



SUTTER/YUBA COUNTIES COOPERATIVE EXTENSION ~ UNIVERSITY OF CALIFORNIA  
 142A GARDEN HIGHWAY, YUBA CITY CA 95991  
 Tel: (530) 822-7515 ~ Fax: (530) 673-5368  
<http://cesutter.ucdavis.edu>



# Pomology Notes

April 2005 Issue

## UPCOMING MEETINGS:

<u>DATE</u>	<u>TITLE/SUBJECT</u>	<u>LOCATION</u>	<u>CONTACT</u>
MAY 3 .....	UCCE PRUNE SPRING FIELD MTNG	YUBA CITY	822-7515
MAY 11.....	NICKELS FIELD DAY	ARBUCKLE	458-0570
JUNE 15.....	SUTTER/YUBA ALMOND FIELD DAY	YUBA CITY	822-7515

## GENERAL ORCHARD CHECKLIST FOR APRIL:

- ❑ Plan nitrogen fertilizer program for the rest of the season **after** fruit set. Split applications are more cost effective.
- ❑ Plan potassium fertilizer program for the rest of the season **after** fruit set. Fall is the best timing for potassium fertilization in blocks with flood or solid set sprinkler irrigation, but a heavy crop may mean the orchard needs extra help (foliar sprays) to make it through the season without becoming potassium deficient. Growers with drip or micro-sprinkler irrigation system can begin adding potassium through the irrigation system (depending on crop size) in the spring when fruit growth and nutrient demand takes off.
- ❑ Look for zinc deficiency symptoms in the orchard now – particularly delayed bud break and small, yellow leaves. These symptoms may disappear later in the season as shoot growth increases.
- ❑ Peach twig borer traps should be up by now (late March). UC recommends 2 traps per block.
- ❑ Protect the future of your orchard by painting the trunks of replants and young trees **WHITE**. When painting trunks, use indoor water-based latex (not oil-based) paint. Trunk shields (“nursery boxes”) can protect the bark of young trees from herbicides, but should be removed in the fall to avoid holding moisture around the trunk that could promote disease. If trunk shields are used on young trees, the trunk should also be painted to avoid “box burn” around the top of the box that could girdle the tree trunk at that height. “Box burn” can be a significant problem in hot springs or late plantings.
- ❑ Call me (Franz at 822-7515) and invite me out to your orchard. I’d like to meet you and learn about your operation.

The University of California prohibits discrimination against or harassment of any person on the basis of race, color, national origin, religion, sex, physical or mental disability, medical condition (cancer-related or genetic characteristics), ancestry, marital status, age, sexual orientation, citizenship, or status as a covered veteran (covered veterans are special disabled veterans, recently separated veterans, Vietnam-era veterans or any other veterans who served on active duty during a war or in a campaign or expedition for which a campaign badge has been authorized) in any of its programs or activities or with respect to any of its employment policies, practices, or procedures. University Policy is intended to be consistent with the provisions of applicable State and Federal laws. Inquiries regarding the University's equal employment opportunity policies may be directed to the Affirmative Action/Staff Personnel Services Director, University of California, Agriculture and Natural Resources, 300 Lakeside Drive, 6<sup>th</sup> Floor, Oakland CA 94612-3550 (510) 987-0096.

