are available in the U.C. Cooperative Extension's Grape Grower's Manual) and identifying your infection hotspots (every vineyard has one) will not only help you control powdery mildew, but keep you in touch with other disease, insect or nutritional problems that may come up.

Good luck, stay vigilant, and be very proactive.

Patrick Rodgers has over 30 years experience farming using both organic and conventional methods, which includes 20 years managing premium vineyards. He specializes in quality winegrape production, olives, organic agriculture, farmworker training, and sustainable farm management. He lives in Ukiah and can be reached at 707-468-8294 or cell 707-621-4800.

2005 Lake County Extended Ripening Trial Hang Time During a Cool Year

By Erica Lundquist, Ph. D.
LCWC Viticulturist

In 2005 the California Association of Winegrape Growers provided funding for extended ripening trials around the state. The LCWC was fortunate to receive funding for a trial, and Beckstoffer Red Hills Vineyard Company provided the trial site and assistance with data collection and laboratory analyses. A brief summary of the results is given here, and a detailed summary is posted in the Lake County Winegrowing section of the LCWC website.

The trial to compare the effects of harvest date on yield and juice components was carried out on Cabernet Sauvignon because it is the most commonly planted red winegrape variety in Lake County. The season was unusually cool. Degree day accumulation

at the site (base 50°F between April 1 and October 31) was 550 degrees lower than for the average of the previous three years. Harvest of the block used in the study was four weeks later in 2005 than in 2004.

Site Description

Plant material: Cabernet Sauvignon clone FPS
04 on Kober 5BB rootstock, planted 2000
Trellis, spacing: VSP, 7' X 8'
Soil: Glenview-Arrowhead complex, very
gravelly, well-drained, formed on
weathered obsidian
Elevation: 2000'
Slope, aspect: 20% percent slope with a NE
aspect, rows run N-S



Figure 1. View of the experimental site, August 15, 2005.

The replicated field trial was sampled on five dates starting September 30, 2005 at approximately 23 °Brix and ending November 9, 2005 at approximately 26 °Brix. During that time the yield, cluster weights and berry weights did not change significantly (Figure 2, Table 1), however other juice components did change significantly. Titratable acidity and malic acid declined over this time period, while pH rose. The potassium concentration declined from the first to fourth sample date and rose on the 5th date.

