

# CROP CURRENTS

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From: Janet Caprile, Farm Advisor  
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## PESTICIDE SAFETY & HEAT ILLNESS TRAINING in Spanish

Diablo Valley Farm Center  
Delta Road at 2<sup>nd</sup> Street, Knightsen, CA

### Classes for Pesticide Handlers

*Pesticide Handlers* are anyone who applies, mixes, loads, flags, or otherwise handles pesticides. Employers must provide a pesticide safety training every year for their handlers before they begin work with pesticides. Each participant will receive an official Pesticide Safety Training Record.

- Thursday, **February 23**, 2012  
8:00-11:00 am
- Thursday, **March 22**, 2012  
8:00-11:00 am

### Classes for Field Workers

*Field Workers* are employees who work in fields or nurseries where pesticides have been applied but do not handle pesticides themselves. Employers must provide a pesticide safety training every 5 years for their field workers. Each participant will receive a Worker Training Verification Card.

- Thursday, **April 19**, 2012  
8:00-10:00 am
- Thursday, **June 14**, 2012  
8:00-10:00 am

If your employee(s) cannot attend one of these scheduled classes, any certified commercial applicator (PCA, PCO, QAC, QAL) or private applicator may legally provide the pesticide safety training.

**Sponsored by:** University of California Cooperative Extension and Contra Costa County Agriculture Department

**To register:** Call the Ag Department in Knightsen at (925) 427-8610. Please provide the names or number of attendees so we can prepare sufficient materials for all participants. The class is FREE and open to all who wish to attend.

# CALIFORNIA CHERRY RESEARCH REVIEW

Tuesday, January 24, 2012  
Evelyn Costa Assembly Room  
San Joaquin County Agricultural Center  
2101 E. Earhart Avenue, Stockton, California 95206

Sponsored by the University of California Cooperative Extension  
California Cherry Advisory Board, and California Cherry Growers & Industries Foundation

- 8:30 am      **Welcome**  
Joe Grant, UC Cooperative Extension, San Joaquin County
- 8:40            **Diagnosis, epidemiology & control of fungal canker diseases in sweet cherry**  
Dr. Doug Gubler, Dept. of Plant Pathology, UC Davis
- 9:05            **Managing pre- and post-harvest diseases of sweet cherries**  
Dr. Jim Adaskaveg, Dept. of Plant Pathology, UC Riverside
- 9:30            **Biology and control of Spotted Wing Drosophila**  
Dr. Bob Van Steenwyk, Department ESPM, UC Berkeley
- 10:05           Break
- 10:25           **Spotted Wing Drosophila:**  
                  **Insecticide residue degradation and maximum residue levels in sweet cherries**  
Stephanie Rill, Entomology Staff Research Associate, UC Cooperative Extension, Kern County
- 10:50           **Postharvest control of SWD in sweet cherries for export markets**  
Dr. Spencer Walse, USDA-ARS, Parlier, CA
- 11:15           **A systems approach to renovating the sweet cherry industry**  
Dr. Matthew Whiting, Washington State University, Prosser, WA
- 11:45           **Oriental Fruit Fly quarantine update for cherry growers**  
Scott Hudson, Agricultural Commissioner, San Joaquin County
- 12:15           **ADJOURN**

2.5 hours continuing education credit pending (0.5 hr. Laws & Regulations, 2.0 Other)

University of California Cooperative Extension  
**Quad-County Walnut Institute**

Contra Costa, San Joaquin, Stanislaus, Merced

Thursday, February 16, 2012

Evelyn Costa Assembly Room  
San Joaquin County Agricultural Center  
2101 E. Earhart Avenue, Stockton, California 95206