**PRUNE ORCHARD SPECIFIC CHECKLIST FOR APRIL:**

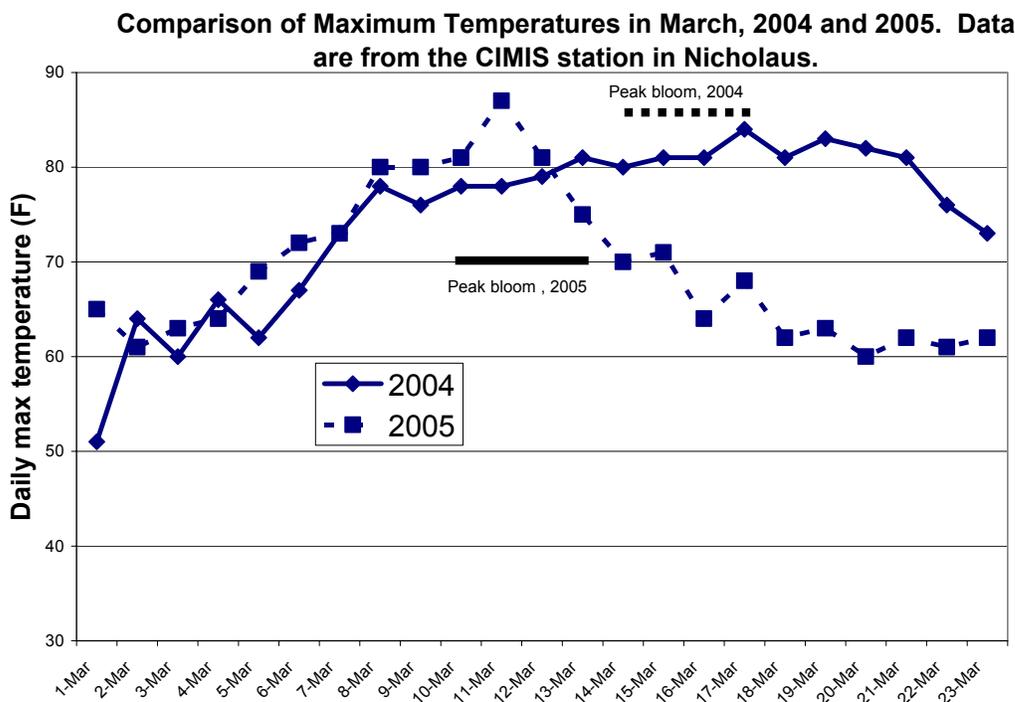
- ❑ Check out availability of a shaker for thinning.
- ❑ Evaluate fruit set in April to determine fruit number per tree and decide if shaker thinning at reference data is needed (see article below).
- ❑ Consider painting bark (white; at least the southwest side) of young trees (2<sup>nd</sup>-5<sup>th</sup> leaf). Early and late season heat can sunburn trees of this age.

**ALMOND ORCHARD SPECIFIC CHECKLIST FOR APRIL:**

- ❑ Watch the weather forecasts, and when needed, protect almonds against spring and summer diseases – especially sensitive varieties (see information in this newsletter).
- ❑ Navel orange worm traps should be up by April 1. Use four traps per block or 1 trap per 10 acres in large blocks.

**PRUNE BLOOM WEATHER: 2004 vs. 2005**

Will there be a decent prune crop this year? It is too early to tell as I write this in late March. The 2005 crop picture should be clearer in early April. This year, temperatures leading up to bloom were hot, but cooled off rapidly (see graph below). Comparisons of ETo and humidity for the same time period in 2004 and 2005 show that the heat came early this year (March 8-12), but the driest weather was on March 13-14, after the temperatures had started to drop. Hopefully this offset in timing of peak heat vs. peak dryness and/or the rapid cooling during the later bloom and petal fall periods permitted good flower fertilization and a good crop in 2005. On the downside, the rainy petal fall weather may (?) produce scab in some orchards.



## TIME TO THINK ABOUT SHAKER THINNING PRUNES

Even though it's too early to tell if there is a decent crop in prunes this year, it isn't too early to plan for a good to heavy crop in case there is one. Shaker thinning a heavy crop will help increase size of the remaining fruit, improve leaf potassium levels, improve crop dry away (less small fruit), and improve the production potential in future years. Not thinning a heavy crop will probably mean small fruit, broken limbs, potassium deficiency, and possibly sunburn and *cytospora* infection. A sure way to set back or ruin a prune orchard is to hang and harvest a much larger crop than the orchard can effectively size.

