

# CROP CURRENTS

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JANUARY 2016	
•	The Weather Report
•	UC Fertilizer Guidelines
•	Have Voles in Your Orchard?
•	Meeting Announcements:
•	Jan 15: Developing a Business Plan for a Specialty Food Business
•	Jan 26: Cherry Research Review
•	Jan 27: NSJV Processing Tomato Meeting
•	Mar 15: Quad County Walnut Institute
•	Even More Meetings!

## THE WEATHER REPORT

**Rainfall:** We’ve had fairly average rainfall to date (October through December). Our soils profiles are moist enough that perennial crops should be better able to withstand frost and there should not be concern about damage from oil sprays due to dry soils. The above average rainfall that is expected for this “El Nino” year is predicted to begin in January. And perhaps it already has. It is pouring rain as I write this newsletter and rain is predicted throughout the entire 1<sup>st</sup> and much of the 2<sup>nd</sup> week in January.

**Winter Chill.** We’ve had a nice, fairly cold and overcast fall with even some old fashioned fog showing up. We have accumulated an average amount of winter chill hours to date.

Traditionally we like to see close to 500 hours of chill (hours below 45<sup>0</sup>F) by the end of December in order for the higher chill orchard crops (apricots, cherries, apples, pears) to properly mature their buds and set a good crop with a compact bloom. This traditional method has worked well under the rainy, foggy, and overcast winters that used to be typical for us in the past. In more recent years, we have had less fog and more warm, bright, sunny days in the winter which can negate or reverse the chill accumulation. Our old model doesn’t take this into account even though we know that it can influence chill.

In the 1990’s, Dr. Ammon Erez and other researchers developed a more complex chill accumulation model to account for the negating effects of fluctuating winter temperatures. It is called the Dynamic Model and calculates the chill in units called “Chill Portions”.

This model has been most thoroughly tested in California cherries to help determine when sufficient chill has accumulated *to be able to successfully*

CUMULATIVE RAINFALL (inches)				
	BRENTWOOD		PLEASANTON	
MONTH	2014 – 2015	28 Year Average	2014 – 2015	10 Year Average
Oct	1.3	0.7	0.0	1.2
Nov	2.7	1.9	2.6	2.9
Dec	4.3	4.4	7.0	6.4
Jan		7.2		8.8
Feb		9.9		11.1
Mar		11.4		14.1
Apr		12.2		15.5
May		12.8		16.2
Jun		12.9		16.6
Jul		12.9		16.7
Aug		12.9		16.7
Sept		13.1		16.8

apply rest breaking sprays. However, we haven't collected the data that indicates how many chill portions are required for cherries (or most other tree crops) to satisfy their complete winter "rest" requirement.

So I include the Chill Portions calculations only as an interesting comparison. You'll see that the Chill Portions better reflect the chill "negation" that we experienced from a lot of clear, bright, sunny, winter days in 2013-2014 which resulted in a straggly bloom and poor set in some crops even though the Chill Hours seemed sufficient. Last season both methods showed insufficient accumulation to set a good crop for high chill requirement tree crops. So far, we are doing better this year with Chill Portions than we have for the last 3 years.

You can keep up with the chill accumulations on line at: <http://fruitsandnuts.ucdavis.edu/>.

## UC FERTILIZER GUIDELINES HELP WITH MANAGEMENT PLANS

New water quality regulations require all growers to fill out **Farm Evaluation Plans** as well as **Nitrogen Management Plans** this season. Our local Water Quality Coalition group (the San Joaquin County & Delta Water Quality Coalition) will be coordinating this effort for their members, providing templates for the reports and summarizing and submitting required documents to the Regional Water Quality Control Board.

In order to help growers fine tune their fertility programs and complete their Nitrogen Management Plans, the University of California has partnered with the CDFA's Fertilizer Research and Education Program to make research based fertility information more available to growers. Dr. Daniel Geissler, our new UC Cooperative Extension Soil Specialist, has been working on an interactive series of **Fertilization Guidelines** for the major crops grown in California. He has completed guidelines for the following crops and more are on the way:

Alfalfa	Almonds	Barley
Broccoli	Cauliflower	Citrus
Corn	Cotton	Grapes
Lettuce	Peaches/Nectarines	Pistachio
Potatoes	Prunes/Plums	Rice
Strawberries	Tomatoes, proc.	Walnuts
Wheat		

You can find them on line at:

<http://apps.cdfa.ca.gov/frep/docs/Guidelines.html>

## HAVE VOLES IN YOUR ORCHARD?

There is a new material that shows promise as a vole repellent which may prevent them from chewing on bark and girdling trees. Our UCCE Vertebrate Pest Specialist, Roger Baldwin, would like to test it to see if it works as well in the field as it did in his lab. If you think you may have voles in your orchard and would like to participate in a field study, give me a call – 925-646-6129. Maybe we can help you take care of those pesky critters.

