

CROP CURRENTS

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WEATHER REPORT

As usual, the weather has provided us with some good news (high winter chill) and some bad news (below normal rainfall). The high chill hours should give us a quick and compact bloom for our tree crops (if the spring weather during bloom is not unusually cold). Let's hope we don't get all our missing rainfall during bloom! The tables below summarize the rainfall and chill hours in Brentwood as of February 23rd.

RAINFALL (inches)			
MONTH	1998-99 (La Nina)	1997-98 (El Nino)	Average (12 yrs)
OCT	0.7	0.4	0.7
NOV	1.9	4.3	1.2
DEC	0.3	1.9	2.0
JAN	2.3	5.5	3.0
FEB	2.4	8.0	2.7
MAR		1.4	1.5
APR		0.8	0.6
MAY		2.1	0.8
JUN		0.2	0.4
JUL		0.0	0.1
AUG		0.0	0.2
SEPT		0.1	0.4
TOTAL	7.7	24.7	13.0

ACCUMALATED CHILL HOURS

(hours below 45^o F)

DATE	98-99	97-98	96-97	95-96	94-95	94-94
11/14	68	12	92	46	88	49
11/28	123	34	115	79	245	199
12/12	281	154	175	121	422	290
12/26	506	343	375	295	669	576
1/09	779	498	456	388	801	734
1/23	881	586	677	535	878	909
2/06	1064	656	724	581	880	1058
2/20	1168	729	793	584	961	1185
2/23	1184	739	804	612	966	1215

If you have internet access you can update these records at your convenience through the UC Fruit & Nut Research and Information Center (<http://fruitsandnuts.ucdavis.edu>) or the UC IPM Program (<http://www.ipm.ucdavis.edu>).

NEW FUNGICIDES FOR TREES & VINES

Several new fungicides for tree and vine crops have been recently registered or are expecting registration this season. Many of these are “reduced risk” materials that the EPA considers safer for people and the environment. Some have entirely new chemistries than our current materials. This means they will be helpful in preventing resistant strains of disease from developing if alternated with materials from other chemical classes. The tables which follow represent a fairly comprehensive list of the current, new and pending fungicides that have been tested by UC researchers.

Break, Elite, Indar, and Procure are four new DMI type fungicides. These are in the same chemical class as our older materials Bayleton, Funginex, Rally and Rubigan. They are locally systemic and most are absorbed quickly, moving up but not down in the plant. Many have “kick-back” activity against apple and pear scab and stone fruit fungi. They all have a high potential for diseases to develop resistance to them as they just have one way to interfere with disease development – scientists call this a single-site mode of action. It is more likely that the disease organism can mutate and resist being killed by the chemical if it only has one roadblock to overcome. The best way to prevent resistance from developing and keep these materials effective for many years to come is to alternate them with effective fungicides that are not DMI type fungicides.

Abound, Flint and Sovran are new materials that fall into an entirely new class of fungicide called Strobilurins. They are “reduced-risk” materials that are derived from a naturally occurring antispore from a wood rotting fungi. These have both contact and systemic activity and excellent efficacy. They work by interfering with the respiration of the disease organism. They also have a single-site mode of action so the potential for the disease to develop resistance to these

materials is high. Alternate these with another class of fungicide to prevent resistance.

Vanguard is in a new chemical class all it's own. It is locally systemic and has “kick back” activity against apple and pear scab and stone fruit fungi. It is more effective under the low temperatures of spring than the high temperatures of summer. It is an excellent Botrytis material. It also has just a single-site mode of action so should be alternated with other fungicides to prevent resistance from developing.

Elevate also has a new and unique chemistry different than any other class of fungicide. It is a reduced risk material with a 4 hour re-entry interval and no pre-harvest interval. It is a contact material (non-systemic) that is a good preventative for Botrytis. The exact mode of action is unknown but it is suspected that it has multiple sites where it interferes with disease development so the risk for resistance is low.

