



RESEARCH • IPM NEWSLETTER



Six Lodi Winegrowers ARE THE FIRST TO CERTIFY VINEYARDS UNDER THE New Lodi Rules Program

At a Press Event at Wine & Roses Garden Ballroom on January 17, 2006 six Lodi winegrowing operations received the first certificates for certifying vineyards under the new Lodi Rules for Sustainable Winegrowing program. They were:

Robert Pirie, Brian Anderson,
and Jeff Brandstadt
COLLIGERE FARM MANAGEMENT

Keith Watts
K AND S WATTS VINEYARDS

Joe Dexter
LOBO LOCO WINES

Jerry Fry, Bruce Fry,
and Brad Kissler
MOHR-FRY RANCHES

Robert Abercrombie
SUTTER HOME

John Ledbetter, Kim Ledbetter-
Bronson, and Cindy Johnson
VINO FARMS

What are **The Lodi Rules for Sustainable Winegrowing**? They are California's first sustainable winegrowing standards that have been peer reviewed by scientists, academics and environmentalists and being implemented on a region-wide basis. **The Lodi Rules** are based on the *Lodi Winegrower's Workbook* and are designed to lead to measurable improvements in environmental health of the surrounding ecosystem, society-at-large, and wine quality. Participating growers can get their vineyards certified as producing sustainably-grown winegrapes.

The Lodi Rules Program is third party certified which means the standards have been reviewed and endorsed by an organization not connected to the Lodi-Woodbridge Winegrape Commission. Vineyards in **The Lodi Rules** program will be certified by Protected Harvest, an environmental non-profit organization that endorses farmers' use of stringent

environmental farming standards. Protected Harvest has received the highest rating by Consumers Union as an eco-label with meaningful, verifiable, and transparent standards.

The Lodi Rules Program has two components:

www.lodiwine.com/lodirules_farming_standards1.shtml

Sustainable Winegrowing Standards – **The Lodi Rules**

Pesticide Environmental Assessment System that measures the environmental impact of all the pesticides, whether organic or synthetic, used in a vineyard during the year (PEAS).

To qualify for certification a vineyard has to achieve a minimum number of sustainable farming practices points based on **The Lodi Rules**, and not exceed a maximum number of pesticide impact points calculated using PEAS. Certification is awarded to an individual vineyard on an annual basis. Protected Harvest ensures compliance and chain of custody with **The Lodi Rules** using an auditing process.

Much for detail about **The Lodi Rules** program can be found at www.lodirules.com. This website is also accessible through the Commission's website at www.lodiwine.com. An important orientation meeting for **The Lodi Rules** program will be held on February 10th at 9:00am at the Central Valley Waste Management Services conference room at 1333 E. Turner Rd. in Lodi. At that meeting Cliff Ohmart and Chris Storm will discuss the program in detail, such as the financial benefits from certifying a vineyard, how to sign up for the program, what is required to have a vineyard certified, and other important topics. Cliff will also give a presentation about **The Lodi Rules** program at Lodi Grape Day on February 7th.

Important Pesticide Use Enforcement

- UPDATE -

BY SCOTT HUDSON

Agriculture Commissioner, San Joaquin County

There were a couple of very substantial changes in our pesticide use enforcement program that took place this year. These changes, the most significant in years, aim to increase enforcement for pesticides misuses. The first change is in how we respond to pesticide use violations. The second, is a new law requiring reimbursement of all uncompensated medical costs for certain pesticide injuries that were caused by pesticide use violations. The law also increases penalties for these types of violations.

Enforcement Response Policy

A new statewide pesticide enforcement response policy is expected to increase the number of penalties that are assessed for pesticide use violations. Unlike the previous policy, the new policy requires penalties for most pesticide use violations on the first incident.

In the past, agricultural commissioners were often given the latitude to give warnings for the first time growers and applicators violated pesticide laws or regulations. As long as the applicators were cooperative in correcting their mistakes and developed a plan to prevent further violations, penalties were often avoided. This is no longer the case. Most pesticide use violations now result in penalties.

