



UNIVERSITY OF CALIFORNIA  
 COOPERATIVE EXTENSION ♦ SUTTER & YUBA COUNTIES  
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# ORCHARD NOTES

February 2002

## SUTTER/YUBA/COLUSA WALNUT DAY

MONDAY, FEBRUARY 25, 2002, 1:00 TO 4:00 P.M.

VETERANS MEMORIAL BUILDING, 1425 CIRCLE DRIVE, YUBA CITY, CA

Sponsored by the University of California Cooperative Extension of Sutter/Yuba and Colusa Counties

12:30 P.M. Registration

### PROGRAM

Moderator: *Janine Hasey*

### MARKETING

1:00 P.M. Managing the Big One, *Sue Haenny, Marketing Director, California Walnut Commission*

### INNOVATIONS IN CODLING MOTH CONTROL

A New Lure for Trapping Codling Moth, *Doug Light, Entomologist, USDA*

Alternative Codling Moth Pheromone Dispensing Technologies, *Steve Welter, Entomologist, UC Berkeley*

### BREAK

Moderator: *John Edstrom*

How Well is Pheromone Mating Disruption Working to Control Codling Moth in Pest Management Alliance Plots?, *Carolyn Pickel, UCIPM Advisor, Sacramento Valley*

### CULTURAL PRACTICES

Effects of Irrigation on Walnut Quality, *Janine Hasey, UC Farm Advisor, Sutter/Yuba Counties, Bruce Lampinen, Walnut Specialist, UC Davis*

### BRIEF UPDATES

2002 Walnut Cost Study, *John Edstrom, UC Farm Advisor, Colusa County*

Xanthocast Blight Model and Weather Forecasting, *Carla Thomas, FieldWise*

4:00 P.M. Adjourn

2.25 hours

PCA 1.75 hours & CCA

REFRESHMENTS COURTESY OF HELENA CHEMICAL  
 OF YUBA CITY

## FUNGICIDE EFFICACY & TREATMENT TIMING TABLES

Fungicide efficacy and treatment timing tables for Apple and Pear and Peach and Nectarine are attached for your reference. They will help answer your questions as to how effective a particular fungicide is for a disease and when to apply it. There are also guidelines for other crops and a table on fungicide properties that provides information that should be helpful in planning your fungicide program to manage resistance available from our office. They were produced by U.C. Plant Pathologists, Beth Teviotdale, Jim Adaskaveg, Themis Michailides and Doug Gubler. The report can be accessed at the following websites: UC Kearney Agricultural Center: <http://www.uckac.edu/plantpath/> UC Davis, Dept. of Plant Pathology: <http://www.plpnem.ucdavis.edu/PLP/Index.htm>.

### FEBRUARY REMINDERS

**PEACHES:** Hang Oriental Fruit Moth (OFM) pheromone traps by the third week of February to detect the first moth. The biofix was February 26 in 2001 and February 23 in 2000 in Yuba City. Sometimes it occurs in early March. Set biofix to calculate degree-days. If using mating disruption apply OFM pheromone dispensers or sprayable at first moth or by March 1. To reduce the number of in season pyrethroid sprays, consider OFM mating disruption at biofix this year. Pheromone dispensers last for 90 days eliminating the need for the late May or early June spray. Please call if you have any questions on how to use pheromone dispensers or sprays and how effective mating disruption has been in controlling these pests locally.

Where no dormant insecticide was used, *Bacillus thuringiensis* (Bt) should be applied with bloom time fungicide sprays to control overwintered PTB. The first Bt spray is applied when 20-40% of the overwintering PTB larvae have emerged from the hibernacula. The second application is made at 80-100% emergence. These two Bt sprays have provided effective control for overwintered PTB in cling peaches locally as an alternative to a dormant insecticide application.

Success (spinosad) is another material for PTB control that helps preserve beneficial insects and can be applied as a bloom spray.