Not only do we have a variety of new chemistries that pose a reduced risk but we have some very effective fungicides as well. The second set of tables summarizes the comparative effectiveness of these materials on trees and vines, as determined in UC trials, for a variety of diseases.

General Properties and efficacy of Registered and Experimental Fungicides Used on Deciduous Fruit and Nut Crops in California

Trade name	Fungicide	Class	Systemic action	Mode of action	Resistance potential
ML ^w	copper	Inorganic	No	Multi-site	Low
ML	sulfur	Inorganic	No	Multi-site	Low
Maneb	maneb	Carbamate (EBDC) ^x	No	Multi-site	Low
Thiram	thiram	Carbamate (DMDC) ^y	No	Multi-site	Low
Ziram	ziram	Carbamate (DMDC) ^y	No	Multi-site	Low
Ronilan	vinclozolin	Dicarboximide	Yes	Multi-site	Low
Rovral	iprodione	Dicarboximide	Yes	Multi-site	Low
Vanguard	cyprodinil	Anilinoypyrimidine	Yes?	Single-site	High
Bravo	chlorothalonil	Aromatic nitrile	No	Multi-site	Low
Benlate	benomyl	Benzimidazole	Yes	Single-site	Very high
Topsin-M	thioph.-methyl	Benzimidazole	Yes	Single-site	Very high
Syllit*	dodine	Guanidine	Yes	Few to multi-site	Medium
Elevate*	fenhexamid	Hydroxyanilide	Unknown	Unknown	Unknown
Captan	captan	Phthalamide	No	Multi-site	Low
Unnamed*	quinoxifen	Quinoline	Yes		
Scholar*	fludioxonil	Phenylpyrrole	Contact		
Bayleton	triadimefon	DMI ^z -Triazole	Yes?	Single-site	High
Break/Orbit	propiconazole	DMI-Triazole	Yes?	Single-site	High
Elite	tebuconazole	DMI-Triazole	Yes?	Single-site	High
Funginex	triforine	DMI-Piperazine	Yes?	Single-site	High
Indar	fenbuconazole	DMI-Triazole	Yes?	Single-site	High
Procure	triflumizole	DMI-Imidazole	Yes?	Single-site	High
Rally	myclobutanil	DMI-Triazole	Yes?	Single-site	High
Rubigan	fenarimol	DMI-Pyrimidine	Yes?	Single-site	High
Abound*	azoxystrobin	Strobilurin	Yes?	Single-site	High
Flint*	trifloxystrobin	Strobilurin	Yes?	Single-site	High
Sovran*	kresoxymethyl	Strobilurin	Yes?	Single-site	High

* Experimental; registration pending

^w ML=many labels

^x EBDC = ethylene bisdithiocarbamate

^y DMDC = dimethyl dithiocarbamate

^z DMI, demethylation (sterol) inhibitor

? = not confirmed on stone fruit and nut crops using radioactive labeled compounds

EFFICACY: TREE CROPS

Fungicide	Brown rot	Jacket rot (Botrytis)	Shot hole	Powdery mildew	Rust	Scab		Anthracnose	Alternaria
						Almond	Apple		
Abound (NR)	++ RD	ID	++	ND	++	+++	+++ ¹	++++	+++
Benlate**	+++	+++	-	+++	++	+++	+++	----	----
Bravo	++	++	+++	—	++	++	NR	+++	++
Break/Orbit	+++	+	+/-	ND	+++	ND	NR	+++	----
Captan	++	++	+++	—	+	+++	++	++	----
Copper	+	+	++	—	—	+/-	---	----	+
Elevate (NR)	++	+++	ND	ND	ND	ND	ND	ND	ND
Elite (NR)	+++	++ RD	+/-	+++	+++	+/-	+++	+++	++
Flint	++RD	++	++	ND	ID	+++	+++	ND	+++
Funginex	+++	—	—	++	+	—	+++	ND	ND
Indar	+++	---	+	ND	ND	+++		+	----
Maneb	+	+	++	—	+++	++	++	++	+
Procure	++	—	+/-	+++	ND	ND	++++	ND	ND
Rally	++	—	+/-	++++	+++	—	++++	++	----
Ronilan	+++	+++	+++	—	—	NR	NR	ND	ND
Rovral	+++	+++	+++	—	—	—	NR	----	+++
Rovral + oil	++++	++++	+++	+	++	—	NR	----	+++
Rubigan	+++	—	—	++++	++	NR	++++	ND	ND
Sulfur	+	+	—	+++	+++	++	++	+	----
Thiram	+	+	ND	—	—	NR	++	ND	ND
Topsin M**	+++	+++	-	+++	++	+++	+++	----	----
Vanguard	++	+++	++	ND	ND	+ID	++++	ND	----
Ziram	+	+	+++	—	—	+++	++	----	+