Penalty amounts vary depending on the seriousness of the violation. There are three fine categories (A, B, and C) with a penalty range for each. For Category A violations, the fine range is \$700 - \$5,000. Typically, violations in this category caused actual harm to people or the environment. The fine range for Category B violations is \$400 - \$1,000. These violations did not actually cause harm but had the potential to do so. Category B violations are the most

common type of violation found and include such violations as lack of safety equipment, incomplete decontamination facilities for employees, lack of required employee training, leaky equipment, label violations, etc. Category C violations have a fine range of \$50 - \$400 and typically are the “paper work” type of violations.

The department of pesticide regulation developed the new enforcement response policy with input from the county agricultural commissioners. The goals of the new policy are to increase and standardize pesticide use enforcement in California. The goal is not to be punitive but to deter pesticide use violations and increase compliance.

There is help for growers and applicators who want to make sure they are complying with the state’s many pesticide use laws and regulations. A good place to start is the pesticide use handbook that was distributed to all San Joaquin County growers in 2003. The handbook summarizes the pesticide use laws most growers and applicators need to know. It also provides a handy compliance checklist for reference when making pesticide applications. Additionally, at the agricultural commissioner’s annual grower meetings (held in November and December), new pesticide regulations are discussed as well as a review of existing ones. Your pest control advisor (PCA) and district agricultural biologist are also excellent resources for information and questions on pesticide use laws.

Non-occupational Pesticide Injuries

If a pesticide use violation causes illness or injury, violators will be legally responsible to pay certain medical costs of victims. The new requirement was passed and

signed into law in 2004 (Senate Bill 391, Florez) but new guidelines were just developed to help guide the department of pesticide regulations and the county agricultural commissioners (CACs) in the law’s implementation. The law also increases the penalties for these types of violations.

The law was prompted by several incidents in which large numbers of persons living near agricultural fields were made ill by pesticide drift. Many were without medical insurance, and did not have the means to pay for medical treatment themselves.

Under this law, if a pesticide used in an agricultural setting was in violation of a law or regulation and the misuse caused an illness or injury to a person who was in a non-occupational setting, then the violator must reimburse any uncompensated medical costs to the injured person. Uncompensated medical costs are normally those costs not covered by insurance.

This new law applies only to “non-occupational” injuries from pesticides used in agricultural settings. Non-occupational means that the person exposed to the pesticide was not working as an employee. Examples would be fumigant drifts to nearby homes causing illness to the residents, pesticide drift on to a passing car causing illness to the occupant(s), or a pesticide spill causing illness to a non-employee by-stander.

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IN THE VINEYARD

BY PAUL S. VERDEGAAL
University of California
Cooperative Extension Farm Advisor

2005 Effects Spring Diseases
Irrigation Vine Nutrients
Frost VMB/GWSS

Another relatively wet winter appears to be on hand even with normal to slightly below normal rainfall from this point on. At the mid point of January over thirteen inches have accumulated, this is slightly less than last year, but total seasonal rainfall is usually about 17 inches. There has been some concern about the very mild December, but chill hours below 45° F are well above the 200 to 300 hours that grapes need for a good rest. More often budbreak and yield problems have occurred with dry soil profiles as in 2003 and 2004. That appears to be no problem this year. The expectation is for a lighter crop in 2006, and although vines don't always follow the book, the odds are there will be an average to slightly below average yield this year.

