



LODI WINEGRAPE COMMISSION
RESEARCH • IPM *news*

OCTOBER 2009

Cliff Ohmart LEAVES LODI'S SUSTAINABLE WINEGROWING PROGRAM ON SOLID FOOTING FOR THE FUTURE

After 14 years directing LWC's nationally recognized Sustainable Winegrowing Program I recently decided to accept a job offer from SureHarvest, Inc. of Soquel, California. I will be Vice President of Professional Services. SureHarvest provides a complete set of solutions for growers, grower groups, and agrifood companies interested in developing sustainable programs.

Given what we have accomplished over my tenure at LWC, it is worth briefly reviewing the past and then contemplating what the future might offer. I would like to start by thanking the Lodi growers and LWC staff for the amazing teamwork we were able to share over the last 14 years. The growers of Lodi have long been known for their vision, leadership, and willingness to share information to improve winegrape and wine quality and move along the sustainable farming continuum. I was able to tap into this in every program that I initiated in Lodi. It started my first day on the job in 1996 when we initiated the Biologically Integrated Farming Systems (BIFS) program funded by a grant from UC Davis. I will never forget my astonishment at the energy and willingness of the Lodi growers to participate in good projects. When the call went out for volunteers to join the BIFS program I had 30 names by the end of the first couple of days. While other UC Davis-sponsored BIFS programs in other crops struggled to get 8 to 10 grower participants we ended up with 45! In the end the BIFS program lasted for ten years and all of us involved learned a tremendous amount.

In 1999 we embarked on the Lodi Winegrower's Workbook program. Over a 12 month period a committee of very dedicated Lodi growers, PCAs, UC scientists and Farm Advisors created the workbook. After it was published in late 1999 we spent the next two years doing 40 workbook workshops with almost 300 Lodi growers where they assessed their level of sustainable winegrowing and creating action plans to improve. We had workshops in growers' kitchens, conference rooms and even one in a pizza parlor in Lockeford. Word of the quality of the workbook and its success in helping winegrape growers spread began to spread outside Lodi. It ended up serving as the foundation for the Code of Sustainable Winegrowing Practices Workbook for California's wine industry and was the model for workbooks developed in New York and Michigan. There is soon to be one in Missouri as well. In 2008 we published the second edition of the Lodi Winegrower's Workbook



which some Lodi growers have already received at workbook workshops and the rest of you will receive as workshops are held this coming winter and spring with the new Sustainable Winegrowing Director.

In 2003 we took another bold step by creating the Lodi Rules for Sustainable Winegrowing program, California's first third party certified sustainable winegrowing program. It was accredited and endorsed by Protected Harvest in early 2005 and launched in that year. It now boasts over 15,000 certified acres, seven wineries displaying the Lodi Rules logo on about 30 wines, and one winery (Michael-David Vineyards) paying growers a 10% bonus for certified grapes. Once

again Lodi's leadership has inspired others to follow as a sustainable certification program was launched by the Central Coast Vineyard Team in 2008 and the California Sustainable Winegrowing Alliance will be launching one in 2010.

The Lodi winegrowers have a lot of which to be proud. We have accomplished an amazing amount of things since I joined the LWC staff and it has been a privilege for me to be a part of it. However, one of the great things about Lodi growers is they are never content to sit on their laurels. I remember very clearly in 2000 at an event at Wine & Roses where we officially launched the workbook a Lodi grower, in typical fashion, came up to me holding a copy of the workbook and said to me "What are we going to do next?" I have complete confidence that LWC's Sustainable Winegrowing Program will maintain its leadership and continue to evolve and mature. Sustainability is here to stay and it is important that LWC's program keeps up to date on issues like greenhouse gas emissions, air quality, human resources, and water and energy use. Growing quality winegrapes is very challenging and it will very likely get even more challenging with time. The vision, leadership, and energy of Lodi winegrowers and LWC staff will ensure these challenges will be met.

I will be working with LWC a couple of days a month over the next few months to help with the transition to a new Sustainable Winegrowing Director so hopefully I will see some of you during that time. I wish you all well with the remainder of the 2009 harvest and feel the future is very bright for Lodi Wine Country. As Mark Chandler said to me as I was leaving his office after telling him I had accepted a new job, "It has been a great ride!"