EFFICACY: GRAPEVINES

Fungicide	Powdery mildew	Downy mildew	Bunch rot		Phomopsis	Eutypa
			Botrytis	Summer		
Abound	++++	++++	----	----	+++	----
Bayleton	++	---	---	---	---	---
Benlate**	++++	---	++	++	+	+++
Captan	---	+	++	++	+++	---
Copper	++	+++	++	+++	+	---
Elevate (NR)	---	---	+++	?	---	---
Elite (NR)	++++	---	++	++	---	---
Flint (NR) ²	++++	+	++	++	++	---
Maneb	---	---	++	---	+++	---
Procure	++++	---	---	---	---	---
quinoxifen (NR)	++++	---	---	---	---	---
Rally	++++	---	---	---	---	---
Ridomil Gold	---	++++	---	---	---	---
Rovral	---	---	++	---	---	---
Rovral + oil	---	---	+++	---	---	---
Rubigan	++++	---	---	---	---	---
Sulfur	+++	---	---	---	---	---
Thiram ((NR)	---	---	++	---	---	---
Vanguard	---	---	++++	++	---	---
Ziram	---	---	++	---	++	---

++++ = excellent; +++ = very good; ++ = good; + = fair; +/- = slight; - = ineffective; RD = rate dependent, ID = incomplete data, NR = not registered, ND = no data, ** = Resistant populations of target organisms occur in California

1 Causes severe phytotoxicity on some apple cultivars

2 Causes severe phytotoxicity on Concord grapevines

GRAPES:

Powdery Mildew & Botrytis Control

Last season's weather was conducive to the development of serious incidences of both powdery mildew and botrytis bunch rot. If this was the case in your vineyard, be ready with an early preventative program.

Powdery Mildew: The key to control is early season reduction in inoculum potential and subsequent infection. Powdery mildew overwinters in the vineyard in dormant buds. If you had a high incidence of the disease last year, chances are you have a high level of inoculum in the dormant buds.

A dormant application of lime sulfur can reduce the overwintering inoculum by about 80%. Use 10 gallons of lime sulfur per acre in at least 100 gallons of water and direct the nozzles towards the cordon arms.

Your in season control program should begin at budbreak to 2" shoot growth with an application of wettable sulfur (5 lb/100gal. water/acre). Apply subsequent sulfur treatments at 7-14 day intervals. You can switch to DMI, strobiluran or other fungicides, if you prefer, once you have sufficient shoot growth. Soap, oil, potassium bicarbonate materials, and AQ10 are organic options that are moderately effective. They are best used under milder pressure and in alternation with other materials (but don't apply oil within 10 days or soap within 3 days of a sulfur application).

Removing a few basal leaves from around the grape cluster at bloom to cluster set time can help control both powdery mildew and botrytis by improving air circulation, reducing humidity and improving spray coverage.

Botrytis Bunch Rot: The fungus overwinters in berry "mummies" left on the ground or hanging on the vine. If you haven't done so already, remove the mummies from the vineyard to reduce the inoculum.

