HEALTHY FOOD SYSTEMS • HEALTHY ENVIRONMENTS • HEALTHY COMMUNITIES • HEALTHY CALIFORNIANS

University of California
Agriculture and Natural Resources
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UCCE

Field Notes
A Quarterly Publication of Cooperative Extension

August 2012

Pursuit Herbicide Injury to Almond

In June we visited a first-leaf almond orchard that had started the season growing normally, but as the root system expanded, the trees' growth became rapidly stunted (fig 1). The newly expanding shoot tips showed 'little leaf' symptoms (fig 2) characteristic of glyphosate injury, with an incredible proliferation of shoots (fig 3) growing from the same point on the scaffolds.

After investigating crop rotations, we learned that the trees showing symptoms had followed alfalfa newly planted the previous year that had been removed after only one year. Trees from the same nursery and farmed by the same grower were planted on the other half of the ranch in ground following three years of alfalfa (planted in 2009) but did not show any symptoms. The trees showing injury were planted 12 months after the herbicide imazethapyr (Pursuit) was used. Pursuit is a widely used herbicide in seedling alfalfa. Uptake of the herbicide occurred following the most recent irrigation where herbicide mobilization and expanding roots came into contact.

Documented symptoms of imazethapyr injury include stunted growth, small leaves, and the formation of adventitious buds and multiple shoot growth. These symptoms can occur as early as 14 days after use or remain in the soil for months after application and still be a problem. Imazethapyr is an amino acid synthesis inhibitor herbicide that can persist in soil for up to 40 months depending on irrigation practices, crop rotations, and soil pH. Crop rotation restrictions range from 0 days to 40 months and are specific for the crop being planted.

Typically, Pursuit is not used on 2nd and 3rd year alfalfa because of its soil persistence issues having the potential for injury to subsequent crops. Nutsedge and other weeds were noticeably absent from the block treated with Pursuit which is not surprising, since it does have excellent broadleaf weed control capabilities. Young almonds are clearly susceptible to imazethapyr and other herbicides with a similar mode of action and almonds should not be planted following their use unless label restrictions are thoroughly reviewed and fully met.

Brent Holtz, Farm Advisor and County Director
Mick Canevari, Farm Advisor Emeritus

Figure 1. Stunted trees

Figure 2. Little leaf symptoms

Figure 3. Shoot proliferation

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Walnut Blight: What went wrong this season?

Some walnut orchards experienced dramatic nut drop in June and July due to walnut blight. Vina orchards seem to be the worst affected, but orchards of other varieties also saw significant disease and crop loss. Two aspects of this problem are interesting and provide some clues to the possible causes and suggest corrective actions that should be considered in the future:

1. Disease incidence and severity is highly variable. Even for hard-hit varieties like Vina or Serr, some orchards have very little blight and some have a lot. This suggests that differences in blight severity among blocks have as much or more to do with differences in management and weather than with varietal susceptibility.

2. The majority of dropped nuts have blight lesions that appear to have originated from "end blight" (Fig 1A), where the initial infection occurred at the blossom end of the nut. End blight infections are more typically the result of early season (e.g. March and April) infection events from bacteria overwintering in buds whereas "side blight" lesions (Fig 1B) tend to occur when later season (May and June) rain events move bacteria around from previously infected nuts to others. End blight infections are also much more likely to spread to the kernel (and eventually cause the nut drop) than side blight. These observations suggest that the heavy drop we are seeing had more to do with conditions and blight control programs in place early in the season than later.

So, what went wrong this year and what can be done better next year?

Inoculum levels were very high with record rainfall levels in the spring of 2011. This set the stage for the spring of 2012 when weather conditions were wet and favorable to disease from leaf-out of most varieties through the end of April. (Fig 2) Orchards lacking an effective protective copper spray residue any time during this period were at risk of disease development. Research and experience have shown that "an effective protective copper spray residue" include:

- Using one of many available and effective copper-containing blight control products at rates (copper rates vary by formulation) shown to be effective. Application rates on the high end of the range permitted by the label give the best disease control.
- Tank-mixing copper with Manzate fungicide (mancozeb) in all applications. High levels of bacterial copper resistance have now been documented in many walnut districts, orchards, and varieties. As currently understood, copper-resistant walnut blight bacteria have an enhanced ability to protect themselves by "pumping out" copper ions that penetrate cell membranes. Manzate disrupts cell membranes, overcoming this protective mechanism.
- Beginning a program of regular blight applications early when pistillate flower emergence occurs. Research has shown the benefits of initiating protective sprays when bud break has proceeded to a point when 20-40% female flowers are visible or when emerging shoots have reached the "prayer stage" of elongation. Adding an earlier "bud-break" or even catkin emergence treatment of copper+mancozeb plus a bud-penetrating surfactant to kill bacteria overwintering inside buds has been shown in some trials to provide some benefit, especially in high pressure situations, i.e. when the overwintering bud populations are high and in-season weather conditions are favorable to disease.
- Maintaining an effective copper+mancozeb residue throughout the time when weather conditions favor disease. Remember that copper stays on the tissue to which it is applied: Shoots and nuts that emerge and/or expand after an application are unprotected until copper is applied to them in the next application.
- Using full orchard sprays for each application. Alternate row spraying, even in (increasingly rare) cases where growers really do manage to get back within a few days to treat the other rows, likely results in a considerable number of flowers/nuts with less-than-optimal copper residues, providing a window for increased population build-up, nut infection and promotion of copper resistant strains in the bacterial population.

Joe Grant, Farm Advisor
Jim Adaskaveg, Plant Pathologist, UC Riverside

Figure 1A. End blight

Figure 1B. Side blight

Figure 1C. End & side blight

Walnut blight symptoms on developing fruit. A. End blight is typical of early season infections from primary inoculum. B. Side blight is typical of later season infections from secondary inoculum spreading from infections of end-blighted fruit; and C. End and side blight on the same nut.

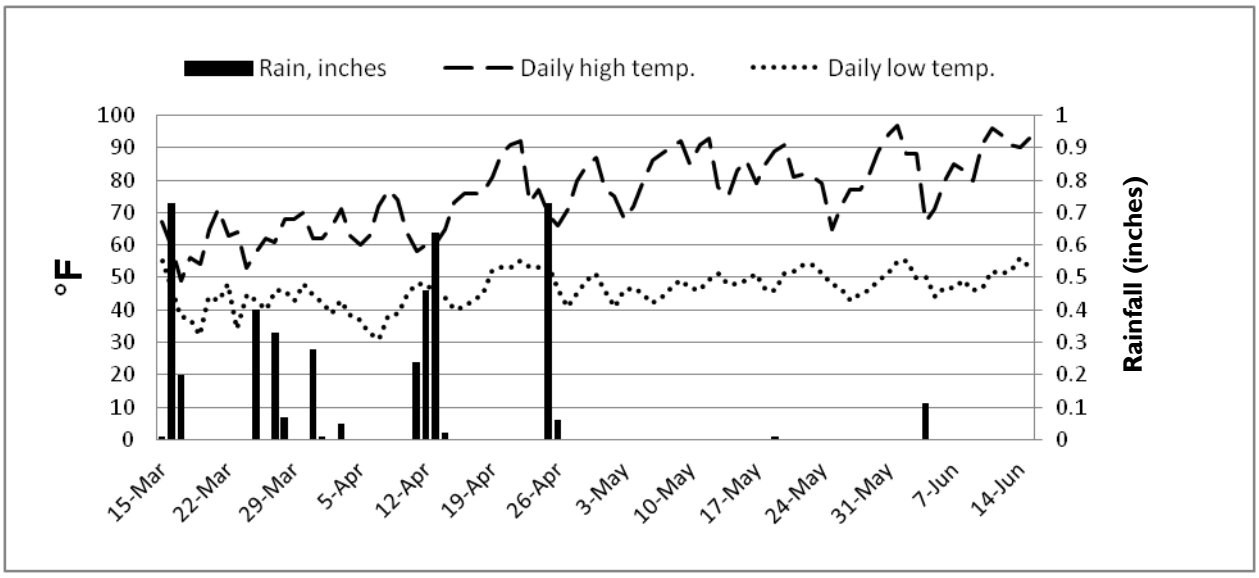


Figure 2. Spring 2012 daily high and low temperatures and rainfall for Linden

Soil Conservation: A Historical Look

Prior to beginning as the Delta Crops Resource Management Advisor, I worked on projects to improve soil quality and crop productivity in orchard systems. As part of those projects, I explored the history of soil conservation policy in the United States. From Jefferson and the philosophy of Manifest Destiny, to Lincoln and the signing of the Homestead Act, moving westward to settle and farm has been part of our national history. In the 1920s and 1930s, however, we learned that even the new frontier had its limitations.