If I were growing prunes and didn't have my own prune harvester, I would make some phone calls now and line up an experienced shaker operator and equipment to thin once reference date arrived (usually early to mid-May). Then I'd wait to see if I had a crop. If there is a crop, I'd do the following:

- ❑ Consider sending a crew through the orchard with gas-powered hedgers-on-a-stick (Stihl, Husqvarna, etc.) to shorten "hangers" if this hasn't been done in some time. This will allow better energy transfer to the fruit when shaker thinning, as well as provide some early crop thinning.
- ❑ Get a copy of the handout "Shaker-thinning for prunes—General Guidelines" available from the UC Farm Advisor's office at 142A Garden Highway, Yuba City.
- ❑ Attend the UCCE Sutter/Yuba Prune Field Day on May 3 and watch the demonstration of shaker thinning and listen/participate in the discussion.
- ❑ Determine fruit count in my orchard and thin as soon as reference date was confirmed.

### UCCE SUTTER/YUBA PRUNE FIELD DAY

**MAY 3, 2005**

**HEIER'S ORCHARD, EAST BUTTE ROAD, SUTTER COUNTY**

8:30 am	Sign-in with coffee and donuts
9:00	Prune shaker thinning demonstration
10:00	Aphid control trial and insect scouting review
10:30	Foliar zinc demonstration and discussion
11:00	Review of orchard moisture monitoring options
11:30	Tower sprayer demonstration, <i>Tom Winslow, Blueline Manufacturing Company</i>

**1 CE hour  
requested**

MEETING LOCATION: just south of the Sanders and East Butte Roads intersection on the west side of East Butte Road.

DRIVING DIRECTIONS: Exit Hwy 99 at Eager Road (several miles north of Yuba City and south of Lomo crossing). Drive west on Eager Road to Larkin Road. Turn right on Larkin Road, go north several miles, and then turn left on Sanders Road. Take Sanders Road going west, past Broadway, until Sanders dead ends into East Butte Road. Turn left on East Butte Road and Heier's orchard will be on the right within a quarter mile. Yellow UC meeting signs will be out on East Butte Road to direct you to the meeting location.

## NEW MEALYBUG PEST!?

The striped mealy bug is an orchard pest of increasing concern in pistachio and almond orchards of the San Joaquin Valley. It has also been found on grapes in El Dorado County. This pest can attack many plants, including stone fruit trees (peaches, prunes, nectarines, etc.). While this pest has not yet been found in Yuba or Sutter counties, many prune harvesters from the Sacramento Valley work in San Joaquin Valley pistachio orchards. Growers should be aware of this new pest and the possibility that it may move from orchard to orchard on harvesters – especially those that work in potentially infested pistachio orchards. More information and a picture of this pest is available on line at:

[http://www.co.el-dorado.ca.us/ag/pdf/Striped\\_Mealybug\\_Gen\\_Info.pdf](http://www.co.el-dorado.ca.us/ag/pdf/Striped_Mealybug_Gen_Info.pdf), or by calling me (Franz) at 822-7515.

## GENERIC FERTILITY PROGRAM FOR PRUNES AND ALMONDS

There is no one-size-fits-all fertility program for tree crops. The biggest factor determining orchard nutrient need is cropload, and that often changes from year to year. In addition, there may be special needs in a particular block that can only be identified by annual leaf sampling and occasional soil samples. However, as a place to start, the following is a generic fertility program for prunes and almonds:

### **POTASSIUM (K)**

**TIMING:** *Fall*, for soil banding in flood or solid set sprinkler irrigated orchards

*April – July*, when injecting fertilizer through drip or micro-sprinkler irrigation systems or in foliar sprays.

**RATES/MATERIALS:** UC recommends 300-500 pounds of fertilizer material\* per acre per year (soil applied) as a maintenance program. More is needed if the orchard is deficient. Potassium nitrate sprays can be used in season to supplement or substitute for soil application. Four sprays (20 lbs potassium nitrate per 100 gallons of water), at least 2 weeks apart, are needed in prunes to effectively substitute for ground applied potassium fertilizer. Exact timing of these sprays is not critical. They can be applied in spring or summer.