Leaf removal, as mentioned above, may be the only control necessary if spring weather is dry. However, if wet weather occurs during bloom, apply a fungicide spray to protect the bloom. If rainy weather continues, you may need to apply additional sprays at preclose and veraison. Mid season hedging to improve air circulation in the canopy, can also help to reduce infection.

If no leaf removal is practiced, you may need to provide a protective spray at bloom regardless of weather, especially if you had a bunch rot problem last year.

TREE FRUIT:

Dormant Spray Cautions

There has been concern expressed in recent years over the contribution of dormant insecticide sprays to surface water contamination and the risk they may pose to hawks and other wildlife.

Organophosphates have been routinely detected in the San Joaquin and Sacramento Valley watersheds and monitoring has shown levels to increase with heavy rainfall following dormant sprays. Although, the levels found in waterways are minute and don't pose a direct threat to humans, fish, birds, or mammals, they have occasionally exceeded legal limits. And these brief peaks have been found to affect aquatic invertebrates that are essential components to aquatic food chains. For these reasons, the regulatory agencies are taking a hard look at dormant spray use (as well as other, non-agricultural OP uses). They are considering imposing more stringent regulations on dormant sprays if the levels in waterways do not decrease.

The other bad news about dormant insecticides (especially the pyrethroids) is that recent studies have shown that they can lead to an increase in spider mite populations the following season. They also can have a negative impact on naturally occurring San Jose scale parasites. And they can unpredictably drift off site in our winter fogs.

Given these concerns, it seems worthwhile to seriously evaluate the need for the addition of insecticides to the dormant oil spray every year. Fortunately, dormant oil alone is a fairly effective control for most of the pests we target with our dormant sprays - mites, scale and aphids. The notable exception is Peach Twig Borer (PTB) in stone fruit and almonds. However, recent research has shown that we can replace the dormant insecticide treatment with two sprays of BT at bloom. See below for more information on this treatment.

If you do decide you need to apply a dormant insecticide, keep the following tips in mind to minimize the likelihood of off site movement:

- Don't mix or load pesticides near waterways.
- Use the lowest effective rate.
- Shut off spray rigs at the end of the rows, especially near canals and streams.
- Let the weeds grow in the middles to reduce erosion and water runoff.

Watershed monitoring is continuing. If we can reduce the level of insecticides found in the waterways, we may be able to preserve the use of these materials for when they are really needed and avoid restrictive regulations.

STONE FRUIT & ALMONDS: Bloom Sprays for Peach Twig Borer

The first line of defense against Peach Twig Borer (PTB) has typically been a dormant spray of oil and an organophosphate (Diazinon, Lorsban, Supracide) or pyrethroid (Asana, Ambush, Pounce, etc.). However, given the concerns about dormant insecticides above, it may be prudent to eliminate the insecticide in the dormant spray and replace it instead, with a couple of BT sprays at bloom. Research has shown two bloom time BT

applications to be just as effective as a dormant insecticide treatment.

The first application should be made between popcorn and the beginning of bloom and the second should be made 7-10 days later (but not after petal fall). The timing is critical as this material has a very short residual and must be eaten by the larvae. A third application may be needed if bloom is prolonged. However, due to our good winter chill, I expect there will be a fairly compact bloom this year.

BT is compatible with and can be tank mixed with most bloom time fungicide sprays. The only fungicides that are not compatible with BT are alkaline materials such as Bordeaux or Lime Sulfur. Good coverage is essential. Ground application using a label concentrate rate in 80-100 gallons water per acre is best. If you can't get into the orchard to do a ground application, an aerial application of a concentrate label rate in 5 gallons per acre should be used. Fly the material on at a height of about 20 feet to get good deposition on the treetops. If you need to spray entirely by air, 3 applications at pink, full bloom and petal fall will improve efficacy.