In 1929, as a result of the Great Depression, commodity prices plummeted, and President Roosevelt signed the Agricultural Adjustment Act as part of his New Deal program. The act allowed the United States Department of Agriculture to pay farmers to take land out of production in an effort to reduce crop surpluses and control prices. Additionally, he signed the Soil Conservation Act in 1935, establishing the Soil Conservation Service (SCS), renamed the Natural Resources Conservation Service (NRCS) in 1994. The SCS was created in response to the Dust Bowl, when giant dust clouds billowed from the Midwest to as far as Washington D.C. and the Atlantic Ocean.

Given the economic and environmental challenges of the time, it was common to use soil conservation as a cloak for commodity-control policies. The Soil Conservation and Domestic Allotment Act (1936) was the first of these commodity-control policies disguised as soil conservation policy. It supported soil conservation only to the extent that it paid growers to take poor quality land out of production, but it was intended to reduce crop surpluses and mitigate falling commodity prices.

Soil conservation and commodity-control policies were entwined until the 1970s, when prices sky-rocketed. Secretary of Agriculture, Earl Butz, was known to say “get big or get out” and “plant fencerow to fencerow”. Policies to encourage soil conservation were essentially abandoned, and it was not until the mid-1980s that they were given attention again. The 1985 Farm Bill included payment programs for conservation, and conservation tillage gained wider adoption. Funding for conservation programs has been an important part of subsequent Farm Bills, but we will wait and see how it fares in the Farm Bill currently under debate.

With that as background, what should be recognized is that soil conservation policy traditionally focused on reducing soil erosion. We know that soil degradation goes beyond erosion to include salinity, acidity, nutrient limitations, subsidence, among other problems. In 1993, the National Research Council emphasized the importance of conserving and enhancing soil quality because it is linked with air and water quality.

One of my exciting challenges in this new position will be working on projects to maintain and enhance soil quality and crop productivity in the Delta. Conservation tillage may be a tool in the toolbox. In the next article, I describe different conservation tillage practices and elaborate on some ideas for the Delta.

Michelle Leinfelder-Miles, Farm Advisor, Delta Crops

Figure 2.

Conservation Tillage: Classifications and Examples

Tillage may be categorized based on the number of operations performed and the amount of residue left covering the soil surface. Conventional tillage is defined by the Conservation Technology Information Center as tillage that incorporates most crop residue, leaving less than 30 percent of the soil surface covered with residue after planting. Conventionally tilled field corn in California's Central Valley, for example, may have 18 soil-disturbing operations performed from land preparation through to planting and cultivating. These operations make for good soil-to-seed contact and efficient furrow irrigation, but they require fuel and labor, generate dust, and can reduce soil tilth.

Conservation tillage is defined by the NRCS as maintaining at least 30 percent soil surface coverage, reducing the volume of soil disturbed in order to lessen erosion by water and wind. No-tillage, strip-tillage, ridge-tillage, and mulch-tillage are types of conservation tillage. In a no-till system, the soil is only disturbed by fertilizer injection and seeding. In strip tillage, the seed row is tilled prior to planting, but less than one-third of the soil surface is disturbed. Residue is cut and short beds are formed ahead of the planting shoe in ridge-tillage, but again, the soil is generally untouched between harvest and planting. Mulch-tillage would be any other conservation tillage system that maintains 30 percent or more of the surface covered with residues.

