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# The Lodi Rules for Sustainable Winegrowing – What Is It?

- California's first peer-reviewed sustainable winegrowing standards
- It supports LWWC's goal to continually improve Lodi's reputation for quality grapes & wine
- It is a voluntary program open to all LWWC growers to certify vineyards as sustainable
- Certified by Protected Harvest, an organization with Consumers Union's top rating



# The Lodi Rules for Sustainable Winegrowing – Why Do It?

- Logical outgrowth of LWWC's Sustainable Viticulture program
- Achieve measurable improvement in environmental health of Lodi farms
- Other CA wine regions are considering it; one US region is doing it
- European Union countries are demanding chain of custody/food safety certification



# The Lodi Rules for Sustainable Winegrowing – Financial Benefits?

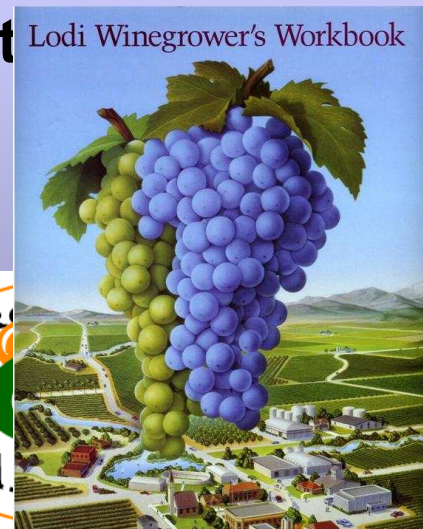
- **10% Reduction on Insurance Premiums**
  - Pan American Underwriters
  - CAWG members
- **Increased grape prices?**
- **New winegrape contract?**
- **Increased wine sales?**



# Origins of The Lodi Rules

Grower committee was formed in April 2001 to review value added programs in US & elsewhere and concluded:

- Third party certification program provides most credibility
- Base program farming standards on the *Lodi Winegrower's Workbook*
- Healthy Grown® certified by Protected Harvest was best certification model



# What is the Healthy Grown Model?

To be Certified a Vineyard Must:

- Exceed a minimum number of sustainable farming practices points
- Not exceed a maximum number of environmental impact units from pesticides (synthetic and organic) used in the vineyard



# **The Lodi Rules** **Committee:**

**Growers**

**PCAs**

**Winemakers**

**UC**

**NGO**

**LWWC**

**Bryan Anthony, E. & J. Gallo Winery**

**Joe Cotta, Cotta Ranches**

**Steve Felten, Felten-Melhoff Ranch**

**Jerry Fry, Mohr-Fry Ranches**

**Bruce Fry, Mohr-Fry Ranches**

**Chuck Ingels, UCCE Farm Advisor, Sacramento Co.**

**Randall Lange, LangeTwins Farms**

**John Ledbetter, Vino Farms**

**Kim Ledbetter-Bronsen, Vino Farms**

**Larry Mettler, Arbor Vineyards**

**Robert Pirie, President Colligere Ranches**

**Terry Prichard, UC Irrigation Specialist**

**Steve Quashnick, Western Farm Service**

**Kent Reeves, EBMUD Wildlife Biologist**

**Craig Rous, Bear Creek Winery**

**Bob Schulenburg**

**Mark Shimosaki, Viticultural Services**

**Paul Verdegaaal, UCCE Farm Advisor San Joaquin Co.**

**Chris Storm, LWWC Viticulturist**

**Cliff Ohmart, LWWC Research/IPM Director**

**Mark Chandler, LWWC Executive Director**

**Stuart Spencer, LWWC Project Manager**





# The Lodi Rules Farming Standards

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**To be Included a Practice must be:**

- **Measurable (verifiable)**
- **Enhance sustainability (one or more of the 3 E's of sustainability)**
- **Technically & economically achievable**





# Standard Development & Review



- Over 14 month period drafted & edited
- Protected Harvest arranged for peer review
- Protected Harvest Board review
- Standards endorsed by Protected Harvest 2005



# Sustainable Winegrowing Practices Standards

- Ecosystem management - 12
- Education, Training & Te
- Soil Management - 13
- Water Management - 11
- Vineyard Establishment
- Pest Management - 18



# Ecosystem Management

## 1.1 Sustainability Vision <sup>F</sup>

<b>I have attended an LWWC workshop for developing and writing a sustainable management vision (plan) for my farm. I have</b>	<b>YES = 6</b>
<b>a written vision statement and it contains the elements outlined in the <i>Companion Document for the Lodi Rules</i>.</b>	<b>NO = 0</b>

