



Pomology Notes



January 2004

Upcoming Meetings

Date	General Topic	Place	Contact number
• January 15 th	Water Quality/Drift Control	Chico	(see below)
• January 22 nd	Cling Peach Day	Yuba City	530-822-7515
• February 3 rd	North Sac Valley Nut Meeting	Chico	530-538-7201
• February 4 th	UC Olive Day	Sacramento	530-822-7515
• February 12 th	Listening Session (see article below)	Redding	(see below)
• February 12 th	Managing Labor Costs Seminar	Yuba City	530-822-7515
• February 17 th	Sutter/Yuba/Colusa Walnut Day	Yuba City	530-822-7515
• February 17 th	Organic Pear Production and Marketing	Rohnert Park (Sonoma County)	
• February 24 th	South Sac Valley Almond meeting	Colusa	530-458-0570
• February 24 th	Organic Soil Fertility Workshop	Yuba City	530-822-7515
• February 26 th	UC Tehama County Prune Meeting	Yuba City	530-822-7515
• February 26 th	Listening Session (see article below)	Davis	(see below)
• March 1-7 th	State-wide Prune Day	Yuba City	530-822-7515

PRUNE ORCHARD CHECKLIST FOR DECEMBER/JANUARY:

- [] Check dormant spurs to determine if a dormant spray should be applied and/or what should go in the tank. (Call me for information, farm visit/demo, or look on the web at <http://www.ipm.ucdavis.edu/PMG/r606900511.html>.)
- [] Destroy mummy fruit in the orchard, regardless of whether you prune the block or not. Brown rot overwinters in fruit mummies (last year's crop) stuck on the tree and/or fallen on the ground. Destroying mummies is a very important step in controlling brown rot in an orchard. Knock fruit mummies out of the tree, and destroy them on the ground by mowing or cultivation.
- [] Consider controlling gophers if mounds appear in the orchard.
- [] Review crop grade sheets and leaf analyses from 2003, and use that information to plan a general orchard pest and nutrient management program for 2004.
- [] Maintain equipment (sprayers, etc.)
- [] Make out your order for peach twig borer traps and set it aside for mailing in February. Traps should be up by April 1, and UC recommends 2 traps per block.
- [] Call me (Franz Niederholzer at 822-7515) and invite me out to your orchard. I'd like to meet you and learn about your operation.

ALMOND ORCHARD CHECKLIST FOR DECEMBER/JANUARY:

- [] Need a dormant spray? Check dormant spurs for scale to determine if a dormant spray should be applied and/or what should go in the tank (call me for information, farm visit/demo, or use prune guidelines as a starting point (<http://www.ipm.ucdavis.edu/PMG/r606900511.html>))
- [] Sanitize the orchard. Use harvester or long poles to knock mummy nuts out of trees. Destroy the mummies by first windrowing them on the orchard floor and then mowing or rototilling over the windrow. Goal = one mummy or less per tree. Navel orangeworm overwinters in mummy nuts (where dormant spray can not reach), and it is cheaper to kill them this way (winter sanitation) than to hope one or more sprays will kill them in season.
- [] Get ready for bloom. It will be here in no time.
 - Check out/maintain irrigation system used for frost control.
 - Maintain equipment (sprayers, etc.)
 - Have clean spray strips and close-mowed orchards when frost season starts.
 - Check out your frost alarm and thermometers.
 - Line up your bees for bloom. Current UC recommendations are for 2-3 hives per acre. When bloom weather is cold and wet, more hives (3 per acre) = more nuts at harvest.
- [] Review crop grade sheets and leaf analyses from 2003, and use that information to plan a general orchard pest and nutrient management program for 2004.
- [] Consider controlling gophers if mounds appear in the orchard.
- [] Make out your order for peach twig borer and navel orangeworm traps and place it in February. Peach twig borer traps should be up by April 1, and one trap will cover 20 acres. Navel orange worm traps should be up by April 1. Use four traps per block or 1 trap per 10 acres in large blocks.
- [] Call me (Franz at 822-7515) and invite me out to your orchard. I'd like to meet you and learn about your operation.