For almonds, and the early maturing stone fruits, this bloom spray is probably the only treatment you will need to make for PTB. For the later maturing stone you will probably an additional spray in May to prevent damage to the ripening fruit.

To time the May spray most effectively, hang a pheromone trap in your orchard in late March. Check the trap twice a week until you begin to catch PTB on a regular basis and make note of your trap catches. Apply a spray 400 degree-days (usually about 31-45 calendar days) after you begin to catch your first moths. Watch for my Tree Pest Update newsletter in late April for a more accurate translation of degree-days to calendar days for this season. This information is best used with the trap catches from your own orchards, as flights in different orchards will be slightly different.

APPLES & PEARS: Fireblight control

Last spring, we saw quite a bit of Fire Blight (FB) damage in our Pink Lady orchards. This new variety is much more susceptible to this disease than our other common varieties and last season's prolonged bloom really made this difference clear. Orchards on M26 and M9 also showed more damage than those on other rootstocks. It is apparent that Pink Lady and apples on M26 or M9 rootstock need as aggressive a FB control program as pears.

The Disease: Fireblight is a bacterial disease which overwinters in twig and branch cankers in the orchard. It is spread by rain splash and insects and enters the tree primarily during the bloom, if the weather is warm and humid. In very susceptible varieties it can also infect young, succulent shoots through wounds and natural fissures, if the weather conditions are ideal. Fortunately, this type of infection is not common.

Cultural Controls: The first line of defense, especially in young trees, is vigor control. Fast growing, young succulent tissues are much more susceptible to infection. Be careful with fertilizer (especially nitrogen) and water. You may want to consider using a cover crop to help control vigor on strong soils.

You also want to do what you can to reduce moisture and humidity in the orchard in the Spring. Don't irrigate during bloom or use overhead sprinklers during mild weather.

Weather Monitoring: Watch the weather in your orchard during bloom. If the mean daily temperature (that's the average of the maximum and minimum temperature) approaches 62⁰F (in early March) or 60⁰F (by early April), you'll need to apply a preventative spray. Continue applications every 3-5 days during bloom as long as weather conditions are favorable. If rain or hail occurs, re-spray the orchard immediately. You can spray every other row as long as foliage is minimal and you get good coverage. This may sound like a more intensive program than we are used to with apples but it is nothing new to pear growers.

There are a few FB models that have been developed to get away from the intensive calendar sprays and more accurately time exactly when preventative sprays should be applied. However, they've all been developed outside California, under quite different climatic conditions, and have not been thoroughly tested in California. They are currently under review in the San Joaquin Valley but until we have a few years of stringent evaluation, I would be hesitant to skip sprays based on model predictions.

Spray Materials: Registered spray materials include streptomycin, copper, Bordeaux, and Blight-Ban A506. All are organically acceptable materials. The copper and Bordeaux materials may cause fruit russetting if used after green tip so the streptomycin is the most commonly used material.

Blight-Ban A506 is a new biological control material which is a non-disease causing bacteria that can help protect the tree from FB infection. Research has shown this material to be effective in reducing disease but it is not effective enough to be a stand alone control. It should be used in conjunction with a streptomycin program – either as a tank mix or a separate spray. In pears, this combination approach using 2 Blight-Ban sprays (at 20% bloom and petal fall) has resulted in an infection rate 3 times lower than with streptomycin alone. In apples, the reduction in disease has not been as dramatic and researchers are looking at ways to improve efficacy of this new material.

Sanitation: Walk the orchard once a week and remove any blighted branches as soon as they are visible, before it can run into major scaffolds. The warmer the weather the faster the disease moves, so don't wait. Make cuts 8-12" beyond where you see damage and remove the diseased material from the orchard. Protect wounds on young wood with an antibiotic spray after pruning. Disinfect pruning tools between cuts if they contact infected wood with a 1:5 dilution of Clorox, Lysol or Pine-Sol.