The abundant rainfall last season and the excellent growing conditions produced huge canopies, which are observed in some of the pruning weights in the last few weeks. The large leaf areas of those canopies and mild conditions helped vines tolerate the huge crops last year. There are concerns that some shoots in some varieties did not "harden off" well before the first frost in late November, barely two weeks after

the end of harvest. Some poorly matured canes were evident in Zinfandel and Merlot, among other varieties at some sites. There shouldn't be major problems with lost spur positions or dead basal buds that form this years spurs, but there may be some weak buds or spurs. Cane pruned vines or kicker canes on spur pruned vines may show some weak bud problems, poor spring growth or fruitfulness. In general healthy mature vines are pretty good at self regulating, and will have enough capacity to mitigate any crop load effects from last year. A good nutrient program and adequate irrigation will help vines bounce right back for this year, as grapes seem to have that ability more so than fruit and nut trees. With that in mind it may be good to invest in some potassium, but watch the nitrogen this year especially if the crop does look light. Petiole samples at bloom are not perfect, but can provide some guideline to potassium needs along with micronutrients. For the nitrogen, you can get a close enough estimate of vine needs by looking at a percentage of last years crop compared to the potential crop load this year. Remember to check irrigation wells for water nitrate levels if that hasn't ever been done to adjust for any nitrogen applied with irrigation water. Also don't "rush" the nitrogen application before bloom unless you are using a slow

release fertilizers or compost and manures. With all that in mind you may still be left with poor canes to prune and the best you can do is select the healthiest looking cane or prune to a few one bud spurs where necessary. Vines that are in generally good health will do the rest.

Besides nutrient application there are other vineyard items for the spring. Of more immediate concern are budbreak, frost, new shoot growth and protecting those shoots from disease infections. Frost is one topic always lurking in the mind of any grower. Four things to remember are: 1) Low areas are susceptible to cold air accumulation resulting in frost; 2) windless nights of low humidity and low dew point are major concerns; wet soil that is cultivated (but not the day before) or low cover crop can be slightly warmer than high cover or weeds; 3) delayed and/or double pruning can delay budbreak and avoid cold conditions for another 10 to 14 days; and if you are going to drip irrigate to "frost protect" you need to apply the water at least 24 to 36 hours ahead to allow some heart accumulation the day before to do any (?) good. And 4), copper sprays or bactericides do not prevent freeze damage.

Powdery mildew was a problem late in the year last season. A late dormant lime sulfur spray can be helpful in

reducing powdery mildew and Phomopsis problems, but after budbreak is the important time to focus on control, irrespective of variety or site. Recent research indicates dormant applications of lime sulfur may help reduce long term problems of measles or Esca caused by vine decline pathogens such as Phaeoacromonium and Phaeomoniella in addition to powdery mildew. But winter access can be a problem in getting those sprays on in a timely manner. Vine training after planting and avoiding large pruning wounds are currently the most effective strategies in dealing with the less aggressive but still threatening Vine Decline “cousins” of Eutypa Dieback.

For Phomopsis and powdery mildew wettable sulfur after bud break can be very effective, although there are many new materials and captan is still available. Check the UC IPM guidelines and talk with your PCA or give me a call. Wettable sulfur after budbreak can be a very effective and inexpensive choice for doubling up on an early start to powdery mildew control, while the addition of copper is a little less definitive as a help, except with Botrytis. Whatever the material of choice ends up being, a good powdery mildew program includes: some sulfur (dust or wettable), rotation of materials between years, and complete coverage, are each important

If rainfall stays average the remainder of winter and early spring, there will be good soil moisture in vineyards this year at bud break. But things can change dramatically, between now and flower set, let alone by harvest. In any case more growers are avoiding severe stress of vines from Regulated Deficit Irrigation (RDI). There are still good reasons and good results to be seen from RDI, but as with most vineyard practices (besides life in general) moderation is usually, if not always better than extremes. If you are avoiding severe deficits this year, be aware of actual vine water status (pressure bombs still good for that) and don't start too early. Until mid May, when the vine canopy is still small, evapo-transpiration (ET) is low

and the soil profile is still saturated. It doesn't take many hours of application to get too far ahead of actual vine needs. Longer “hang times” have become more common and more of a concern regarding yields, but also related to vine irrigation strategy. So irrigation has become a little more complicated again, but regulated deficit irrigation (RDI) is still one of the biggest steps, if not the first and most significant step, towards improving wine quality. Of course, caution is always good for young vines, vines with nematode problems and vines in shallow or rocky soils of low water holding capacity.