IN THE VINEYARD

BY PAUL S. VERDEGAAL

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Cooperative Extension Farm Advisor

The 2009 growing season has been more than the usual challenge. Seasonal temperatures were average to somewhat mild, but soil conditions posed unusual difficulties on vines after three dry years. The early May rain of more than an inch helped reduce stress on vines and might have been part of the reason mite problems appeared relatively late and not as severe as might be expected. However, there is a significant amount of summer (sour) bunch rot this season, especially in tight clustered and thin skinned varieties such as Zinfandel.

The overall crop looks to be harvesting above average in yield for many early varieties in many sites, which is more than was expected by some, including myself. Average, but variable temperatures brought harvest just a little on the later side of the long term average with picking that started around August 7 for Chardonnay and Pinot noir going to sparking wine production. White Zinfandel harvest began in earnest around August 19th, compared to a long term average of about August 10th.

Some mid-season varieties have sped up in development and Sangiovese, Syrah, and red Zinfandel were ready before the recent rain of September 13/14th! As harvest continues, the weather remains variable in temperature and so far grape picking proceeds at an uneven pace. Colors and flavors seem to be developing well, with good acid levels. As of the first week of September we had 11 days above 100°F compared to 13 days last year and an average of about 12 for a season.

The 2009 season was not as dry (15.1 inches) as 2008 (13.6) and 2007 (12.1), but accumulated stress was very evident in farm calls this year. There was also above average windy days this year. The three year drought has manifested itself in various symptoms. Many vines showed yellow basal leaves and less growth, while at the same time some areas of the same vineyard or even individual vines showed good new growth in response to irrigation. And there are some vines with berry shrivel or parts of clusters raisining that do not seem to be attributable to disease, nutrient deficiency or excessive exposure; somewhat similar to the dry conditions seen in of 2003 and 2004.

The dry year has required more irrigation and attention to timing, especially under a regulated deficit irrigation strategy. In years with variable weather patterns, extreme heat and/or dry soils, summer bunch rot can

occur even without insect damage or late summer/early fall rains. In 2009 that appears to be the possibility, with more than the usual amount of summer bunch rot. I am not sure, but the early May rain as beneficial as it was for reducing vine stress and delaying spider mite population increase may have improved flower set, induced larger berry growth and resulted in tighter clusters. The overall dry conditions required more irrigation than usual. Trying to avoid severe water deficits can then be very difficult, if not impossible to avoid rapid berry growth, thin skins and splitting. The result is damaged fruit (leakers) and summer bunch rot. If very severe water deficits occur, it may be possible to avoid some summer bunch rot on Zinfandel, but soil type, weather variation, insect damage, bird damage, crop load and nutrient status may still encourage some sour rot problems, especially in Zinfandel and Petite Sirah. Unfortunately, not a lot can be done to prevent summer bunch rot other than managing irrigation on a fine line between providing enough water to keep the vines from being excessively stressed and too much water that might cause tight clusters and thin berry skins. The bottom line is moderate vine stress through adequate and well timed irrigation. That may be a topic of discussion before next season.

Even though the extremely hot temperature may have slowed the vines down, low relative humidity (at least until last week) and lighter crop loads kept harvest early and will finish it off fast.

There have been a few other common problems; among them berry shrivel, vine dieback or complete collapse, potassium deficiencies, poor shoot growth, leaf scorching and actual salinity accumulation. A mix of diseases, disorders and deficiencies can be a major factor, but the third year of drought has exacerbated each one or often combinations of the various problems this year. Not much can be done at this point and a long discussion would be needed to cover all of the above. An average or above average winter rainfall can make a lot of the issues go away on their own, as they seemingly did after above average rains in 2005-06. I will try to discuss more of these concerns and strategies over the winter in preparation for next year, come "rain or shine".

Insect pests and spider mite pressure appears to be average or light, but there have been a few scattered problems especially with late season leafhoppers. There was some powdery mildew before the hot weather, but that is well suppressed now. Vine Mealybug (VMB) is still spreading throughout the county. It's important to be on the lookout

and aware of any new infestations, often indicated by shiny vines that seem to be covered in "dew" during the middle of the day, with sooty mold or excessive honeydew in clusters, spurs or cordons, or little "cotton balls on leaves and clusters. A high degree of ant activity in and around vines can also indicate problem spots. It appears the most rapid and effective spread is occurring where birds tend to roost and drop into the vineyard (usually within 75 to 100 feet of trees or wires). There are several materials to help control VMB, but it has to be controlled quickly and aggressive. Over time we may live with it, but it will cost most growers \$100 to 150 per acre per year from now on (my estimate). VMB is spreading rapidly so it will be coming to more vineyards. If you do find it this year, jump on it after harvest. But talk to your winery or grape buyer as there are still restrictions on some of the best materials. The UC IPM guidelines need to be updated for VMB; if you have questions talk to your PCA or give me a call.