DORMANT SEASON PEST MANAGEMENT OPTIONS FOR PRUNES AND ALMONDS

Dormant sprays cost money, and storm water runoff from orchards can contain pesticides (diazinon, Asana®, etc.) that pollute rivers and streams. The potential for spray drift is also greater from dormant applications compared to in-season spray(s). So, for economic and environmental reasons it is important to ask the following question of every block-- is a dormant spray needed? If the answer is "yes" then the next question is "what materials should go in the spray tank"? UC researchers have carefully examined the dormant season pests in prunes and almonds, and come up with a solid recipe with conservative treatment thresholds (no risk of ignoring a problem) to help growers decide whether or not a dormant spray is needed and, if so, what should go in the tank. Data sheets for recording results are available from the UC farm advisors office in Yuba City or on the web at: <http://www.ipm.ucdavis.edu/PMG/r606900511.html>. Here are the steps to take:

1. Randomly select 35-50 trees from each orchard or plot to be sampled.
2. Collect 2-3 spurs randomly from the inside and outside of each tree's canopy for a total of 100 spurs. Clip the spur off at the base, making sure to include some old spur wood along with the past season's growth to identify San Jose scale parasitism.
3. Using a hand lens or binocular microscope, examine 20 of the spurs for scales, mite eggs and aphids eggs (in prunes), as well as parasitized scale. It is not necessary to count the number of individual pests, just identify the pest and record whether it is present or not on the monitoring form. Record results on data sheet. Info on the sheet will help you decide if checking another 20 spurs is needed to make a spray decision.
4. Add together the total number of spurs marked in each pest column and record in the total box.

DORMANT SPUR SAMPLING THRESHOLDS FOR COMMON DORMANT SEASON SPRAY
TARGET PESTS IN PRUNE AND ALMOND.

Pest	Prune	Almond
<u>San Jose Scale</u>	<p>Below 10%: No spray 10 – 20%: use OIL at 4 - 6 gals/acre Over 20% Options: 1) OIL with organophosphate (diazinon, Supracide, etc.) 2) OIL with Seize</p>	<p>Below 10%: No spray 10 – 20%: use OIL at 4 - 6 gals/acre Over 20% Options: 1) OIL at 8 gals/acre 2) OIL with organophosphate or 3) OIL with Seize</p>
<u>European Fruit Lecanium</u>	<p>Below 24% - No spray Over 24% - Oil only</p>	<p>Below 24% - No spray Over 24% - Oil only</p>
Overwintering <u>Mite Eggs</u>	<p>Below 40% - No spray Over 40% - Oil only</p>	<p>Below 40% - No spray Over 40% - Oil only</p>
<p>Aphid eggs (<u>mealy plum aphid</u> Or <u>leaf curl plum aphid</u>)</p>	<p>1 Aphid egg – Consider Options (see Dormant Treatment Guide later in newsletter) 0 Aphid eggs – Review Past History (see Dormant Treatment Guide in newsletter)</p>	Not a pest in almonds
<u>Peach Twig Borer</u>	<p>No effective dormant monitoring program. <u>Not usually</u> a significant pest in dried plums. Bloom sprays or May spray give as good or better control than dormant spray (alone) without risking surface water pollution from dormant spray materials.</p>	<p>No effective dormant monitoring program to determine need for dormant spray. <u>Need to control this pest in almonds is usually based on last year's grade sheet and current year (in season) trapping and shoot strike numbers.</u> Bloom sprays, May spray, and/or hull split spray give as good or better control than dormant spray alone without risking surface water pollution from dormant spray pesticides.</p>

Illustrated guidelines to prune orchard pest monitoring are on the web (complete with the downloadable forms) at <http://www.ipm.ucdavis.edu/PMG/C606/m606wc03.html>.

Dormant Treatment Guide for Prune Orchards				
Aphid Orchard History Unknown Due to Past Dormant Sprays¹	Orchard History indicates Aphids? (No or Yes)	Scale Above Threshold	"Reduced Risk" Treatment Options	"Conventional" Treatment
Yes		No	Low Rates of Dormant Insecticides without Oil OR 2X Oil* (Once at green tip and 10 days later) OR Fall Zinc Treatment OR In-season insecticide	Dormant Insecticide + Oil
Yes		Yes	Low Rates of Dormant Insecticides + Oil	Dormant Insecticide + Oil
	No	No	Nothing	Dormant Insecticide + Oil
	No	Yes	Dormant Oil (Low Pop) OR Dormant Insecticide + Oil (High Pop)	Dormant Insecticide + Oil
	Yes	No	Low Rates of Dormant Insecticides without Oil OR 2X Oil* (Once at green tip and 10 days later) OR Fall Zinc Treatment OR In-season insecticide	Dormant Insecticide + Oil
	Yes	Yes	Low Rates of Dormant Insecticides + Oil	Dormant Insecticide + Oil
* Oil alone is not effective for leaf curl plum aphid once the leaves are curled				