Controlling early season vine growth and then more closely meeting mid to late season water demand of vines makes sense to maintain good active leaf area for a balance of crop and leaves. Especially in light of the recent “controversy” of hang time, vines need to maintain healthy and photosynthetically active leaves for a longer time. Some of the questions related to delayed harvest are beginning to sort themselves out, but at the same time recent research and field experience indicate irrigation strategies and hang time may help get the flavors vintners want without extreme yield reduction to growers. And the whole interaction of irrigation, crop load and fruit hang time, although complicated, may be manageable in spite of contradictory goals.

What I have seen this year and in past years is vine balance is more important than absolute wine growing strategies or “recipes”. And then you get a

year like 2005 where longer hang time was less design than just the year. Quality was generally very good to excellent. But was it the long hang time, the mild conditions, the big canopies or the (oops) big crop? As in 1997 (the second biggest crop compared to 2005) crop load didn't seem to be problem and quality was excellent! Yet in 1998, a year with a short crop, cool (European) conditions and a long hang time, was wine quality less than stellar in any competition by any measure? We still have a ways to go before we have all the answers, but vine balance is important. Maybe the Greeks did teach us a valuable lesson in the philosophy that embodies in part: everything in moderation.

And finally, remember to be on the look out for the presence of Vine Mealybug (VMB), which is being found throughout the state and in scattered locations around San Joaquin County. The over wintering crawlers tend to be small and not active until after budbreak, but if you find vines with heavy amounts of black sooty mold, check those vines very closely. Look in any cracks crevices and loose bark and even down into the soil on large roots. Also note if there is a high amount of ant activity fairly early. Talk with your PCA or check www.ipm.ucdavis or www.vine-mealybug.uckac. But don't forget about the Glassy Winged Sharp Shooter (GWSS) and the Western Grape Leaf Skeletonizer (WGLS), they both are still lurking to the south and north of San Joaquin County. *Good luck in 2006*

EDITOR'S NOTE: For anyone interested in enrolling in The Lodi Rules program in 2006 be aware that a liquid lime sulfur spray has relatively high environmental impact units and if used will likely result in preventing a vineyard from qualifying for certification. However, the health of your vineyard is a top priority, so if you feel a treatment is needed then make your decision based on all the facts. Call Cliff or Chris and LWWC 209 367 4727 with any questions about this issue.

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When pesticide illnesses are mentioned, people often think of the obvious such as vomiting, chills, cramps etc. caused by pesticide exposure. But, it should be noted that pesticide illnesses are also skin rashes, irritated eyes, and headaches caused by pesticide exposure. All acute pesticide illnesses, no matter what the severity, are covered by this new medical reimbursement requirement.

In addition to the requirement that certain medical costs be paid, the law also substantially increases the penalties for pesticide injuries. SB 391 authorizes the CACs to levy a separate penalty for each person who is injured or made ill by a pesticide violation.

CACs had previously been allowed to levy separate penalties only for multiple violations of worker safety regulations—the number of workers injured did not increase the penalty, only the number of code sections violated. Now, a one person/one violation provision applies to violations involving workers as well as victims in non-occupational settings. CACs have the authority to multiply the amount of the penalty by the number of victims. What this means is that CACs could levy a penalty of up to \$5,000 for each person injured or made ill as a result of a violation of any pesticide law or regulation, significantly increasing the potential penalties.