### **NITROGEN (N)**

**TIMING:** *After crop set*

**RATES/MATERIALS:** The rate per acre depends on cropload. However, in prunes carrying a good crop, a good base level is 100 lbs of N per acre per year. Track summer leaf N levels and adjust according to the needs of a particular orchard. There is a prune nitrogen budget in the UC IPFP binder. In almonds, 1,000 lbs of nut meats uses approx. 100 lb of actual N. An almond nitrogen budget is available on the web at:

<http://fruitsandnuts.ucdavis.edu/almondNKmodel/almondNKmodel.htm>

### **ZINC (ZN)**

**TIMING:** *Fall or Spring*

**RATES/MATERIALS:** Foliar sprays give the most consistent results in correcting zinc deficiency symptoms. In the fall, UC recommends 10-15 lbs zinc sulfate in 100 gallons of water sprayed at a dilute (400 gpa) rate at natural leaf drop. In the spring, various materials are available. UC recommendations include 2 lbs zinc sulfate or 5 lbs of basic zinc sulfate (neutral zinc 52%) in 100 gallons of water. Please read and carefully follow the label.

---

\*As 0-0-50 potassium sulfate (sulfate of potash) or 0-0-60 potassium chloride (muriate of potash).

**BORON (B) – in almonds**

**TIMING:** *Harvest thru “pink bud”*

**RATES/MATERIALS:** Foliar sprays have been most consistently used to improve nut set and production in almonds. Two pounds of Solubor (or equivalent amount of actual B) in 100 gallons of water sprayed at 100 gpa has been the standard in UC experiments. Applying boron at full bloom can reduce set, so spraying boron between pink bud and petal fall should be avoided. Applying boron between petal fall and harvest can improve tree boron status, but may not provide the yield increase that has been documented following a boron spray between harvest and pink bud. Hull samples, taken at harvest, are the best way to determine almond boron status.

**SPRING/SUMMER DISEASE CONTROL IN ALMOND**

If April and/or May (June?) are as wet as late March, then spring/summer disease control should be a priority for almond growers, especially in sensitive varieties (see table in this newsletter) with a history of disease. This is particularly true for anthracnose, which can damage the current crop and cropland in years to come by killing fruiting wood. When spring rains are forecast, especially long, warm storms, growers are strongly urged to consider protecting their orchards from disease.

Alternate fungicide chemistry, whenever possible, to avoid resistance development. Use of some fungicides is restricted after bloom. Always read and follow the label.

**IPFP BINDER UPDATES AVAILABLE**

The UC Integrated Prune Farming Practices (IPFP) Binder has been updated twice – once in 2004 and once in 2005 – since it was first available in 2003. If you bought an IPFP binder from the Sutter/Yuba County UCCE Farm Advisor’s office in 2003, and haven’t gotten an update since, please call me (Franz at 822-7515) and let me know. I’ll get the necessary updates to you. If you bought your copy from another UCCE office, please call that office for an update.

**SPRING/SUMMER DISEASE SENSITIVITY IN SELECTED ALMOND VARIETIES**

Disease	Butte	Carmel	Fritz	Merced	Mission	Monterey	NP Ultra	Non-Pareil	Padre	Peerless	Price	Ruby	Sonora	Thompson
Anthracnose	S	S	VS	VS	S	VS	VS	SR	S	S	VS	--	--	VS
Shot hole	S	S	S	VS	S	--	VS	VS	S	VS	S	S	S	VS
Alternaria leaf spot	VS	VS	VS	S	S	SR	--	VS	SR	--	S	S	VS	--
Scab	S	VS	S	VS	S	S	VS	S	--	S	VS	VS	VS	S

VS= very susceptible    S= susceptible    SR = somewhat resistant    -- = no information

Information in this table was taken from a larger table on page 16 of the 2<sup>nd</sup> edition of Integrated Pest Management for Almonds, UC ANR Publication #3308. This publication is available for \$32.00 plus tax from your local UCCE office, including the Sutter/Yuba office at 142A Garden Highway in Yuba City.

FRANZ NIEDERHOLZER  
U.C. FARM ADVISOR