# Ecosystem Management

## 1.11 Nest Boxes for Wildlife that Prey on Vineyard Pests

<p><b>a.</b> I have placed nesting boxes for raptors (e.g. owls, hawks, kestrels, etc.) <u>and</u> bats in or around my vineyard <u>and</u> natural nesting sites and perches for the above predators are present in or around my vineyard (e.g. oak trees) <u>and</u> nest sites and perches are monitored and maintained.</p>	3
<p><b>b.</b> I have placed nesting boxes for raptors (e.g. owls, hawks, kestrels, etc.) <u>and</u> bats in or around my vineyard and boxes are maintained <u>or</u> natural nesting sites and perches, for the above predators are present in or around my vineyard (e.g. oak trees).</p>	2
<p><b>c.</b> I have placed nesting boxes for bats <u>or</u> raptors (e.g. owls, hawks, kestrels, etc.) in or around my vineyard and they are maintained.</p>	1
<p><b>d.</b> I have not placed nesting boxes on my property and no perches have been established or exist for birds of prey or bats.</p>	0

# Human Resources

## 2.3 Employee Orientation

<b>a.</b> My company/farming operation provides an annual orientation program for non-seasonal employees <i>and</i> includes an overview of the company purpose, operations, culture and commitment to sustainability.	<b>2</b>
<b>b.</b> My company/farming operation provides an annual orientation program for non-seasonal employees.	<b>1</b>
<b>c.</b> My company/farming operation does not have an annual orientation for non-seasonal employees.	<b>0</b>

# Human Resources

## 2.5 LWWC and University-Sponsored Professional Training and Development <sup>F</sup>

<p>a. I or a company/farming operation representative has attended <b><i>at least six</i></b> LWWC training seminars or other educational programs within the last 12 months (e.g. breakfast meetings, field days, workbook workshops, research seminars, University of California or California State University classes or meetings).</p>	<b>2</b>
<p>b. I or a company/farming operation representative has attended <b><i>at least three</i></b> LWWC training seminars or other educational programs within the last 12 months (e.g. breakfast meetings, field days, workbook workshops, research seminars, University of California or California State University classes or meetings).</p>	<b>1</b>
<p>c. I or a company/farming operation representative has attended <b><i>less than three</i></b> LWWC training seminars or other educational programs within the last 12 months (e.g. breakfast meetings, field days, workbook workshops, research seminars, University of California or California State University classes or meetings).</p>	<b>0</b>



# Soil Management

## 3.1 Nutrition Management Plan <sup>F</sup>

**I have a comprehensive nutrition management plan containing the following elements: field parameters; soil analysis; water analysis; petiole or other tissue analysis; vineyard yield history; sources and forms of nutrients; sensitive areas; recommended rates and timing; methods of application; and a review and update schedule. For more details see the *Companion Document for the Lodi Rules*.**

**YES = 6**

**NO = Fail  
Chapter**

# Soil Management

## 3.4 Plant Analysis

<b>a.</b> I take a <u>bloom-time sample</u> of petioles or leaf blades and send it to a lab for analysis <u>each year</u> or I sample at bloom and other times during the season.	<b>2</b>
<b>b.</b> I take a <u>bloom-time sample</u> of petioles or leaf blades and send it to a lab for analysis at least once <u>every two years</u> .	<b>1</b>
<b>c.</b> I <u>never</u> take petiole or leaf blade samples.	<b>0</b>

# Water Management

## 4.5 Distribution Uniformity\* <sup>V</sup>

a. I tested and recorded distribution uniformity of my irrigation system <u>within the last 12 months</u> <b>OR</b> I have subsurface drip and I checked the relief valves <u>at least weekly</u> .	3
b. I tested and recorded distribution uniformity of my irrigation system <u>within the last 2 years</u> <b>OR</b> I have subsurface drip and I checked the relief valves <u>at least once a month</u> .	2
c. Some time in the life of my irrigation system I have tested the distribution uniformity <b>OR</b> I have subsurface drip and I checked the relief valves <u>at least once this past year</u> .	1
d. I <u>have never tested</u> the distribution uniformity of my irrigation system.	FC

# Pest Management

## 6.1 Vineyard Monitoring for Insect and Mite Pests

<u>a.</u> My PCA and/or I monitor(s) the vineyard for insect and mite pests at least once every 10 days from bud break to harvest and I keep a written record.	3
<u>b.</u> My PCA and/or I monitor(s) the vineyard for insect and mite pests at least once every 14 days during the growing season and I keep a written record.	2
<u>c.</u> My PCA and/or I monitor(s) the vineyard for insect and mite pests once every 21 days and I keep a written record.	1
<u>d.</u> My PCA and/or I monitor(s) the vineyard for insect and mite pests once a month and I keep a written record.	0
<u>e.</u> I keep no vineyard monitoring records for insect and mite pests.	FC