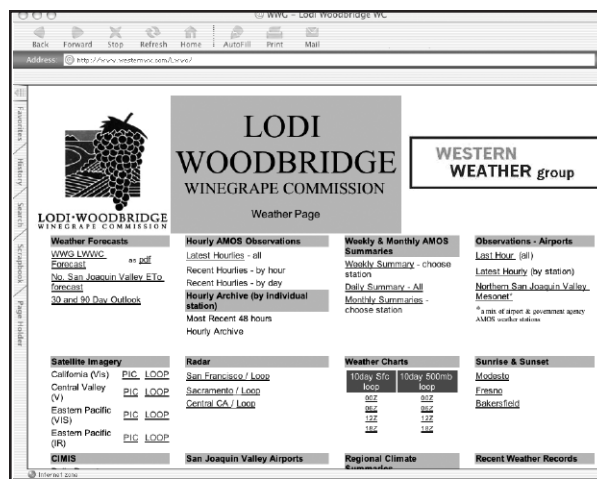
The new enforcement response policy and the non-occupational pesticide injury law are substantial changes to our enforcement program. Under the new policy we expect to take many more penalty actions than in the past. However, as in the past, we will continue to work with growers and applicators to ensure they have the information and understanding needed to comply with California's pesticide use laws and regulations.

LWWC Internship Available FOR VINEYARD PEST MONITORING FOR 2006

We are starting the search for someone interested in being an IPM assistant for the BIFS program during the 2006 growing season. It is a full time, 40 hour/week job with the following responsibilities:

- Monitor 30 BIFS vineyards on a weekly basis to assess population levels of major vineyard pests, their natural enemies, and vine nutritional problems.
- Enter data into a computer database and produce data sheets for growers and PCAs.
- Distribute weekly data sheets to growers and discuss with them the results of the monitoring.
- Assist in organizing grower meetings.

The job is best suited for someone who is attending college and interested in biology. The job begins in late April and ends in mid September. If you know of anyone who might be interested in the position call Cliff or Chris at the LWWC office at 209 367 4727.



The LWWC Weather Service Web Page

The new weather service web page highlighted in the December IPM Newsletter is now in operation. We have had great feedback already about how good it is. One grower said it was the best weather service they have seen. To access the weather page go to www.lodiwine.com, click on 'Grower News' and then select 'Lodi Wine Country Weather'.

If you are an LWWC member you can also get a detailed daily weather forecast emailed directly to you each morning by calling Cliff or Chris at the LWWC office and giving them your email address.

REMEMBER TO MAIL IN YOUR BALLOT FOR THE WINEGRAPE COMMISSION RENEWAL REFERENDUM

Please remember to send in your ballot for the vote on the renewal referendum for the Lodi-Woodbridge Winegrape Commission. Every vote is important.

LWWC Funds New Research Project on Potassium Management

The LWWC Research Committee just approved funding for a project by Dr. Stu Pettygrove, University of California Davis soil scientist. The title of the project is "Soil-specific Potassium Management in the Lodi Winegrape Region". One of the goals of the research is to develop potassium management recommendations based on soil type in Lodi vineyards. An important part of the project is a survey that will be mailed to all Lodi growers asking questions about your current potassium management. This will help guide Dr. Pettygrove's research. The surveys will be mailed out to you in late February or early March.

UPCOMING EVENTS:

FEB. 7, 2006: 7:30am – 1:00pm. Lodi Grape Day, Hutchins Street Square, 125 South Hutchins St., Lodi, CA.

FEB. 10, 2006: 9:00am – 10:30am. What is the Lodi Rules for Sustainable Winegrowing program, how does it work and how a Lodi grower can participate in it. Central Valley Waste Management Services, 1333 West Turner Rd., Lodi CA

MARCH 29, 2006: 8:00am – noon. Vineyard floor management field day. Location to be announced.

APRIL 18, 2006: 8:00am – noon. Energy efficiency in the vineyard and winery. Location to be announced.

MAY 16, 2006: 8:00am – 11:00am. Vine Mealybug management and discussion of other exotic pest issues such as risk of accidental introductions into California. Presenters: Dr. Kent Daane, University of California Berkeley, Walt Bentley, UC IPM Advisor. Location to be announced.

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