Additionally, researchers with UC Cooperative Extension have defined another term – minimum tillage – as a 40 percent reduction in tillage passes compared to operations in 2000. The reduction in passes has been shown in some systems to save fuel and labor costs, reduce dust and soil disturbance, and maintain yields. A successful example comes from a 12-year tomato-cotton rotation at the UC West Side Research and Extension Center in Five Points. In that study, tillage passes were reduced by 50 percent in the tomato rotation and 40 percent in the cotton rotation, which saved, on average, $70 per acre in fuel, labor, and repairs. Additionally, both crops yielded as well or better under reduced tillage.

I recently saw an example of reduced tillage in dairy silage corn production. The fields were conventionally prepared except that they were not bedded up; the corn was seeded flat (Figure 1). The field is flood irrigated, similar to alfalfa with border checks (Figure 2). By seeding flat and primarily using herbicide weed control, the grower is able to eliminate at least two soil-disturbing operations.

In the Delta, reducing tillage could help to lessen soil subsidence by reducing the rate of oxidation of peat and minimizing wind erosion. The NRCS classifies soils based on their susceptibility to wind erosion. Wind Erodibility Group 1 (WEG1) soils are highly erodible, and WEG8 soils are not susceptible. Much of the primary Delta is classified as WEG2, which means that the soils are quite susceptible. Maintaining surface residues could help to lessen their susceptibility to wind erosion.

More research is needed to understand the effects of reduced tillage on soil properties and crop productivity in a variety of crop rotations and soil types. UC farm advisors and specialists, in cooperation with growers, have conducted on-farm research projects in order to better understand the pros and cons of conventional, conservation, and minimum tillage. Additionally, we survey growers every two years to know how widely conservation and minimum tillage practices are employed. This year is a surveying year. If you employ conservation or minimum tillage, I would be interested in hearing from you, visiting your operation, and including your acreage in the survey. Please give me a call.

Michelle Leinfelder-Miles, Farm Advisor, Delta Crops

Figure 1.

Update on Thrips-vectored Virus Diseases in Onions and Tomatoes

This season I've seen a number of local onion fields affected by **iris yellow spot**, a disease which I hadn't noticed here prior to 2010, but which now seems to be rather widespread in the county's onion fields and which unfortunately is likely here to stay. Symptoms of iris yellow spot are yellow or straw-colored lesions on the leaves and scapes of the onion plant. Lesions on leaves (Fig 1) vary in shape from elongate to rarely diamond-shaped and may be small or large. Lesions may coalesce into large chlorotic areas and may girdle leaves and cause premature senescence or girdle scapes and result in lodging in seed production fields. Although plants are not killed, vigor is reduced, as is bulb size and seed production. Symptoms may vary quite a bit and leaf lesions can potentially be confused with other problems (e.g. fungal diseases or herbicide damage).

Iris Yellow Spot Virus (IYSV) is related to *Tomato Spotted Wilt Virus* and *Impatiens Necrotic Spot Virus* which infect other vegetable crops including tomatoes, peppers, lettuce and others. The only known vector or carrier of the virus is onion thrips (*Thrips tabaci*). Onion thrips acquire the virus during the larval stage while feeding on infected plants. Once a larva has acquired the virus, it is capable of spreading the virus to new plants for the remainder of its life. Adult thrips can bring the virus in from outside a field or larvae can acquire it and spread the virus within the field.

One challenge with this disease is the potential of the onion thrips vector to develop very large populations on onion in short periods. Thrips pressure is one of the more important factors affecting disease outbreaks, and reducing thrips populations in a timely manner is generally correlated with a reduction in disease incidence. For information on scouting for thrips and thrips identification, see the onion thrips management section on the UC IPM website at www.ipm.ucdavis.edu/PMG/r584300111.html. However, be aware that the treatment thresholds mentioned here are for direct economic damage from thrips feeding in the absence of IYSV; research is needed to determine economic thresholds for thrips when IYSV is present in the area. Resistance to organophosphate insecticides has been reported in other states and is suspected in California. Because of this, it is especially important to rotate insecticides from different chemical families. Thorough spray coverage is essential for control, since most thrips feed in protected areas of the plant, and use of surfactants may help the chemicals reach these less exposed larvae. During hot weather, application during the early morning or the evening when the thrips are more active is recommended.