# Minimum Farming Practice Points Required for Certification

<b>Lodi Rules Chapter</b>	<b>Points Needed to Pass</b>	<b>Total Possible Points</b>
<b>1. Ecosystem Management Section Total:</b>	<b>24</b>	<b>47</b>
<b>2. Education Training and Team Building:</b>	<b>13</b>	<b>25</b>
<b>3. Soil Management Section Total:</b>	<b>33</b>	<b>66</b>
<b>4. Water Management Section:</b>	<b>18</b>	<b>35</b>
<b>5. Viticulture Section Total:</b>	<b>12</b>	<b>24</b>
<b>6. Pest Management Section Total:</b>	<b>35</b>	<b>69</b>
<b>Total Farming Practices Points:</b>	<b>135</b>	<b>266</b>



# Pesticide Environmental Assessment System or PEAS

- Model Developed by Dr. Chuck Benbrook
- Calculates environmental impact units for each pesticide Active Ingredient used in Lodi
- EIU's are a direct measure of environmental impact
- EIU's can be added up to calculate total impact of all pesticides used on each vineyard acre per year





# PEAS is a Multi-attribute Model

*PEAS EIU is made of the following indices:*

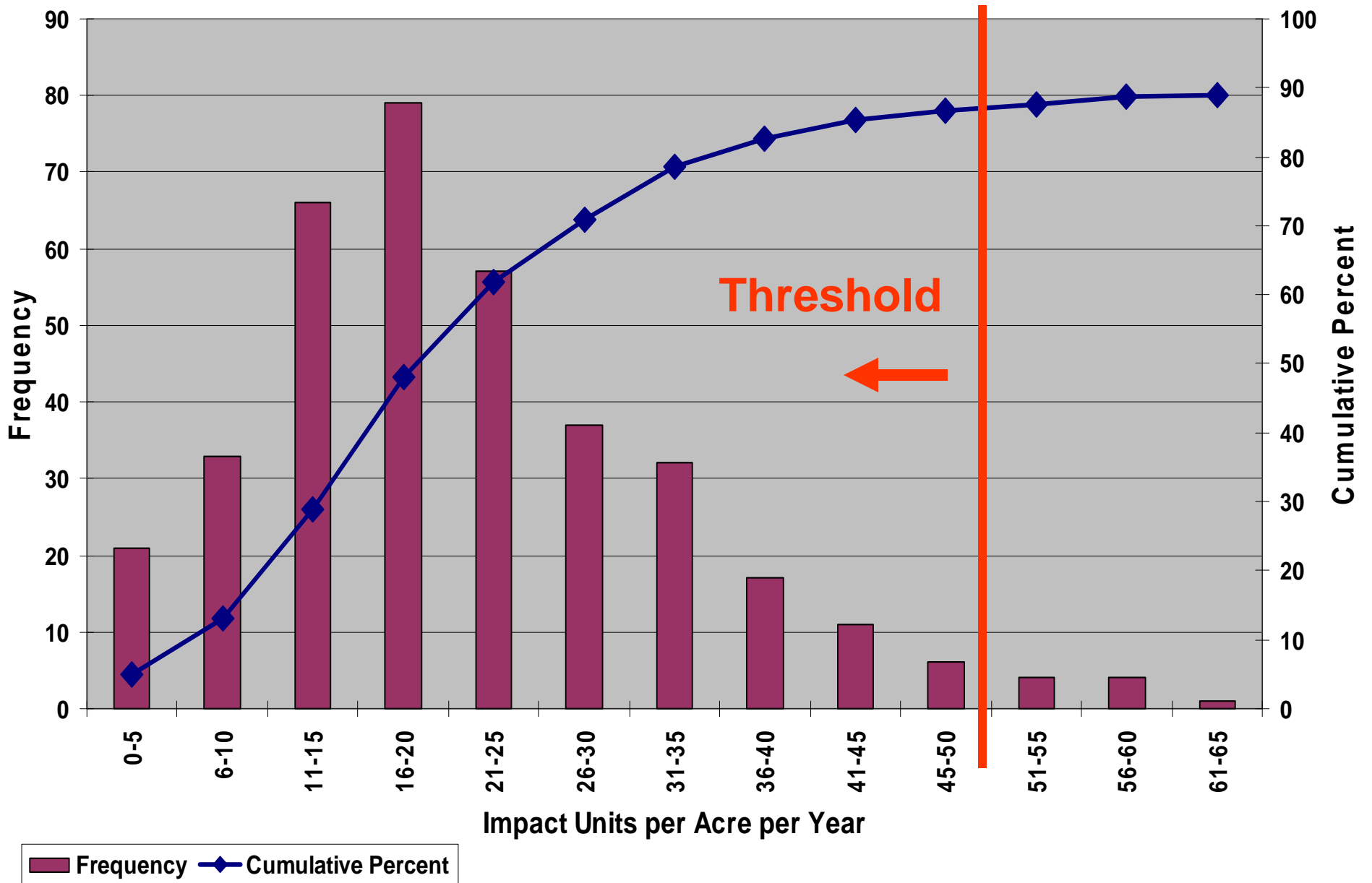
- Worker exposure
- Impact on birds
- Daphnia impact (measure of water quality)
- Bees and pest natural enemy impacts
- Dietary risk e.g. residue ingestion