¹To help determine the history of aphids in a dormant treated orchard:

- a. Carefully observe trees throughout the orchard during growing season for the presence of any aphids. **OR**
- b. Leave a few edge rows untreated and observe trees during the growing season for the presence of aphids.

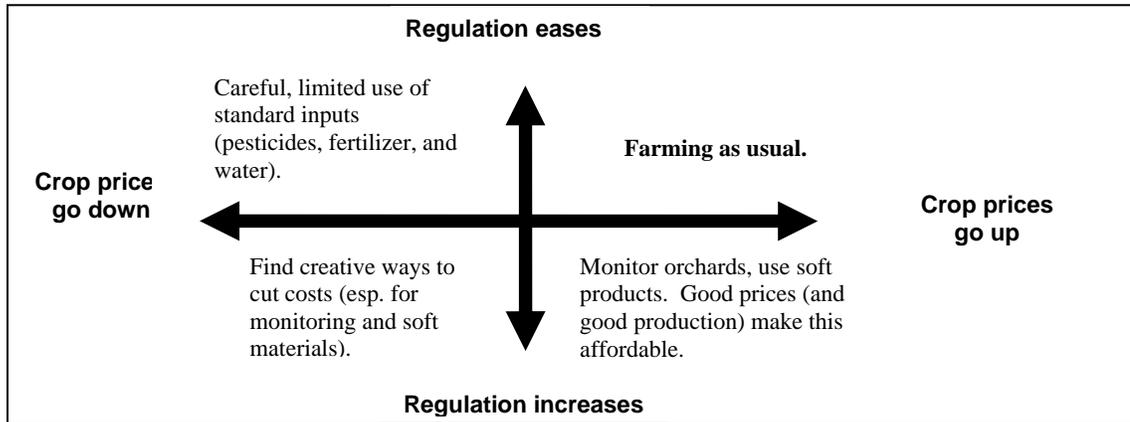
If you have any questions about these practices, please call me (Franz at 822-7515) and I will come out to your farm and work with you and/or your employees on the dormant spur sample.

PLANNING FOR THE FUTURE(S) IN ALMOND AND PRUNE PRODUCTION

“If it ain’t broke, don’t fix it!” How many times have you heard that? Probably more than once, especially when talking about new ideas and/or planning for the future. However, what the “if it ain’t broke...” crowd doesn’t say is this, “**It takes longer to fix than to break**”. So, it pays to have the right spare part(s) or backup plan(s) ready to go when (not ‘if’) something breaks.

This is especially true when planning for the future of your prune and/or almond operation -- in particular, planning in the face of changing crop

prices and environmental regulation. Crop prices are going up in almonds and down in prunes. Increasing environmental regulation of agriculture looks to be near at hand, especially at the state levels. [In addition, consumers at home and abroad are increasingly concerned about food safety, including pesticide residue(s) on food.] An effective orchard management plan accounts for both positive and negative futures. The following diagram shows four possible futures from four possible combinations of changes in crop prices and environmental regulation:



How could/should someone plan for all four possible futures? There are many options, but knowing as much as possible about different orchard management practices and the challenges and costs associated with each is a key to surviving ups and downs in farming. Here are some ideas:

- Use proven, fast, and simple monitoring practices (pheromone traps, degree day models for insect development, egg traps, etc.) everywhere in your blocks.
- Try out in-depth orchard monitoring and reduced environmental risk practices somewhere on your farm, maybe on 5 acres.
- Know the cost(s) of production of your crop per ton and per acre on each of the blocks you farm for different management programs.

EVERY PRUNE OR ALMOND GROWER WHO PLANS TO REMAIN IN THE ORCHARD BUSINESS SHOULD HAVE A SMALL (5 ACRES?) TEST BLOCK WHERE THEY TRY NEW IDEAS, MATERIALS, AND PRACTICES.