- 1:00 pm      **Welcome**
- Reports from walnut research trials in San Joaquin County**  
                 **Be on the look-out for Thousand Canker Disease**  
                 Joe Grant, UC Cooperative Extension, San Joaquin County
- 1:40           **The state of the walnut industry, 2012**  
                 Dennis Balint, Executive Director/CEO, California Walnut Board & California Walnut  
                 Commission  
                 Carl Eidsath, Technical Support Director, CWB & CWC  
                 Jennifer Olmstead, Marketing Director-Domestic, CWB & CWC
- 2:10           **Update on the Forde, Gillet and Sexton Varieties**  
                 **Impact of Botryosphaeria disease in 2011**  
                 Kathy Anderson, UC Cooperative Extension, Stanislaus County
- 2:40           **Break**
- 3:00           **Causes and corrections for walnut quality problems**  
                 Dr. Bruce Lampinen, Walnut and Almond Extension Specialist, UC Davis
- 3:30           **Steps to overcoming nematode problems in walnut replant situations**  
                 Dr. Mike McKenry, UC Cooperative Extension Nematology Specialist
- 4:00           **The role of biocontrol in walnut production**  
                 Dr. Nick Mills, UC Berkeley
- 4:30           **Adjourn**

**1.5 hours continuing education credit for PCA, QAL, QAC, Private Applicators**

*UC Cooperative Extension*

**No. San Joaquin Valley**

**Processing Tomato Meeting**

in conjunction with

*California Tomato Growers Association*

**65<sup>th</sup> Annual Meeting & Exhibit**

Thursday, **February 2, 2012**

Doubletree Hotel

1150 Ninth St

Modesto, CA

- 7:30 **Registration & Exhibits**
- 8:05 **Powdery mildew & bacterial speck update**  
Brenna Aegerter, Farm Advisor, San Joaquin Co.
- 8:20 **Fungicidal control of blackmold & Drip chemigation studies**  
Gene Miyao, Farm Advisor, Yolo/Solano/Sacramento Co.
- 8:40 **Tomato seed development & production issues**  
Steve Schroeder, Nunhems USA
- 9:00 **Tomato harvesters: present & future challenges**  
Dave Meester, CA Tomato Machinery Inc.
- 9:15 **Air Quality in the San Joaquin Valley**  
Anthony Presto, SJV Air Pollution Control District
- 9:30 **Break**
- 9:45 **Diesel engine regs & dust mitigation on farms**  
Sheras Gill, SJV Air Pollution Control District
- 10:00 **Weed control update (including bindweed)**  
Tom Lanini, Weed Science Specialist, UC Davis
- 10:20 **Making the CT paradigm work in proc. tomatoes**  
Jeff Mithcell, UCCE Cropping System Specialist
- 10:40 **Ag market outlook for CA in a global context**  
Steve Blank, UCD Ag & Resource Economics
- 11:00 **Visit Exhibits**
- 12:00 **CTGA Annual Meeting Luncheon**  
FREE for members  
\$35 non-members

RSVP for lunch to:

CA Tomato Growers Association

2300 River Plaza Dr. #100

Sacramento, CA 95833

(916) 925-1225

[ctga@sbcglobal.net](mailto:ctga@sbcglobal.net)

**Enhancing Biological Control  
in Orchard Cropping Systems**

A short course offered by:

The University of California, Washington State  
University, and Oregon State University

**February 22 and 23, 2012**

San Joaquin County Agricultural Center

2101 E. Earhart Avenue, Stockton, California 95206

Why does biological control matter?

Are pesticides and biological control compatible?

How do I know what's out there?

These and more questions are the focus of the interactive short course where you can learn more about natural enemies and novel tools to maximize biological control in walnut, almond, pear, and apple orchards. The information presented in this short course will be helpful and relevant to most perennial cropping systems.

Registration: <http://ucce.ucdavis.edu/survey/survey.cfm?surveynumber=7541>

**UC Soil Fertility Short Course 2012**

Wednesday, **February 22, 2012**

Buehler Alumni & Visitor Center, UC Davis

Sponsor: UC Vegetable Research & Information Center

Addressing the practical aspects of soil fertility management in annual cropping systems in an era of escalating fertilizer costs and government regulation .

The topics covered will include:

- getting the maximum value from soil testing
- interpretation of laboratory soil test results
- comparing fertilizer sources
- developing crop nutrient management plans
- fertilizer management and environmental protection

Intended for growers, CCAs, PCAs, government agency personnel, and others involved in fertility management planning. The registration fee is \$125, which includes lunch, refreshments and study materials. CCA and PCA continuing education credits will be requested.