GROUND SQUIRREL CONTROL

*by Desley Whisson,
Extension Vertebrate Pest Specialist, UCD*

With the onset of spring, ground squirrels emerge from their winter hibernation. Soon after, they begin to breed, and before you know it you have a squirrel problem on your hands.

The most cost-effective management strategy for ground squirrels is to control them before they have a chance to reproduce. Every female killed early in the season means about 8 fewer young to remove later if the control is delayed until young are active above ground.

In early spring, fumigating burrows is one of the most effective means of control. Fumigants work best at this time of year because soil moisture is relatively high, helping to retain a high concentration of the lethal gases in the burrow system. Do not fumigate while squirrels are still hibernating because the squirrel plugs its burrow with soil, preventing fumes from reaching the nest chamber. The plug cannot be seen by examining the burrow entrance.

You have 3 choices when it comes to fumigants:

(i) Gas cartridges:

Gas cartridges are cylinders of combustible ingredients with a fuse. When ignited, they emit smoke and toxic gases. The cartridge is placed in the burrow entrance, the fuse lit, and the cartridge pushed well back into the burrow with a shovel handle. The opening is then sealed off with sod or soil and tamped lightly.

(ii) Aluminum phosphide:

Aluminum phosphide tablets or pellets react with atmospheric and soil moisture to produce phosphine gas which is lethal to all mammals. The label recommended number of tablets are placed in the burrow entrance. Crumpled newspaper is placed in the opening to prevent soil from covering the tablets and the entrance filled with sod or soil which is tamped firmly. Aluminum phosphide is a

restricted use material and should be handled accordingly.

(iii) Acrolein (Magnacide "H"):

Acrolein is an aquatic herbicide which has vapors that, in high concentration are quite toxic to mammals. This volatile liquid is applied to the burrow system through a hose with a specially constructed wand calibrated to deliver a precise dose. The burrow entrances are then sealed with sod or soil. Acrolein is a restricted use material that can only be used by licensed Pest Control Operators.

With all fumigants it is necessary to examine the treated area about 3 days following the application to determine if any survivors have dug out. All opened holes should be retreated and sealed.

One way to conserve fumigants is to first fill in all of the burrow entrances with sod or soil. After about 3 days, squirrels will reopen their burrow systems. Fumigants need only be applied to active burrows.

As with any pesticide, it is important to read and follow label instructions with particular regard for safety factors and non-target species. Gas cartridges have the potential to produce flames so should not be used where a significant fire hazard exists such as near buildings, dry grass, or other flammable materials. To avoid the accumulation of fumes in enclosed areas, never fumigate beneath buildings or in burrows that may open under occupied buildings.

Be aware of the signs of non-target species such as kit foxes or burrowing owls inhabiting abandoned ground squirrel burrows. Do not treat a burrow if you suspect a non-target animal is present. County agricultural commissioners can provide additional information on how to recognize active ground squirrel burrows.

Further information on ground squirrel control may be obtained from County Extension offices, County Agricultural Commissioners, or Desley Whisson [Ph: (530) 754-8644].

RESOURCES: Publications

The following are new UC publications which are available by phone, fax or visit from:

UC DANR Publications Office
6701 San Pablo Ave, 2nd floor
Oakland, CA 94608-1239
TEL: 800-994-8849
FAX: 510-643-5470

Pesticide Safety: A Reference Manual for Private Applicators

Publication 3383, 128 pages, \$7

This is a comprehensive guide designed for growers preparing for their Private Applicator Certification Exam. The easy to read workbook format takes you through all the steps needed to use pesticides safely and responsibly on the farm.

Cover Cropping in Vineyards: A Growers Handbook

Publication 3338, 168 pages, \$20

This new guide features cutting edge methods of using cover crops to enhance vineyard performance. Based on extensive research, this guide details technical and theoretical information on how cover crops effect vineyards and promote ecological stability. It has both how-to instructions and grower's testimonials.