PLEASANTON CHILL UNITS (hours below 45 F)						
MONTH	2015-2016	2014-2015	2013-2014	2012-2013	2011-2012	10 year Average
Nov	281	113	206	132	182	170
Dec	584	219	658	416	558	486
Jan	(637)*	548	972	809	855	816
Feb		666	1113	1097	1056	991
*Through January 4						
BRENTWOOD CHILL UNITS (hours below 45 F)						
MONTH	2015-2016	2014-2015	2013-2014	2012-2013	2011-2012	28 year Average
Nov	167	80	130	95	162	117
Dec	412	203	551	355	559	419
Jan	(481)*	525^	816	769	907	733
Feb		639^	921	998	1066	884
*Through January 4; ^ Tracy weather station data						
BRENTWOOD CHILL PORTIONS (The Dynamic Model)						
MONTH	2015-2016	2014-2015	2013-2014	2012-2013	2011-2012	13 year Average
Oct	0	0	1	1	1	1.5
Nov	15	11	11	12	19	14
Dec	35	28	31	33	42	36
Jan	(38)*	48	46	56	62	59
Feb		62	57	74	79	77
*Through January 4						

# **DEVELOPING A BUSINESS PLAN FOR YOUR SPECIALTY FOOD BUSINESS**

**Friday, January 15, 2016**

**9:00 am – 4:30 pm**

1000 Broadway, Room 5000B

Oakland, CA 94607

Sponsored by the UC Small Farm Program & UC Cooperative Extension  
Funded by the California Department of Food and Agriculture Specialty Crop Block Grant

- 9:00 am      **Welcome Back! Overview & Introductions**  
Shermain Hardesty, UC Small Farm Program Extension Economist
- 9:15            **Importance of Business Planning and Business Plan Formats**
- 9:54            **How I Started and Grew My Specialty Food Business**  
Courtney Smith, Bloomingcamp Ranch
- 10:45          Break
- 11:00          **How I Started and Grew My Specialty Food Business**  
Penny Granberg, Rose Lane Farms
- Noon           **Lunch**
- 12:45          **Assessing Your Specialty Food Business Readiness**  
Shermain Hardesty, UC Small Farm Program Extension Economist
- 1:00            **Preparing Your Project Income Statement and Introduction to SBDC Resources**  
Deagon Williams, Oakland Small Business Development Center (SBDC)
- 2:15            **Sharing - Question & Answer Period**  
Courtney Smith, Penny Granberg, Shermain Hardesty, Deagon Williams, attendees
- 2:45            **Break**
- 3:00            **Let's Get Started on Your Business Plan**  
Shermain Hardesty, UC Small Farm Program Extension Economist
- 4:00            **Resources and Wrap Up**
- 4:30            **Adjourn**

Workshop fee: \$25.00 paid online by credit card or by check.

[Pre-registration](#) required - space is very limited -

Pre-register at: <http://ucanr.edu/spfoodbus>

For more information, contact:

Shermain Hardesty, 530-752-0467, [shermain@primal.ucdavis.edu](mailto:shermain@primal.ucdavis.edu)