Some onion cultivars appear to more tolerant of the virus, while others are less attractive to the thrips vector. Evaluations of cultivars side by side reveal that cultivars with low numbers of thrips and low levels of thrips feeding damage tend to have a yellow-green leaf color, while susceptible cultivars tend to have a blue-green leaf color. Additionally, cultivars with glossy foliage tend to be more resistant than less glossy cultivars.

The crop should be managed to reduce sources of stress. Use drip irrigation or careful irrigation scheduling to reduce water stress. Work in Colorado has shown a correlation between soil sodicity and IYSV incidence, suggesting that salt stress may play a role in making plants more susceptible to virus infection. In addition to careful irrigation and management of soil salts, root diseases such as pink root and Fusarium basal plate rot should also be managed to avoid plant stress.

Other factors affecting the disease: Higher plant populations are associated with lower incidence of IYS. Research in New York has shown that higher nitrogen fertilization resulted in higher populations of thrips larvae, indicating that either more eggs were laid on these plants, more larvae survived on these plants, or both. Overhead irrigation provides some suppression of thrips populations, but does not eliminate the need for other management tactics. There is a great volume of research underway in the major onion-producing states; hopefully the outcome will be better insight into how we might affordably manage the disease here in San Joaquin County. If you need help with diagnosis or putting together a management plan for next season, please contact me.

This season the number of tomato fields affected by **tomato spotted wilt** seems to be generally higher. And while in the past the virus was relatively rare out in the Delta, it seems to becoming more common there, though incidence is still not as high as levels on the east side of the county and in other hot spots of the valley.

The highest incidences of the virus generally are observed along field edges, indicating that the virus is moving in from outside the field initially, though it certainly can build up within the field once it is there. Weeds outside the field likely play a role as an initial source of the virus, though there are other possible sources. Thrips can survive the winter in the soil and emerge in the spring still carrying the virus they acquired the previous season. Little is known of the relative importance of each of these avenues (weeds and overwintering/pupating thrips) for

(Continued on page 6)

(Continued from page 5)

overwintering of the virus in the absence of a tomato or pepper crop. Winter crops can be a source, but the host crops known to harbor the virus are not grown here in San Joaquin County to any great extent (e.g. radicchio, lettuce, and fava bean).

Does it pay to spray? The economic payoff of thrips chemical control programs is debatable. From Fresno County Farm Advisor Tom Turini's multi-year trials, drip-applied Platinum was not effective, while certain foliar applied insecticides were effective in reducing spotted wilt incidence (see report at http://ucanr.org/sites/Vegetable_Crops/files/137800.pdf). However, we have no established thresholds for what thrips population levels should trigger a spray, in part because it is highly variable how many of the thrips are carrying the virus. Thus, it is hard to know when spraying for thrips is warranted. Clearly, resistant varieties are and will continue to be key, especially for areas where the disease pressure is high year after year. There will always be some risk that the virus can overcome the resistance in the crop, but so far the varieties are performing well in California. Even among varieties which are not categorized as resistant, there is variation in susceptibility to the disease. For more information on variety susceptibility, see information from Tom Turini and Michelle Le Strange at http://ucanr.org/sites/Vegetable_Crops/files/137795.pdf.

And one parting thought: Sacramento Valley farm advisor Gene Miyao's research has demonstrated, repeatedly over the last decade, that fungicide applications for **blackmold fruit rot** in processing tomatoes are most effective when made 6 weeks prior to anticipated harvest. So if you have fields scheduled for a late September or early October harvest, now is the time to make an application to reduce blackmold incidence. Chlorothanonil (Bravo and other products) has been the best performing material, though unfortunately even the best timed applications only reduce blackmold incidence in half.