<b>Pesticide</b>	<b>Index</b>
<b>Lorsban</b>	<b>173.00</b>
<b>Nexter</b>	<b>50.00</b>
<b>Copper Hydroxide</b>	<b>7.00</b>
<b>Neem Oil</b>	<b>5.00</b>
<b>Provado</b>	<b>3.00</b>
<b>Cryolite</b>	<b>2.94</b>
<b>Sulfur Dust</b>	<b>2.37</b>
<b>Omite</b>	<b>2.05</b>
<b>Surround</b>	<b>1.45</b>
<b>Roundup</b>	<b>0.39</b>
<b>Kaligreen</b>	<b>0.39</b>
<b>Rally</b>	<b>0.32</b>



# Impact Units for BIFS Vineyards from 1996 to 2003



## Pesticide Impact Units for 'Typical' Lodi Vineyard for a Year

<b>Input Date</b>	<b>Chemical Name</b>	<b>Rate/Acre</b>	<b>Impact Units/Acre</b>
<b>4/13/2004</b>	<b>Sulfur dust</b>	<b>15 lbs</b>	<b>2.94</b>
<b>4/22/2004</b>	<b>Sulfur dust</b>	<b>15 lbs</b>	<b>2.94</b>
<b>5/3/2004</b>	<b>Sulfur dust</b>	<b>15 lbs</b>	<b>2.94</b>
<b>5/13/2004</b>	<b>RoundUp Ultra Dry</b>	<b>0.92 lbs</b>	<b>0.03</b>
<b>5/16/2004</b>	<b>Sulfur dust</b>	<b>14 lbs</b>	<b>2.74</b>
<b>5/29/2004</b>	<b>Sulfur dust</b>	<b>15 lbs</b>	<b>2.94</b>
<b>6/2/2004</b>	<b>Rally 40W</b>	<b>3.88 ozs</b>	<b>0.34</b>
<b>6/24/2004</b>	<b>Provado</b>	<b>0.63 ozs</b>	<b>1.91</b>
<b>6/24/2004</b>	<b>Acramite 50 WS</b>	<b>0.87 ozs</b>	<b>0.65</b>
<b>6/24/2004</b>	<b>Pristine</b>	<b>11.49 ozs</b>	<b>0.20</b>
<b>7/28/2004</b>	<b>Gramoxone Max</b>	<b>1 pint</b>	<b>0.09</b>
<b>7/31/2004</b>	<b>RoundUp Ultra Dry</b>	<b>0.63 lbs</b>	<b>0.02</b>
<b>Total Impact Units per Acre for Year</b>			<b>17.75</b>

# Market Messaging for Lodi's Program

## USDA Valued Added Grant to LWWC

Marketing Task Force formed to oversee the project

Conducted over 100 industry interviews with:

- Vineyards/Wineries...conducting initial outreach
- Wholesale/Retail/Specialty Trade
- Restaurants
- Wine Writers/Educators
- International Wine Consultants
- The Media
- Sustainable Programs /Eco-label Industry
- Six consumer focus groups



# Key Research Findings

- **Consumers want to hear ‘What’s in it for me’**
- **The environment comes after all other wine purchasing criteria are met: quality, price, taste, etc.**
- **Word ‘certified’ is meaningful to consumer**
- **Relate quality to sustainable practices - people want to hear about this!**
- **Most Lodi wineries support the concept and would use the sustainability story, but most do not understand the program or its objectives**





# Some Messaging Results

## Lodi Sustainability Statement

**Lodi wines have a special character because they are produced by a community of farming families. We are responsible to our land, our workers, the community we farm in, and to all those who enjoy our great wines.**



# Financial Supporters of The Lodi Rules

- **US EPA Region 9 - \$80,000**
- **The Great Valley Center - \$10,000**
- **State Water Resources Control Board - \$380,000**
- **USDA Value Added Grant Program - \$140,000**



# What Happened in 2005?

- **Six winegrowers participated**
  - \* **VinoFarms – The Ledbetters & Cindy Johnson**
  - \* **Lobo Loco Vineyard – Joe Dexter**
  - \* **Colligere Farms – Robert Pirie, Brian Anderson**
  - \* **Mohr-Fry Ranches – The Frys & Brad Kissler**
  - \* **K & S Vineyards – Keith Watts**
  - \* **Sutter Home – Robert Abercrombie**
- **Certified 1455 vineyard acres**





Lodi Wine & Visitor Center