### CHEMICAL THINNING - PEACHES

Controlling crop load can be achieved through dormant pruning and fruit thinning. Fruit thinning is a very costly cultural operation in growing peaches. Labor is more expensive and often less available than in the past. As a goal to reduce hand thinning costs, we have had demonstration blocks for several years using a surfactant called Entry that is applied at bloom and works as a chemical thinner. There are many factors to consider when using this material, including variety, stage of bloom, rate and volume the material is applied in. Environmental conditions most likely play a role in material response also. Most of our favorable results have been on Loadel. I will have small demonstration trials in 2002 as in the past. If you are interested in trying chemical thinning and want specific information on using Entry, please call me before bloom at (530) 822-7515. We recommend trying it on a small block with an adjacent comparison hand thinning block.

### PUBLICATIONS

#### REVISED PUBLICATIONS

The newly revised "Postharvest Technology of Horticultural Crops" is available for viewing and ordering from our office. The cost is \$65.00.

The Walnut Cost Study 2002 for the Sacramento Valley is available from our office for the cost of \$2.00 or by downloading <http://coststudies.ucdavis.edu>.

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**JANINE HASEY**  
U.C. FARM ADVISOR

## APPLE AND PEAR - FUNGICIDE EFFICACY

Fungicide	Resistance risk <sup>1</sup>	Scab		Powdery Mildew (apple only)
		Protectant	Eradicant	
Bayleton	high	----	----	+++
Benlate <sup>2</sup>	high	+++	+++	+++
Flint	high	++++	++++	++++
Procure <sup>3</sup>	high	++++	++++	++++
Rally <sup>4</sup>	high	++++	++++	++++
Rubigan <sup>3</sup>	high	++++	++++	++++
Topsin M	high	+++	+++	+++
Vanguard	high	+++	+++	+++
Captain <sup>5</sup>	low	++	----	----
Maneb <sup>5</sup>	low	++	----	----
Thiram <sup>5</sup>	low	++	----	----
Ziram <sup>5</sup>	low	++	----	----
Copper	low	++ <sup>6</sup>	----	----
Lime sulfur <sup>7</sup>	low	----	++++ <sup>7</sup>	+++ <sup>8</sup>
Sulfur	low	++	----	+++

Rating: +++++ = excellent and consistent, +++ = good and reliable, ++ = moderate and variable, + = limited and/or erratic, +/- = minimal and often ineffective, ---- = ineffective.

1. Do not use the same fungicide or fungicides with similar chemistry and high resistance risk more than twice during a season
2. Label withdrawn.
3. On pear, use only **before** white bud and **after** full bloom.
4. Labeled on apple but not on pear.
5. These are important components of resistance management programs.
6. Copper, though effective for scab control, causes fruit scarring.
7. "Burns out" scab twig lesions when applied at delayed dormant and disrupts pseudothecial development when applied to leaves in fall. CAUTION: LIME SULFUR IS INCOMPATIBLE WITH MOST OTHER PESTICIDES. CHECK BEFORE USE.
8. In-season application eradicates powdery mildew.

## APPLE AND PEAR - TREATMENT TIMING

**Note: Not all indicated timings may be necessary for disease control.**

Disease	Fall	Delayed dormant	Green tip	Pink bud	Spring
Scab <sup>a</sup>	++ <sup>b</sup>	++ <sup>b</sup>	+++	+++	+++
Powdery mildew <sup>c</sup>	----	----	----	++++	+++

Rating: +++ = most effective, ++ = moderately effective, + = least effective, and ---- = ineffective

- a. Protection of early tissue is important. Additional applications should be made according to infection periods as determined by the Mills table.
- b. Disruption of pseudothecial development (fall) and inactivation of overwintering twig lesions (delayed dormant) occurs; effects of these treatments on disease control uncertain.
- c. Early application is most effective; added treatments are made if mildew continues.