Brenna Aegerter, Farm Advisor, Vegetable Crops

Putting Our Best Foot Forward

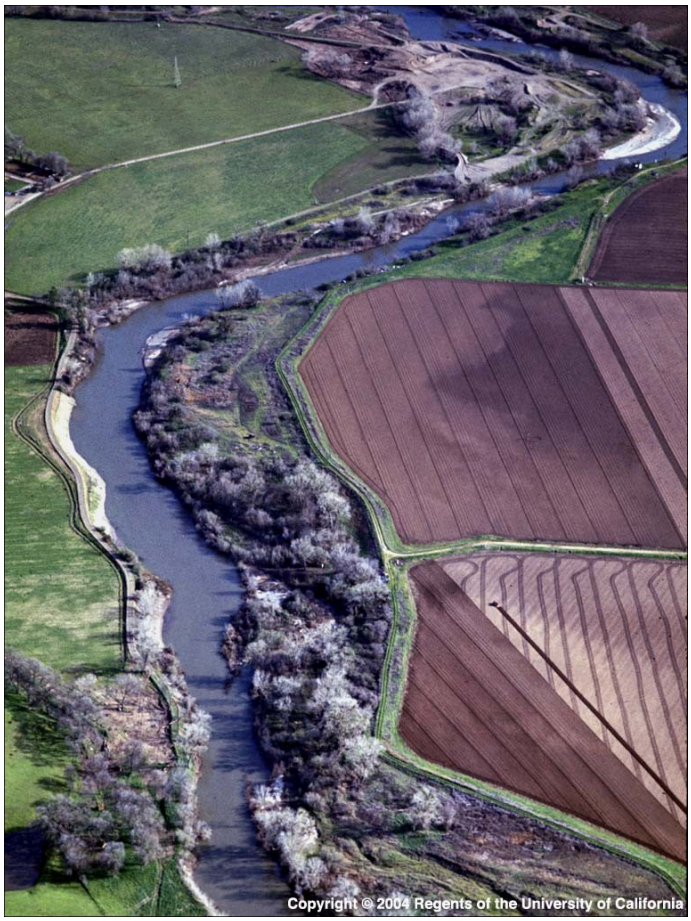
In my seminars on interpersonal negotiation skills (how to deal with disagreement) I speak on a number of factors that help people improve their interpersonal relations. One of them has to do with never stopping to put forth our best efforts.

We tend to put our best foot forward when meeting people for the first time. Much the same can be said about our workplace 'honeymoon period.' We try very hard to make a good first impression. Sooner or later our human weaknesses show and others see the *real* us. It is at this point that we may reason, "Why try and pretend anymore to be someone I am not?"

The key to making a long term positive impression is to never stop trying to be the person we hope to someday become. To decide to continue to put our best foot forward despite our weaknesses.

For more information on interpersonal relations at work, download Chapter 4 of *Party-Directed Mediation*: http://www.cnr.berkeley.edu/ucce50/ag-labor/7conflict/

Gregorio Billikopf, Labor Management Farm Advisor, Stanislaus, Merced, and San Joaquin Counties



Delta Growers:

Sign up for the Delta crops newsletter and meeting notices. Visit http://ucanr.org/subscribedelta, or email Michelle Leinfelder-Miles at mmleinfeldermiles@ucanr.edu, and ask to be added.

CALENDAR OF EVENTS

Conservation Agriculture and Controlled Traffic Farming 2012
August 23 - 30, date and time varies by location
Please see announcement on page 9.

UCCE Silage Day
Thursday, August 23, 2012, 9:45 am - 2 pm
Harvest Hall, Stanislaus Ag Center: 3800 Cornucopia Way, Modesto
RSVPs are appreciated to plan lunch and handouts.
Register at (209) 525-6800 or jmheguy@ucdavis.edu
Agenda and more information on page 8.

Aquatic Weed School 2012
September 5-6, 2012
Plant Science Bowley Teaching Center, UC Davis
The $525.00 registration fee includes a comprehensive course notebook, lunch, and light refreshments each day. Class size is limited, so early enrollment is suggested.
For more information, see http://wric.ucdavis.edu or contact the UC WEED Research & Information Center.
e-mail: wric@ucdavis.edu; phone: (530) 752-1748

Beef Quality Assurance Program
Wednesday, September 26, 2012, 9:15 am – 12:00 pm
Oakdale Rodeo Grounds Clubhouse, 1682 East F Street, Oakdale.
Contact: Theresa Becchetti (209) 525-6800, also see agenda on page 10.

Small Landowner Livestock Short Course
Thursday, September 27, 2012, 12:30 pm – 4:30 pm
Oakdale Library, 151 South First Street, Oakdale
Contact: Theresa Becchetti (209) 525-6800, also see more info on page 11.