Instructors: UC Cooperative Extension Specialists **Tim Hartz** (vegetable crops) and **Stu Pettygrove** (soils).

Registration & information: <http://vric.ucdavis.edu>.

## PRUNING DECIDUOUS FRUIT TREES

*A workshop for Master Gardeners  
and new growers*

**Lecture:** A 2-hour lecture in the morning will cover basic pruning concepts:

- why we prune
- the types of cuts
- positioning limbs
- vigor management
- pruning systems

Lecture will be held rain or shine on:

Friday, **February 10**, 2011  
10:00-noon  
Diablo Valley Farm Center  
3020 2<sup>nd</sup> St. (at Delta Rd)  
Knightsen, CA 94548

**Lunch:** On your own – bring a bag lunch, head home or visit a local restaurant

### **Optional Demonstration and Practice Sessions:**

If the weather allows, we will visit Brookside Farm from 1-4 in the afternoon for a demonstration and practice session. There is limited space for this session so sign up soon if you are interested.

*Bring your own pruning tools:* hand pruners, loppers, saw, pole pruner (if you have one).

Rain cancels this session and a rain date has been scheduled for the following Friday (weather permitting). If the second session is not needed as a rain date, an additional practice session may be conducted for those on the waiting list if the first session fills up.

Raindate or second field session (if needed):

- Friday, **February 17**, 1-4pm

**Registration:** Call 925-646-6540 to register. The class is free and open to all who wish to attend. *Space is limited for the afternoon practice session.*

## MORE MEETINGS:

January 24-26

### **Unified Wine & Grape Symposium**

Sacramento Convention Center

Contact: <http://www.unifiedsymposium.org/>

January 26

### **UC Riverside Citrus Day**

Variety collection tours of mandarins, oranges, lemons, and citrus relatives; variety breeding program; rootstock trials; crop sensors for irrigation; managing asian citrus psyllid, citrus thrips, fuller rose beetle; Givaudan citrus flavor design & development.

9am-4pm, UC Riverside Ag Operations, Riverside, CA

FREE (including BBQ lunch) but registration required

Register by Jan 16: <http://www.citrusvariety.ucr.edu>

January 28

### **Managing the Small Vineyard I**

The first in a quarterly series of 1-day classes for home and small commercial winegrowers. This covers many of the practices occurring during the winter and spring months.

9am – 4pm, UC Davis

\$175 includes course materials and lunch

Contact: (800) 752-0881; [www.extension.ucdavis.edu/wine](http://www.extension.ucdavis.edu/wine)

February 1-2

### **Eco Farm Conference**

Asilomar Conference Grounds, Pacific Grove, CA

Registration: 831-655-9924; [www.eco-farm.org](http://www.eco-farm.org)

February 14

### **Current Wine & Winegrape Research**

Brief presentations by researchers on their projects in breeding, cultural practices, and pest management enology.

9am – 5:30pm, UC Davis

\$49 includes lunch, wine reception, course materials

Contact: (800) 752-0881; [www.extension.ucdavis.edu/wine](http://www.extension.ucdavis.edu/wine)

March 4-6

### **24<sup>th</sup> California Small Farm Conference –**

#### **Cultivating the Next Generation**

Santa Clarita Conference Center, Valencia CA

Contact: 888-712-4188

[www.californiafarmconference.com](http://www.californiafarmconference.com)

March 15

### **Recent Advances in Viticulture & Enology**

This program provides overviews of the latest research on the microbes of wine and provides insights into astute management practices.

8:30am – 5pm, UC Davis

\$220 includes lunch

Contact: (800) 752-0881; [www.extension.ucdavis.edu/wine](http://www.extension.ucdavis.edu/wine)

## PUBLICATIONS:

The following are new or newly revised UC publications that are FREE and can be downloaded directly from our on line catalog: <http://anrcatalog.ucdavis.edu/>. Type the publication title into the search box to find the publication.