# CALIFORNIA CHERRY RESEARCH REVIEW

January 26, 2016

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

Sponsored by the University of California and California Cherry Board

- 9:00 am      **Welcome**  
Joe Grant, UC Cooperative Extension, San Joaquin County
- 9:10          **Control of cherry fungal canker diseases**  
Dr. Doug Gubler, Dept. of Plant Pathology, UC Davis
- 9:30          **Developing a biopesticide to combat spotted wing drosophila**  
Joanna Chiu, Dept. of Entomology, UC Davis
- 9:50          **Engineered transgenic *Drosophila suzukii* for wild population suppression & eradication: Production, performance assessment and effective wild releases**  
Dr. Omar Akbari, Dept. of Entomology, UC Riverside
- 10:10        **Volatile codes: Correlation of olfactory signals and reception in *Drosophila*-yeast chemical communication**  
Dr. Zain Syed, University of Notre Dame
- 10:30        **Investigating biological controls to suppress spotted wing drosophila populations**  
Dr. Kent Daane, Dept. of ESPM, UC Berkeley and UC Kearney Agricultural Research & Extension Center, Parlier, CA
- 10:50        **Break**
- 11:10        **Systems approach for control of brown marmorated stinkbug, *Halyomorpha halys*, in California sweet cherries**  
Dr. Spencer Walse, USDA-ARS, Parlier, CA
- 11:30        **A Portable Cabinet X-ray Machine to Control Quarantine Pests in Exported Fruit**  
Dr. Peter Follett, USDA-ARS, Hilo, HI
- 11:50        **Update: 2015/2016 chill accumulation**  
Mike Devencenzi, Denevenzi Ag Pest Management and Research
- 12:10        **Management and epidemiology of pre- and postharvest foliar and fruit diseases of sweet cherry**  
Dr. Jim Adaskaveg, Dept. of Plant Pathology, UC Riverside
- 12:30        **Lunch** (courtesy of California Cherry Board)  
**Update on the California Cherry Board's Self-Assessment for Cherry Production Program**  
Cliff Ohmart, SureHarvest
- 1:30          **Adjourn**

2.7 hours of PCA Continuing Education Credit pending

University of California Cooperative Extension  
**NORTHERN SAN JOAQUIN VALLEY PROCESSING TOMATO MEETING**

*In conjunction with:*  
**The California Tomato Growers Association (CTGA) Annual Meeting**

Wednesday, January 27, 2016  
8:00 - 11:00 am

Modesto Double Tree Hotel  
1150 9th St, Modesto, CA 95354  
<http://www.ctga.org>

- 8:00 am      **Welcoming remarks**  
Scott Stoddard, Farm Advisor, UCCE Merced & Madera Counties
- 8:05          **Tomato disease update**  
Brenna Aegerter, Farm Advisor, UCCE San Joaquin County
- 8:25          **Managing stink bugs with insecticides**  
Tom Turini, Farm Advisor, UCCE Fresno County
- 8:45          **Yield response to potassium and supplemental composted poultry manure applications**  
Gene Miyao, Farm Advisor, UCCE Yolo, Solano, & Sacramento counties
- 9:05          **Getting ready for nitrogen management plans**  
Tim Hartz, CE Vegetable Crops Specialist, UC Davis
- 9:25          Coffee break
- 9:40          **Summary of pre-plant herbicide carryover studies in buried drip fields.**  
Kurt Hembree, Farm Advisor, UCCE Fresno County.
- 10:00        **Beyond VFFNP – breeding for the “new” generation of California diseases.**  
Rich Ozminkowski, Tomato Breeder, The Kraft-Heinz Company
- 10:20        **Twenty-five years with CTRI: summarizing the past, anticipating the future.**  
Chuck Rivara, California Tomato Research Institute
- 10:40        **What’s New from:**  
                Bayer (Paul Walgenbach),  
                DuPont (Carl Bannon),  
                BASF (Leigh Ann Harrison),  
                Syngenta (Scott Kreighbaum)
- 11:05        **Visit vendors**
- 12:00        **CTGA luncheon**

University of California Cooperative Extension  
**QUAD-COUNTY WALNUT INSTITUTE**  
Thursday, March 15, 2016

*In conjunction with:*  
**STOCKTON TRADE SHOW**  
San Joaquin County Fairgrounds  
1658 S Airport Way, Stockton, CA 95206

- 8:00 am      **Coffee & registration**
- 8:30          **Choosing the right rootstock**  
Joe Grant, UC Cooperative Extension, San Joaquin County
- 9:00          **Should we prune young walnuts?**  
Janet Caprile, UC Cooperative Extension, Contra Costa County
- 9:30          **Understanding and managing walnut Botryosphaeria/Phomopsis canker and blights**  
Dr. Themis Michailides, Plant Pathologist, UC Kearney Ag Center, Parlier
- 10:00        **Break to visits exhibits - 30 minutes**
- 10:30        **Salinity management for nut crops**  
David Doll, UC Cooperative Extension, Merced County
- 11:00        **Managing navel orangeworm**  
Kathy Anderson, UC Cooperative Extension, Stanislaus County
- 11:30        **California Walnut Board & Commission present: A new beginning**  
Dennis Balint, CEO/Executive Director, California Walnut Board & California Walnut  
Commission; Michelle McNeil; Jennifer Olmstead; and Carl Eidsath
- 12:00        **Adjourn – Visit exhibits**