Rangeland Soil Quality Health and Weed Management Workshop
Tuesday, October 23, 2012
Time and Location to be determined.
Please contact Theresa Becchetti for more information (209) 525-6800.

UC Soil Fertility Short Course
Wednesday, November 28, 2012, 8 a.m. to 4:30 p.m.
UC Davis Buehler Alumni and Visitors Center.
Topics 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. Although the focus will be on nutrient management in annual cropping systems, much of the material presented will be relevant to perennial crops as well. The program is intended for growers, CCAs, PCAs, government agency personnel, and others involved in fertility management planning. Registration, which includes lunch, refreshments, and study materials, is $75 for students and UC personnel. For others, registration is $150. When this was last offered in February, registration was full before the event date, so early enrollment is suggested. More information is available on the VRIC website (http://vric.ucdavis.edu).

UC IPM Green Bulletin for Structural and Landscape Pest Management Professionals
posted online at www.ipm.ucdavis.edu/greenbulletin
In the current issue:

Integrated Thrips Management in Landscape Settings
Deer Mouse Infestation? Be Aware of Hantavirus
Iron HEDTA: A Natural Selective Herbicide for Turf
Asian Citrus Psyllid, Huanglongbing Update

University of California
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UCCE Silage Day ~ Modesto
Thursday, August 23, 2012

AGENDA

9:15a – Registration begins

9:45a - Welcome & introductions

10a - UCCE silage update

Jennifer Heguy, UCCE Dairy Advisor

10:20a - Timing harvest for silage quality

Dr. Heidi Rossow, UC Vet Med, Dairy Nutrition & Nutrient Management

10:45a – What's the value of high quality corn silage?

Dr. Noelia Silva-del-Rio, UC Dairy Production Medicine Specialist

Break – Visit with meeting sponsors

11:30a - Feeding silage for production & animal health

Dr. Peter Robinson, UC Dairy Nutrition Specialist

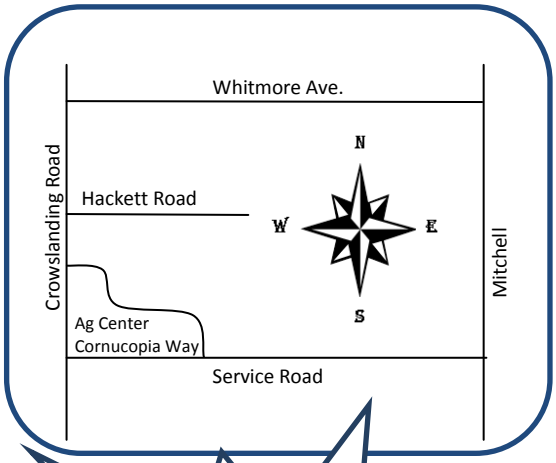
12p - Technology spotlight

Local dairy producer panel

Lunch – Visit with meeting sponsors

2p –Adjourn

Harvest Hall, Stanislaus Ag Center:
3800 Cornucopia Way, Modesto



Bring in your silage samples for DM analysis using NIR technology!

- There is **no charge** to attend
- **RSVPs are appreciated** to plan lunch and handouts
- **Register** at (209) 525-6800 or jmheguy@ucdavis.edu

2012 Silage Day Sponsors:

Eureka Seeds · Alltech · NK syngenta · San Joaquin Equipment · DEKALB When Performance Counts · Lallemand · Silostop

Questions? Please contact **Jennifer Heguy, UCCE Dairy Farm Advisor** @ (209) 525-6800 or jmheguy@ucdavis.edu

Conservation Agriculture and Controlled Traffic Farming 2012

CASI announces 4 conferences

CASI is pleased to sponsor a series of four interactive conferences on August 28, 29, and 30 throughout the Central Valley on conservation agriculture and controlled traffic farming.