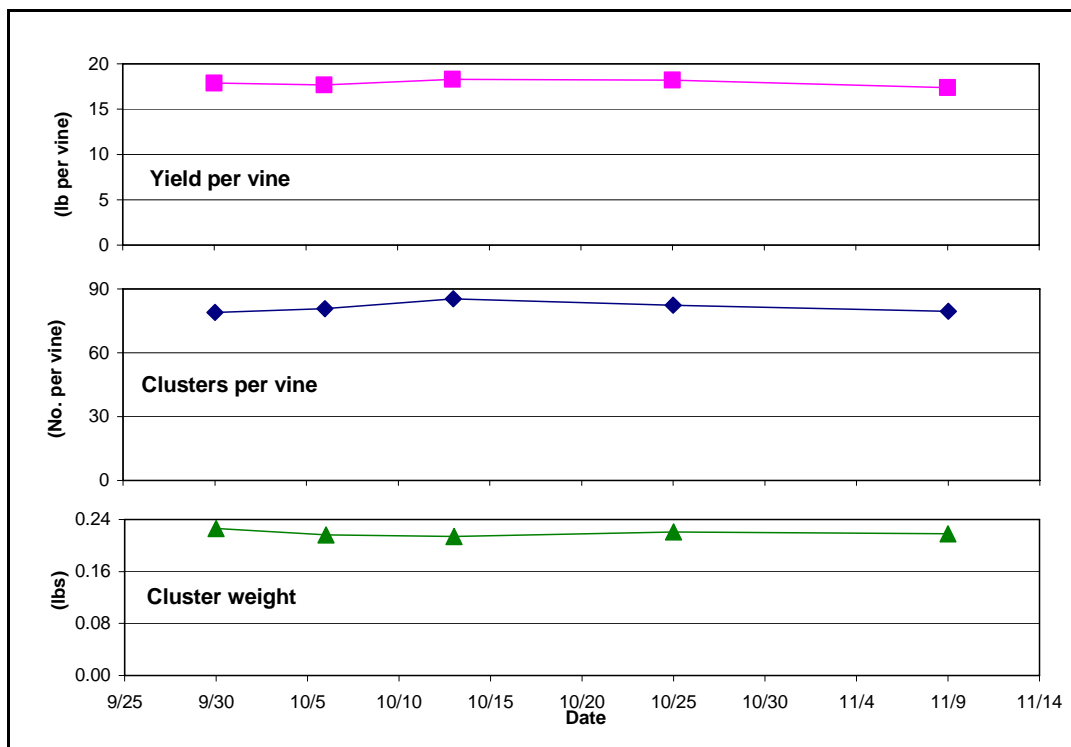


Figure 2. Components of yield during the ripening period.

Table 1. Juice components and berry weights for the Lake County 2005 Cabernet Sauvignon Extended Ripening Trial.

Sample Date	Soluble Solids (°Brix)	pH	T.A. (g/L)	Potassium (mg/L)	L-malic acid (g/L)	Berry weights (g/100 berries)
9/30/2005	23.3	3.23	9.22	2366	3.57	109
10/6/2005	24.0	3.25	8.72	2192	2.81	110
10/13/2005	24.4	3.30	8.19	2234	2.93	107
10/25/2005	25.8	3.37	6.65	1826	2.58	110
11/9/2005	25.7	3.39	6.05	2490	2.60	110
RCB Anova	***	***	***	***	*	NS
LSD 0.05	0.9	0.05	0.54	166	0.60	

*, **, *** Indicate significance at P<0.05, 0.01 and 0.005, respectively.

Calendar of Local Events

June 9, 2006 Mite Pest Management & Powdery Mildew Monitoring Workshop 9 a.m.-12 p.m., Clear Lake Grange, 1510 Big Valley Rd., Finley. Lucia Varela, UCCE North Coast Area IPM Advisor, will lead a workshop on how to identify and monitor for major spider mite pests. Glenn McGourty, UCCE Lake and Mendocino Counties Viticulture Advisor, will demonstrate monitoring for powdery mildew. Sponsored by: U.C. Cooperative Extension, the Lake County Winegrape Commission, and the California Sustainable Winegrowing Alliance. The meeting is free of charge. CE hours applied for. To sign up call Glenn McGourty (707) 463-4495

July 19, 2006 Sustainable Winegrowing Workbook and Armillaria, Oak Root Fungus, Field Day 9:00 a.m.-12:30 p.m. Snows Lake Vineyard, Lower Lake. This meeting will start with the Sustainable Winegrowing Workbook Pest Management Chapter, which will be a repeat assessment for many growers, followed by the new Air Quality Management Chapter. This chapter will help you to understand many of the new air quality issues facing growers around the state. USDA Plant Pathologist Dr. Kendra Baumgartner will give an overview of Armillaria biology and will discuss the latest information on Armillaria control. Bob Johnson and Terese Geniella from Snows Lake will demonstrate how they use root collar excavation for Armillaria control. The meeting is free of charge. A brown bag lunch will be served. CE hours applied for. Contact: Erica Lundquist, (707) 245-8384, or erical@lakecountywinegrape.org.

November 16, 2006 Mendocino College Pest Management Day Seventh Day Adventist Church, Lakeport. This meeting brings the latest pest management information and experts from around the state. The major focus of the day is winegrape pest management. The meeting is co-sponsored by Mendocino College, the LCWC and UCCE. Enroll in the class through Mendocino College. Lunch is provided. Contact Jim Xerogeanes, Mendocino College Agriculture Instructor, (707) 468-3218 for information.



Lake County Winegrape Commission
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