## MORE MEETINGS:

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January 12-13

### **PROVEN SOLUTIONS TO DROUGHT STRESS:**

#### **Water Management Strategies for Perennial Crops with Limited and Impaired Water Supplies**

Modesto Center Plaza  
1150 9<sup>th</sup> St, Modesto, CA

This workshop brings together experts in drought management from the U.S., Israel, and Australia. CEU's will be available for certified crop advisers, certified professional agronomists, and certified professional soil scientists or soil classifiers.

*Fee: \$150*

*Sponsors:* USDA-ARS and UC-ANR's California Institute for Water Resources

*Registration and information at:*

<http://www.droughtmgt.com/>.

January 14

### **YOUNG ORCHARDS WORKSHOP**

8:00-12:00

Woodland Community & Senior Center, Woodland.

*Topics include* vertebrate management, irrigation for young almonds, training & pruning young almonds, pest & disease concerns in young orchards.

FREE

*Sponsor:* UC Cooperative Extension, Sacramento-Solano-Yolo

*Contact:* Katherine Pope, Orchard Systems Advisor, [kspope@ucanr.edu](mailto:kspope@ucanr.edu)

January 20

### **No. San Joaquin Valley ALMOND DAY**

8 am - noon

Modesto Jr. College Ag Pavilion (West Campus)  
2201 Blue Gum Ave., Modesto, CA

FREE

*Sponsor:* UC Cooperative Extension

*Contact:* Brent Holtz, (209) 953-6100, [bahltz@ucanr.edu](mailto:bahltz@ucanr.edu)

January 20-23

### **36<sup>th</sup> ECO- FARM CONFERENCE**

Asilomar Conference Grounds,  
Pacific Grove, CA

*Registration Fee:* variable options

*Contact:* [www.eco-farm.org](http://www.eco-farm.org)

February 2

### **LODI GRAPE DAY**

8 am – 2 pm

Hutchins Square

125 S. Hutchins St, Lodi

Morning session is FREE. Lunch is \$25.

*Sponsor:* UC Cooperative Extension

*Contact:* Paul Vedegaal, (209) 953-6119

February 2-3

### **CA PLANT & SOIL CONFERENCE**

Wyndham Hotel

9000 W. Airport Dr., Visalia, CA 93277

Scientific presentations on water, nutrients, salinity, pests, and more. PCA and CCA Continuing Education credits available.

*Sponsor:* American Society of Agronomy

*Registration Fee:* \$105-215

*Contact:* [calasa.ucdavis.edu](mailto:calasa.ucdavis.edu)

March 1-2

### **FRUIT RIPENING & ETHYLENE MANAGEMENT WORKSHOP**

UC Davis

*Sponsor:* UCD Post Harvest Technology Center

This [workshop](#) focuses on how to ripen fruit and fruit-vegetables for fresh cut processing and for wholesale and retail sales, and delivering ready-to-eat, delicious fruits to consumers.

*Fee:* \$899 includes all classroom instruction, lab activities, course materials, morning and afternoon coffee breaks, lunches, and an evening mixer.

*Registration & information:*

<http://postharvest.ucdavis.edu/>

March 5-8

### **CA SMALL FARM CONFERENCE**

Sacramento, CA

This is the state's premier gathering for small-scale farmers, farmers' market managers, agricultural students, educators and advocates. Includes field courses, educational and interactive workshops, a trade show, and multiple networking opportunities. Tasting Reception on March 7, 5:30 – 7:30 pm, highlights the bounty of the region.

*Fees:* Variable options; early bird registration ends Jan 22; scholarship available

*Contact:* [www.CaliforniaFarmConference.com](http://www.CaliforniaFarmConference.com),  
1 (888) 712-4188

# CROP CURRENTS

Hope you find something of interest in this issue.

Janet Caprile  
Farm Advisor  
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TIME SENSITIVE MATERIAL

UCCE – CONTRA COSTA COUNTY  
75 SANTA BARBARA RD, 2<sup>ND</sup> FLOOR  
PLEASANT HILL, CA 94523-4215