August 28
Davis • 1-4pm
UC Davis Heidrick Ag Equipment Center
113 / Hutchison • UC Davis
Davis, CA 95616
(530) 752-1898

August 29
Modesto • 8 - 11am
UCCE Stanislaus County
3800 Cornucopia Way, Ste A
Modesto,CA 95358
(209) 525-6800

August 29
Five Points • 1pm - 4pm
UC West Side Field Station
17353 West Oakland
Five Points, CA 93624
(559) 884-2416

August 30
Bakersfield • 8 - 11am
UCCE Kern County
1031 South Mount Vernon
Bakersfield, CA 93307
(661) 868-6200

Conservation agriculture(CA) production systems optimize food, fiber and energy production from available resources, increase soil health and productivity by increasing soil organic carbon, and build up many additional ecosystem services that cannot be achieved by intensive tillage-based cropping systems.

Controlled traffic farming (CTF): plants grow better in soft soil but wheels work better on roads --- the same machinery wheel tracks in cropping fields are maintained year after year. There are a multitude of potential benefits of CA and CTF, these systems are currently very minimally used in California.

The purpose of this series of conferences throughout the Central Valley in August of 2012 will be to bring together five world experts on these systems to share information related to the principles of CA and CTF and to discuss opportunities and potential benefits these approaches may have for current California systems.

Presenters will include:

Jerry Hatfield
Director, USDA ARS National Soil Tilth Lab
Ames, IA

Don Reicosky
Retired USDA ARS
Morris MN

Rolf Derpsch
No-till Expert
Paraguay

Clay Mitchell
Farmer
Geneseo, IA

John McPhee
Tasmanian Ag Research Institute
Devenport, Tasmania

Conservation Agriculture Systems INNOVATION

NRCS

EDISON

RESOURCE

Sustainable Conservation

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UC DAVIS COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

UC DAVIS DEPARTMENT OF PLANT SCIENCES

UC CE

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Beef Quality Assurance Program
Oakdale Rodeo Clubhouse
1624 East F Street
Oakdale, CA
September 26, 2012 9:30am – 12:00pm

A Beef Quality Assurance Program is being held by the University of California Cooperative Extension and California Cattlemen's Association at the Oakdale Rodeo Grounds Clubhouse on September 26th. Topics will include injection and vaccine information, animal ID, age and source verification and national bull and cow beef quality audit.

There is no charge for the meeting unless you need to be certified through California Cattlemen's Association. **Certification needs to be completed every three years to remain current. ** The fee is $25 per Certification; checks made payable to California Cattlemen's Association will be collected on the day of the event. For more information and to pre-register, please contact Theresa Becchetti (209-525-6800) or register on-line at http://ucanr.org/oakdalebqa by September 12th.

Register on-line here!

Agenda

9:15 am **Registration**

9:30 am **Beef Quality Assurance Program**

Dr. John Maas, Dr. Jim Oltjen, Stevie Ipsen (CCA), Theresa Becchetti

10:30 am **Break**

10:45 am **Quality Assurance Program continues**

12:00 pm **Adjourn**

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Small Landowner Short Course

September 27th
Oakdale Library
151 South First Street
12:30pm - 4:30pm
Sponsored by University of California Cooperative Extension and
Natural Resource Conservation Service

Do you own less than 20 acres?
Do you have **horses** or a few other animals?
Not quite sure how to get rid of the **weeds**?
What weeds might be **poisonous**?
Are you **overfeeding** your horses?
How do I best manage my land?

If you answered yes to any of these questions, then the Small Landowner Short Course is for you!! We'll provide you with information to help you better manage your land and animals.

Come find out about resources available to you through the University and NRCS to make the most of your acreage.

For more information please contact Theresa Becchetti at 209-525-6800.

Register by September 12th. To register on-line: http://ucanr.org/smalllandowner

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Name(s)
Address
e-mail address

To help us better tailor the program to you, please answer the following questions:
What type of animals do you own?
What type of pasture do you have (irrigated or not?)
How many acres do you have for grazing?

Please return with $10 registration fee made payable to UC Regents to:
Theresa Becchetti, 3800 Cornucopia Way, Ste A, Modesto, CA 95358
Registration due by September 12th.

University of California Agriculture and Natural Resources
Cooperative Extension
San Joaquin County
2101 E. Earhart Ave., Suite 200
Stockton, CA 95206-3949

Non-Profit Org.
US Postage
PAID
Stockton CA
Permit No. 2

Notes from the Field

August 2012

The University of California working in cooperation with San Joaquin County and the USDA.