If not for the general economy being on life support, things would be significantly better in the wine grape industry, as consumer demand is still up about 0.9% and the crop is not excessively large. For many varieties such as Pinot grigio, Petite Sirah, Sauvignon blanc, Cabernet Sauvignon, even Chardonnay and the newcomer Pinot noir; demand is good. However, caution is affecting grape prices. The crop across varieties and sites appear to be about harvesting about 10 to 15% above average on a per acre basis, especially where frost hit in 2008 and many vines took the year off.

More small wineries (about 80 in the Lodi AVA), more Lodi labels and more competition medals continue to help everyone get some recognition for all the hard work and risk of wine growing in the District. For San Joaquin County as a whole and the Lodi District in particular recognition continues to increase in spite of challenges. The good news is, quality looks to be very good for 2009 overall and winegrowing is still considered in a positive light by the general public, receiving some credit for efforts to deal with more regulations, higher costs and lower prices while contributing to the economy and the communities.

And finally, a note of thanks to Dr. Cliff Ohmart, who is taking a new position with SureHarvest. Cliff has been instrumental in developing the IPM program, Research funding and establishment of Lodi Rules. His efforts have made LWC and Lodi a gold standard that other wine regions throughout the U.S. and even the world are trying to emulate. Thank you Cliff and best wishes.

Good luck to everyone as 2009 finishes up.



FALL CHECKLIST:

- If the weather stays dry, post harvest irrigation to help maintain soil moisture is more than okay until rains are steady.
 - Nitrogen can be applied to early harvested varieties and potassium now (or early next year) is good. It won't "move" like nitrogen. To get full benefit of compost, it needs to be disked in.
 - Make a note of any problem weed species that may be increasing.
 - Mark any vines with excessive red leaves and/or leaf roll for monitoring of fruit quality next year or for possible removal before then.
 - Renew your Ag Waiver Discharge membership.
 - Update your air pollution mitigation plan if you have 100 acres or more in a single vineyard.
 - Also, review your pesticide use reports and get everything up to date
- as there is continued interest to keep agriculture "accountable" for problems real and perceived.
 - For VMB, Lorsban (chlorpyrifos) or Movento (spirotetramat) post harvest can help keep it checked until the summer control program. The new material Movento has performed well in research trials as a post harvest alternative and has just been approved by the EU. Be careful of sprays before a storm, especially near natural drains and waterways.
 - Gophers, voles and squirrel activity are still common and may deserve attention with baits, gas cartridges, fumigant pellets (usually better in spring), trapping, shooting, or a combination of several of the methods. Remember ground squirrels are fair game, tree squirrels require a depredation permit. Owl boxes can help stabilize rodent populations, but do not control them.

Barn Owls REVISITED AND A NEW NEST BOX DESIGN

BY CLIFF OHMART Sustainable Winegrowing Director, Lodi Winegrape Commission

Recently I had the opportunity to meet a fellow from Pennsylvania who was visiting California to speak about barn owls at the California State Fair. His name is Mark Browning and he has developed a plastic nest box for barn owls that I thought Lodi winegrape growers would be interested in knowing about. It also seemed like it would be a good opportunity to revisit the biology of the barn owl and remind people how important these birds of prey can be for the farm.



adult barn owl will kill and eat the equivalent of a large rat, a gopher or as many as a dozen mice per night. Their diet depends on availability of prey. In one Central Valley study it was found they consumed voles, deer mice and house mice in the winter and switched to pocket gophers during the spring and summer. In the same study, based on examination of owl pellets, a nest of owls ate an average 22 gophers per month for the entire year.