- Drip Irrigation Salinity Management for Row Crops
- Drought Irrigation Strategies for Alfalfa
- Marketing Strategies for Agritourism Operations

### *Vegetable Production Leaflets:*

- Asparagus Production in California
- Broccoli Production in California
- Chile Pepper Production in California
- Cilantro Production in California
- Fresh Market Bulb Onion Production in California
- Green Onion Production in California
- Broccoli Production in California
- Leaf Lettuce Production in California
- Spinach Production in California

The following are priced publications that can be reviewed and ordered directly from our on-line catalog: <http://anrcatalog.ucdavis.edu/>. Type the publication title or number into the search box then click on the title to see an overview of the publication and search the contents. You'll get a 10% discount on your entire on-line order by entering the promotion code **PRCC7** at checkout.

**Agritourism and Nature Tourism in California, 2<sup>nd</sup> Ed.**  
Publication # 3484  
\$25.00

**Cover Cropping for Vegetable Production: A Grower's Handbook**  
Publication # 3517  
\$25.00

**Farmstead and Artisan Cheeses: A Guide to Building a Business**  
Publication # 3522  
\$28.00

**Organic Vegetable Production Manual**  
Publication # 3509  
\$25.00

**Small Farm Handbook, 2<sup>nd</sup> Ed.**  
Publication # 3526  
\$25.00

**Vineyard Pest Identification Cards**  
Publication # 3532  
\$25.00

## WEATHER REPORT

**Rain:** We've had an extremely dry fall with no rain forecast for the foreseeable future. This puts us significantly behind schedule for fully recharging our soil profiles. Dry soil conditions can also make winter kill worse on tree crops during a cold snap and contribute to oil damage from dormant sprays or rest breaking sprays.

If you have water available, you may want to put on an irrigation to protect your trees from the winter drought problems mentioned above and begin refilling the soil profile for next season. When trees start out the season with less than a fully charged soil profile, it can be difficult to keep up with irrigation needs in mid and late summer as the deep soil moisture that often assists them during that time is missing.

If you are unable to irrigate, consider applying a lighter oil, a reduced rate, or a gentler rest breaking spray to avoid tree damage.

**Chill.** On the other hand we are doing quite well with our winter chill hours. We like to see close to 500 chill hours by the end of December in order for apricots, cherries, apples, and pears to mature their buds and set a good crop with a compact bloom. The rest we can accumulate in January and February.

You can check future chill hour accumulation at the UC Fruit & Nut Research & Information Center website: <http://fruitsandnuts.ucdavis.edu/> - click on the "Weather Related Models", then "Chill Accumulation Models".

BRENTWOOD CHILL HOURS						
MONTH	2011-2012	2010-2011	2009-2010	2008-2009	2007-2008	AVG
November	162	159	145	63	92	148
December	559	287	471	484	401	492
January		685	746	837*	751	807
February		966	778	986*	920	903

\* estimates from the Tracy Station

RAINFALL			
MONTH	BRENTWOOD		PLEASANTON
	2009-2010	AVG	2009-2010
October	0.8	0.7	1.0
November	0.7	1.2	1.3
December	0.2	2.1	0.2
January		3.0	
February		2.9	
March		1.6	
April		0.7	
May		0.6	
June		0.2	
July		0.0	
August		0.0	
September		0.3	
<b>TOTAL</b>	<b>1.7</b>	<b>13.1</b>	<b>2.5</b>

# Assessment of Multiple Approaches for Controlling Gophers in Orchards

By Roger A. Baldwin, UC IPM Wildlife Pest Management Advisor, Kearney Ag Center

## Pocket Gopher Control Options

Pocket gophers cause extensive damage to many crops throughout California. Many tools are available for controlling gophers including trapping, fumigation with aluminum phosphide, poison baits, and the use of a gas explosive device. Trapping gophers has been a common method for controlling gophers for many years. However, a new trap called the Gophinator (Trapline Products, Menlo Park, CA) is now available that may increase efficiency of trapping.