Safflower Production in California

Publication 21565, 30 pages, \$8.50

This leaflet describes the requirements for planting, harvesting, and managing weeds, insects, and diseases of safflower varieties. With 21 color and 16 black and white illustrations.

Pests of the Small Farm and Garden, 2nd ed.

Publication 3332, 286 pages, \$35.00

This is the 2nd revision of this popular handbook for home gardeners and small-scale farmers. 95 common pests are described in detailed sections that focus on biology, identification, and integrated pest management controls. Crop-by-crop symptom identification tables make this handbook convenient to use. More than 250 color photos and 118 drawings help identify pest problems.

The following UC publications are available free from my office. Call for a copy:

Suggestions for Chemical Thinning Granny Smith, Fuji, and Gala Apples in the San Joaquin Valley

by Joe Grant (San Joaquin Co. Farm Advisor), Warren Micke (Extension Pomologist, UC Davis), Scott Johnson (Extension Pomologist, UC Kearney Ag. Center)

UC IPM Pest Management Guidelines

The following Guidelines were updated in January. They can be viewed and printed from the UC IPM website <http://www.ipm.ucdavis.edu> or call and I can send you a copy:

- Apricot
- Cherry
- Citrus
- Grape
- Onion/Garlic

RESOURCES: Websites

UC Sustainable Agriculture Research and Education Program

<http://www.sarep.ucdavis.edu>

UC Small Farm Center

<http://www.sfc.ucdavis.edu>

Pierce's Disease website

<http://www.CNR.Berkeley.EDU/xylella>

Machinery Buyers Guide

<http://www.hpj.com/wdocs/mbg.htm>

Agriculture Online Machinery

<http://www.agworldwide.com/scgi/headlines/user/>

CALENDAR: Classes/Meetings/Events

Pesticide Safety Training for Farmworkers

March 2, 9-11 am

Delta Community Services Center

724 3rd St., Brentwood

This meeting provides an annual safety training for farmworkers who work with pesticides. To be given in Spanish. Sponsored by UC Cooperative Extension and Wilbur Ellis. Call 646-6540 to register.

Pesticide Safety Training for Farmworkers

March 3, 10-12 pm

Murietta's Well

Mines Rd., Livermore

This meeting provides an annual safety training for farmworkers who work with pesticides. To be given in Spanish and English. Sponsored by UC Cooperative Extension and Wentz Winery. Call 646-6540 to register.

Weed Management Area & Yellow Star Thistle Control Training Session

March 3, 7-9 pm,

Public Works Building

4825 Gleason Dr., Dublin

The main purpose of this meeting is to explore the interest from cattlemen and growers in establishing a weed management area. Benefits may include grant monies for property owners to fight noxious weeds. Various yellow star thistle control measures will be addressed. Presented by the Alameda and Contra Costa Co Dept. of Agriculture, Dow-Elanco, East Bay Regional Parks, CDFG. 1.5 hours PCA credit.

Understanding Agricultural Leases

March 13, 9am-5pm, UC Davis

This session covers the rights and liabilities of landlords and tenants under standard ag. lease provisions and specialized lease clauses, including cash and share rents; repairs and maintenance; irrigation water supply; assignment and subletting; options to renew; rights of first refusal; utilities and tax increases; rights of others in leased premises; oil, gas, and mineral rights; hunting rights; and condemnations. Instructor: Robert Dillon,

attorney, Dillon & Rogers. Contact University Extension at 1-800-752-0881.

Sensory Evaluation of Olive Oil: Harvest 1998

March 16-17, 8 am-4:30 pm UC Davis

This course is designed to teach you how to evaluate olive oils. It incorporates lectures and tastings and concentrates on the recognition of major defects which would result in oil being denied extra-virgin status. Instructors: Paul Vossen (Farm Advisor, Sonoma Co.), Dr. Paolo Fantozzi (Univ. of Perugia, Italy), Darrell Corti (Corti Bros.), Roberto Zecca (oil producer, board member COOC). Contact University Extension at 1-800-752-0881.