First I will discuss Mark's owl box design which evolved as he studied barn owl biology for the last seven years. The box is made of plastic, making it light weight, easy to mount, and it will last indefinitely. It has a 5 1/2" entrance hole, a rain guard, landing perch, and a small acrylic window, protected by a flap, at the back allowing for easy viewing of what is happening inside the box. The box is white and has two vents in the roof to minimize heat buildup. The front of the box is in two pieces and is attached by six easy to remove thumb screws making the inside of the box accessible for cleaning. Furthermore, there is a plastic liner inside the box that is readily removed for dumping out the old nest materials making the cleaning process very easy. Normally I do not feature a commercial product in our newsletter. However, I made an exception in this case because of the importance of barn owls on Lodi farms and because of the uniqueness and utility of the next box design. As of the writing of this article San Joaquin Sulfur was in negotiations with Mark to sell the boxes out of their store in Lodi.

Now let's review some information about barn owls. They are found in temperate woodland-grassland habitat all over the world. They make a loud rasping screech rather than the hoot most people associate with owls and hunt almost exclusively at night, spending more time on the wing than most owls. They locate their prey mainly through sound, which is funneled to their ears by the heart-shaped facial disk of feathers. Their hearing is so acute they can hear the patter of a running rodent's feet on hard-packed soil and can tell the difference between species of prey by the different sounds they make.

Barn owls eat twice as much food for their body weight than do other owls making them ideal birds to have around the farm. An

Barn owls have a high mortality rate in the first year of life and a short life span. As a result they have evolved a tremendous reproductive capacity and can quickly colonize an area if suitable habitat and prey are available. This is one reason why the occupancy rate of owl boxes in Lodi is so high. Also, they are not territorial so there is no set formula for the number of boxes that should be in a particular area. Barn owls begin nesting in January so it is good to have boxes up by late fall if possible. Egg laying for the first brood occurs between February and April. Second broods are fairly rare but eggs can sometimes be found at almost any time of year. The female incubates the eggs for about 30 days. During the incubation period females can abandon a nest if disturbed so it is important not to disturb the next during this period. Young leave the nest about 2 months after hatching.

A great source of more information on barn owls, as well as for songbirds and bats, is a 2009 publication 'Songbird, Bat and Owl Boxes: Vineyard management with an eye toward wildlife' from the University of California Agriculture and Natural Resources Division, Publication No. 21636. You can also visit Mark Browning's website www.barnowlbox.com.

DONATE YOUR OWL PELLETS FOR A GOOD CAUSE!

The Vinewood Elementary School GATE program is very interested in barn owls. They are asking Lodi growers interested in helping their program to collect owl pellets from below their owl boxes and provide for their education program. Please call Bob Wyrick at 209 334 2564 or email: 3dialog@att.net if you can help.





**PARTICIPATE IN A POWDERY MILDEW
MANAGEMENT SURVEY**

Researchers in the Department of Plant Pathology at UC Davis are conducting a short survey to assess practices and perceptions relating to the use of biological fungicides for control of grape powdery mildew among California growers and vineyard managers. The survey is voluntary and no personally-identifiable information will be published or disseminated. Participants may also choose whether or not to be entered into a drawing for gift cards valued at \$100-\$300. To participate in the survey, please visit the following link: http://www.survey-monkey.com/s.aspx?sm=XKyPqKWew0eB7UHEWY5dPQ_3d_3d

More information is available by contacting Chris Janousek at cnjanousek@ucdavis.edu or (530) 752-4982.

CALENDAR OF EVENTS:

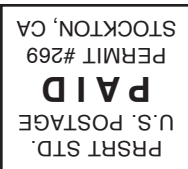
October 21, 2009, 8am – 4:30pm: Groundwater Law and Hydrology. Kevin O'Brien, Instructor. Da Vinci Bldg. 1632 Da Vinci Ct., Davis, CA. \$290.00.

October 24, 2009, 9am – 4pm: Establishing a Small Vineyard. Donna Hirschfelt & Rhonda Smith, Instructors. Room 198, Young Hall, East Quad UC Davis. \$175, includes box lunch and course material.

October 29, 2009, 8:30am – 5pm: Vineyard Health and Safety: An Overview. Robin Nicola, Instructor. UC Cooperative Extension 1710 Soscol Ave. Suite 4, Napa, CA. \$285.00 includes instructional materials and morning refreshments.

November 19, 2009, 9am – 4pm: Current Issues in Vineyard Health. Dr. Deborah Golino, Instructor. \$190 includes course materials and lunch.

To enroll or find out more information about the above classes call (800) 752-0881 or visit <http://extension.ucdavis.edu>.



RETURN SERVICE REQUESTED

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