Additionally, combining aluminum phosphide fumigation with trapping may increase effectiveness, as gophers will occasionally spring traps without getting captured. In these situations, gophers often become trap shy and are much more difficult to capture. Treating these tunnel systems with aluminum phosphide shortly after trapping could remove these individuals from the population thereby increasing gopher control in vineyards. Poison baiting has often been used to control gophers. Efficacy of baiting has varied widely, although strychnine has traditionally been most effective. Gas explosive devices may also be effective. These devices combust a mixture of propane and oxygen within tunnel systems, thereby killing gophers through concussive force while also destroying the burrow system.

## Testing Efficacy

All of these methods are currently allowable techniques for controlling gophers in California, although the efficacy and efficiency of these approaches, particularly in comparison to one another, have been unclear. Therefore, I tested these control strategies at Laguna Ranch, Sebastopol, CA, from 6 April – 8 May, 2009, to estimate the efficacy and efficiency of these approaches. Plots of all three treatment types (trapping + aluminum phosphide, baiting with strychnine, gas explosive device [Rodenator®]) were established within each block. Comparisons of the number of gopher activity plots that contained fresh gopher mounds and feeder holes before and after treatments showed substantial reductions in gopher sign for all trapping + fumigation plots (range = 74–90% control). No baiting (range = 30–56% control) or Rodenator® (range = 0–55% control) plots indicated substantially reduced gopher sign. The time required to apply each treatment was relatively similar between baiting, trapping, and Rodenator® treatments (90–106 seconds per burrow); fumigation treatments were substantially longer (260 seconds). Approximate costs per acre for each treatment were \$420 for baiting, \$396 for the Rodenator®, and \$252 for trapping + fumigation.

## Conclusions

To be effective, control measures need to result in a minimum of a 70% reduction in plots with gopher activity; values of 80–90% are preferable.

Trapping + fumigation met this minimum criterion in all three plots, and met the more rigorous criterion in 2 of 3 plots. Even the one plot that fell short of an 80% reduction in plots with gopher activity yielded a 92% reduction in overall gopher activity. In addition to being more efficacious, trapping + fumigation was also more cost effective. Therefore, trapping + fumigation appears to be an effective method for controlling gophers.

Baiting and Rodenator® treatments did somewhat reduce gopher activity in most plots, but these levels of control fell well below the minimum threshold for effectiveness (70%). As such, growers may realize short-term benefits from control, but will have to apply equal effort for control the following year, whereas more effective control measures (80–90%) would reduce the cost of control in subsequent years.

## Recommendations

- Although controlling pocket gophers is possible year-round, control methods are best conducted from winter through early spring when soil moisture is high. Gophers mound more during this period; identifying fresh mounds is key to effective control.
- Trapping and fumigation with aluminum phosphide appear to be the most effective methods for controlling pocket gophers. Areas should be treated a minimum of two times to increase overall control.
- Baiting and Rodenator® treatments were less effective following two treatment applications. The effectiveness of these methods would likely increase with further applications. However, these added treatments would increase the cost of control.
- The size of gopher populations should be assessed before and after treatment to determine the effectiveness of treatment applications. An easy method to index gopher populations is to establish 20 to 25 30x30 ft. plots evenly throughout your treatment area. A few days before treating the field, flatten all old mounds within each plot (using your boot or a rake is a good way to flatten mounds). Three days later, check all survey plots for new mounds. Divide the number of plots with fresh mounds by the total number of plots and multiply by 100. This provides an estimate of the percent of your field with gopher activity. Repeat this process 2–5 days after applying control treatments (i.e., baiting, trapping, fumigation, etc.). This will give you the percent of your field occupied by gophers before and after treatment and will let you estimate how effective your control measures were. Ideally, you should work to reduce gopher populations by >80–90% to observe substantial reductions in gopher populations the following year.

Once treatment applications are finished, continue to monitor fields periodically for reinvading gophers. Pay particular attention to the perimeter of fields, as these are the areas that gophers will first reinvade. Controlling gophers along the perimeter of fields will keep gopher populations from building back up throughout your fields.

## **CROP CURRENTS**

UCCE – CONTRA COSTA COUNTY  
75 SANTA BARBARA RD, 2<sup>ND</sup> FLOOR  
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## **MEETING ANNOUNCEMENT**

*TIME SENSITIVE MATERIAL*

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