Olive Pruning Demonstrations

March 18

9-10:30 am - Storm Olive Ranch, 4320 Chiles Pope Rd., St. Helena (1-6 year old trees for oil)

1:30-3 pm - Olive Ridge Ranch, 1195 Westside Rd., Healdsburg (4-8 year old trees).

These demonstrations are for growers, farm owners, managers, farm workers and enthusiasts. Sponsored by UC Cooperative Extension and the Ca. Olive Oil Council. Call 888-718-9830 if you need directions. No RSVP is needed.

Management of Fruit Ripening Workshop

March 30, 9am-5pm, UC Davis

This workshop is intended for shippers and destination (wholesale and retail) handlers who are involved in ripening fruits. The focus is on how to increase profits by delivering ready-to-eat, delicious fruits to the consumer. Sponsored by the UC Postharvest Outreach Program. Contact University Extension at 1-800-752-0881.

Managing the Small Vineyard II

April 24, 9am - 4 pm, UC Davis

This class is designed for home and small commercial winegrowers with little previous experience in grape growing. This class is the 2nd in a quarterly series. It covers many of the activities occurring in the spring and summer months, including canopy management principles and practices, grapevine nutrition and fertilization, and irrigation. Fruit ripening and harvest criteria are also included. Instructors: Donna Hirschfeld and Ed

Weber, Viticulture Farm Advisors in Amador and Napa Counties. Contact University Extension at 1-800-752-0881.

Introduction to Sensory Evaluation of Wine

April 24 & 25, 9 am – 4 pm, UC Davis

This class is designed to enhance the critical tasting ability of the novice enophile.

Instructor: John Buechsenstein, consultant.
Contact University Extension at 1-800-752-0881.

Introduction to Wine Analysis

May 1, 8 am – 5 pm, UC Davis

This class is designed primarily for home winemakers but would be useful for cellar workers as well. It introduces wine analyses essential for wine production and builds familiarity with the basic tests. Instructor: Ernie Farinias, SRA, Viticulture Dept., UC Davis. Contact University Extension at 1-800-752-0881.

Successful Small Scale Winemaking

May 1, 9 am – 5 pm, UC Davis

Designed for advanced home winemakers, this program emphasizes the production of small lots of fine wine using minimal equipment. Instructor: Jim Lapsley, C.E Specialist, University Extension. Contact University Extension at 1-800-752-0881.

Getting Started in the Specialty Food Business

May 15-16, UC Davis

All aspects of getting your product from kitchen to the marketplace are covered in this 2 day course. For more information contact University Extension at 1-800-752-0881.

Establishing and Managing an Olive Orchard for Gourmet Olive Oil Production

May 20-22, UC Davis

This new course covers all phases of olive orchard establishment and management, the economic realities of oil production, world competition and the importance of marketing the end product. Two half-day field trips are also included. Contact University Extension at 1-800-752-0881.

Emerging Varietals: New Possibilities for California

May 24 & 25, 9 am – 4:30 pm, UC Davis

The purpose of this class is to explore European varieties which are not widely grown in California and to examine their possibility for production here. Instructor: Glen McGourty, Farm Advisor, Mendocino Co. Contact University Extension at 1-800-752-0881.

CROP CURRENTS

Hope you find something of interest in this issue.

Janet Caprile
Farm Advisor
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SPRING 1999

- **WEATHER REPORT**
- **TREES & VINES: New Fungicides**
- **GRAPES: Powdery Mildew & Botrytis Control**
- **TREE CROPS: Dormant Spray Cautions**
- **STONE FRUIT & ALMONDS: Spray for PTB at Bloom**
- **APPLES & PEARS: Fireblight Control**
- **GROUND SQUIRREL CONTROL**
- **RESOURCES: Publications & Websites**
- **CALENDAR: Classes/Meetings/Events**

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