## PEACH AND NECTARINE – FUNGICIDE EFFICACY

Fungicide	Resistance Risk	Brown Rot <sup>a</sup>		Powdery Mildew <sup>1</sup>	Scab	Rust	Leaf Curl	Shot Hole	
		Blossom	Fruit						
Benlate <sup>2</sup>	high	++++	++++	++++	+++	+++	+	----	----
Elite	high	++++	++++	++++	+++	++	+++	----	+/-
Indar	high	++++	++++	++++	?	+++	?	----	+/-
Orbit (Break)	high	++++	++++	++++	+++	----	+++	----	+/-
Rovral <sup>3</sup> +oil <sup>4</sup>	low	++++	++++	++++	+	+	++	----	++
Topsin <sup>2</sup>	high	++++	++++	++++	+++	+++	+	----	----
Vanguard	high	++++	++++	+++ <sup>8</sup>	ND	?	?	----	+
Elevate	high	+++	+++	+++	?	?	?	?	?
Rally	high	+++	+++	+++	+++	----	----	----	----
Rovral <sup>3</sup>	low	+++	+++	+++	----	----	----	----	----
Abound	high	++	+	+	++	++++	+++	----	++
Botran	high	++	+	+	?	?	?	?	?
Bravo <sup>5,6</sup>	low	++	----	----	----	+++	+	+++	+++
Captan <sup>6</sup>	low	++	++	++	----	+++	----	----	+++ <sup>g</sup>
Copper	low	+/-	----	----	----	----	----	+++	+++
Sulfur	low	+/-	+/-	+/-	+++	+++	+++	----	----
Ziram	low	+/-	----	----	----	+++	----	++++	+++

Rating: +++++ = excellent and consistent, +++ = good and reliable, ++ = moderate and variable, + = limited and/or erratic, +/- = minimal and often ineffective, ---- = ineffective, and ? = insufficient data or unknown, ND = labeled, no data.

4. Do not use the same fungicide or fungicides with similar chemistry and high resistance risk more than twice in one year.
5. Benlate label withdrawn. Strains of *Monilinia fructicola* resistant to Benlate and Topsin are present in some peach and nectarine orchards.
6. Blossom blight only; not registered for pre-harvest use.
7. Oil is a 'light' summer oil, 1-2% volume/volume.
8. Do not use after shuck split.
9. Do not use in combination with or shortly before or after oil treatment.
10. Not effective if used as dormant treatment.

## PEACH AND NECTARINE - TREATMENT TIMING

**Note: Not all indicated timings may be necessary for disease control**

Disease	Dormant	Bloom		3-6 weeks post bloom	Preharvest <sup>a</sup>	
		20-40%	80-100%		3 weeks	1 week
Brown rot	----	++	+++	+ <sup>b</sup>	++	+++
Powdery mildew	----	++	++	+++	----	----
Leaf curl <sup>b</sup>	+++	----	----	----	----	----
Rust	+ <sup>c</sup>	----	----	+++	++	----
Scab	----		++	+++	----	----
Shot hole <sup>d</sup>	+++	+	+	++	----	----

Rating: +++ = most effective, ++ = moderately effective, + = least effective, and ---- = ineffective.

- a. Timing not exact; weather conditions determine need for treatment.
- b. Treatment should be made before bud break and preferably before bud swell.
- c. Dormant treatment with liquid lime sulfur.
- d. Fall application before winter rains begin is the most important; additional spring sprays are seldom required but may be needed to protect the fruit if heavy persistent spring rains occur.

# **WALNUT PRUNING FIELD MEETING**

**Wednesday, February 27, 2002**

**1:00 p.m.**

**1820 Tudor Road, (Hwy 113), just south of Burch Road,  
Yuba City**

This five year old Chandler orchard of John Magenheimer has several replants so we can discuss training conventional walnut trees from 1-5 years old. Growers will be able to see how soil, rootstock and previous pruning practices affect vigor and how this impacts pruning choices. In the event of rain, please call our office.

I will not be holding a field meeting on training walnut hedgerow trees this year. I will be helping one grower with a Howard hedgerow at the critical second year training. Please call me if you would like to accompany us on that training.

UPCOMING MEETINGS  
MARK YOUR CALENDARS

**Simplified Approach to Scheduling Irrigations for Maximum Profit Workshop**

Thursday, March 14, 2002 10:00 a.m. - 12:00 p.m.  
Agricultural Building, 142 Garden Highway, Yuba City  
Program will be in "Orchard Notes"  
Pre-registration will be required but there will be no fee

**Certified Organic Tree Crops: Transition, Growing Practices and Markets**

Wednesday, March 20, 2002, (all day)  
Agricultural Building, 142 Garden Highway, Yuba City  
Brochure will be sent shortly  
Pre-registration will be required