Where can any prune or almond grower go to get further information on the alternative practices (and others) listed above? There are many experienced Pest Control Advisors and other orchard professionals in Yuba and Sutter Counties. In addition, UC Cooperative Extension has many

publications that can help growers/managers interested in these different practices. All the books and pamphlets listed below are for sale at the UCCE offices in Yuba City at 142A Garden Hwy.

UC IPM MANUAL – ALMONDS
 UC IPM MANUAL – STONE FRUIT
 UC IPM PEST ID CARDS
 UC INTEGRATED PRUNE FARMING PRACTICES (UC IPFP BINDER)
 UC IPM WEBSITE: www.ipm.ucdavis.edu
 UCCE SUTTER/YUBA COUNTIES WEB SITE: www.cesutter.ucdavis.edu

IN 2004, SOME FINANCIAL HELP IS AVAILABLE TO **PRUNE** GROWERS INTERESTED IN TRYING OUT SOME OR ALL OF THE ALTERNATIVE PRACTICES LISTED ABOVE. PLEASE CALL FRANZ BY AT 822-7515 TO ASK ABOUT THIS PROGRAM. MONEY IS AVAILABLE ON A FIRST COME, FIRST SERVED BASIS.

Tip: Air-blast sprayers (except air-shear models) deliver spray material based on three factors: 1) pressure at the nozzle, 2) core size, and 3) tip size. So, knowing nozzle pressure is essential for accurate calibration and cost-effective pesticide application. Checking all pressure gauges on an orchard sprayer for accuracy, rechecking sprayer calibration, and changing worn nozzles (cores and tips) AT LEAST once a year is an important step to getting the best pest control at the lowest cost.

PLANNING THE FUTURE OF UC COOPERATIVE EXTENSION

UC Cooperative Extension (UCCE) is part of the Ag and Natural Resources Division of the University of California, also known as UC ANR. The whole division is shrinking under university budget cuts. As part of a “continuing effort to plan the Division's future direction and programs” under these conditions, there will be several meetings around the state in late January and February where those who use and work with UCCE can air their opinions of how and what the new organization

should look like directly to UC administrators. **IF YOU VALUE THE WORK OF UC FARM ADVISORS AND UCCE, PLEASE TAKE THE TIME TO TELL UC ADMINISTRATORS HOW YOU THINK UC CAN CONTINUE TO SERVE YOU IN THE FUTURE.** The closest meetings will be in Davis and Redding (see dates listed in the calendar). Registration is required to participate. Registration and further info on the listening sessions are available on the web at <http://groups.ucanr.org/directions/>.

AVOIDING WATER CONTAMINATION AND PESTICIDE DRIFT (A Workshop for Orchard Pesticide Applicators and their Supervisors) Chico – January 15, 2004

Keeping pesticides out of groundwater and surface water and preventing pesticide drift are two of the most important issues facing agriculture. This 4-hour workshop will give participants practical and effective tools to deal with these issues. Through demonstrations, an on-farm tour, problem identification exercises, and creation of personalized checklists, participants will learn ways that water contamination and pesticide drift can occur, what factors contribute to this, and how to reduce these risks.

Pesticide applicators and their supervisors are encouraged to attend together. There is a greatly discounted registration fee for supervisor-applicator pairs attending from the same company. Continuing education credit: 2 hours Laws & Regulations, 2 hours Other. Space is limited, so early registration is encouraged. Funding for this project has been provided by the CDFA's Buy California Initiative and the USDA. For further information, contact the University of California Statewide IPM Program, at (530) 752-5273, or visit their website at www.ipm.ucdavis.edu.

South Sacramento Valley Almond Meeting

February 24, 2004 – 9AM to Noon

Colusa Industrial Properties Conference Room

100 Sunrise Blvd., Colusa, CA

- 8:30 Coffee
- 9:00 Advances in Almond Weed Control
- 9:30 Ag Water Discharge Waivers—Dealing with Regulations
- 10:00 Break
- 10:20 Almond Disease Control – Using Fungicides and Avoiding Disease Resistance
- 10:50 Benefits and Drawbacks of Chipping Almond Brush
- 11:30 Season Summary
- Noon Adjourn