



FIELD NOTES

A QUARTERLY PUBLICATION OF COOPERATIVE EXTENSION

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San Joaquin County UC Master Gardeners

We are pleased to announce the return of the UC Master Gardener Program to San Joaquin County. Master Gardener volunteers provide research-based horticultural outreach and education to San Joaquin County residents. The Program educates the public on resource conservation techniques, green waste minimization, and environmentally friendly gardening practices. Master Gardeners are available to diagnose plant problems and give horticultural assistance to San Joaquin County residents over the telephone and via office visits, workshops, demonstrations, events, and through mass media.

With support from the San Joaquin County Department of Public Works, the MG program kicked off in January 2007 after a 15 year hiatus. In July 2007 thirty residents from throughout San Joaquin County successfully completed the rigorous 17-week training to become Master Gardeners. Lessons included an introduction to horticulture; soil, water and fertilizer management; composting; green waste reduction; ornamentals and drought tolerant plants; turf management; landscape tree planting and maintenance; introduction to insects; integrated pest management; home vegetable gardening; plant disease diagnosis; weed identification and management; home orchards; small fruits and grapevines; identification and control of household pests; understanding pesticides;

volunteerism; and diagnosing garden and landscape problems. The courses are comprised of one 4½ hour class per week, along with quizzes and a final test for certification into the Master Gardener Program. Upon completion of the training, Master Gardeners are required to contribute 50 hours of community service to San Joaquin County within a year of graduation.

The Master Gardener program is again open for enrollment of San Joaquin County residents. A new series of training sessions will begin February 27, 2008. The classes will be held on Wednesdays from 8:30 am – 1:00 pm. The classes will go until June 25, 2008. The fee for the class is \$100.00 and includes UC books as well as other Master Gardener materials.

Applications are available in our office or on the Master Gardener web-site, <http://sjmastergardeners.ucdavis.edu>.

San Joaquin County residents can benefit from the expertise of the Master Gardener Program at no cost by calling the Master Gardener Hotline at (209) 468-8457. The hotline is available Tuesday through Thursday from 9 a.m. – 12 p.m. for gardening questions. San Joaquin County residents may also bring samples for diagnosis into the UC Extension Office at 420 S. Wilson Way in Stockton during these hours.

Marcy Hachman, Master Gardener Coordinator



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Crops Digest / November 2007 Grapes & Almonds

Grapes

After two wet springs, 2007 began very dry but mild. The season ended with a long drawn-out finish after a fast start for the harvest. The relatively late finish continued a trend for the third consecutive year. This year was different in that, before September 15th, early varieties and blocks reached maturity easily. After mid-September, ripening slowed and at times seemed to almost reverse itself. This year the hot spell lasted only a few days, but in some cases was more evident because of dry soil conditions. Early cluster counts were well above average, but the almost ideal bloom conditions didn't seem to be evident as most varieties and blocks tended to have less set and smaller berry size at harvest. This was especially so in Zinfandel and Petite Sirah; bunch rot was non-existent in both varieties.

Most varieties and vineyards were below average in yield. This was more so for old vines and Zinfandel, generally down 10 to 30 %. Many blocks, including younger Zinfandel vines, did have close to average yields or even slightly above. As with last year, harvest started about normal, around the 10th of August. Because of many factors, (some harder to explain than others) ripening and flavors developed slowly after mid-harvest. At harvest, color and overall quality was excellent. Mother Nature continues to accommodate the interest in longer 'hang time' this year as in 2005 and 2006. The total crop is still a big one, from both maturing younger vineyards and some new acres.

Most vineyards did not have severe weed, insect, mite, or disease problems. Pressure was light in most vineyards, but exceptions always occur. It appears the monitoring and inspection programs are keeping glassy-winged sharpshooter out of the county, but vine mealybug is continuing to spread. It seems to be manageable, but at added cost. Be aware of new infestations where there is a lot of bird or wild animal activity and where equipment and crews may be coming and going.

There is a new mealybug in the southern San Joaquin Valley called the striped mealybug. When looking for vine mealybugs, focus where there is a lot of ant activity on drip hoses or up and down vines. Those areas of ant activity are often the first place to easily confirm an infestation. If you do have specific questions, information is available at the Lodi Woodbridge Winegrape Commission office, our office, and online at ipm.ucdavis.edu or vine-mealybug.uckac.edu.

Increased costs, more regulations, and tougher competition are still driving consolidation of growers and wineries, but agriculture in all forms seems to attract optimists. Hopefully after a good Thanksgiving break, it's time for the year end checklist.

Fall Grape Checklist

- If the soil is dry, a light irrigation to help maintain soil moisture is okay until it rains steadily.
- No nitrogen should be applied now, but potassium now (or early next year) is okay. It won't move like nitrogen. To get full benefit of compost, it needs to be disked in.
- Make a note of any problem weed species that may be increasing.
- Mark any vines with excessive red leaves and/or leaf roll for possible removal.
- Renew your Ag Waiver Discharge membership.
- Update your air pollution mitigation plan if you have 100 acres or more in a single vineyard.
- Review your pesticide use reports and get everything up to date as there is continued interest in keeping agriculture "accountable" for problems real and perceived.
- For vine mealybug, Lorsban postharvest can help keep it checked until the summer control program. Be careful not to apply before a storm, especially near natural drains and waterways.
- Pre-pruning can be done now, but leave at least 12 inches of dormant cane, until *Eutypa* spore load diminishes with some heavy or a few normal rains.

Almonds

The 2007 season was generally a little more upbeat for almonds than grapes. After a very dry and cold winter, there were a few good rains just before bloom. Good weather was present for most of the bloom, with a brief rainy period from February 22-27. Even though it was a dry year, excellent chilling seemed to help encourage a strong bloom and overall crop turned out well. The downside was bees were very expensive and, although in short supply, there were just enough available.

It looks like prices will hold and just cover increased costs, as market demand still grows. Fortunately weather was generally good and so many costs such as bees, fuel, and fungicide use were not devastating. As in all agriculture, increased air and water regulations also add cost pressure. Consolidation of operations at all levels continues.

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The strong fast bloom compared to 2006 didn't seem to harm yields as sometimes happens. The season progressed with a relatively low level of insects and mite problems and a little less incidence of lower limb dieback. That problem, along with bacterial canker, continues to require more research for the long term.

Dry soil conditions were not as bad as some years, but there were some stressed trees as deep soil moisture was considerably less than the last two seasons. Nut size was slightly smaller, possibly due to good yields but also dry soil conditions and moderate weather.

The upside of 2007 has been continued increase of demand and more recognition of the meal enhancement potential and the dietary benefits of almond consumption. Prices may strengthen even with another "billion pound" harvest.

Fall Checklist

- If the orchard didn't get a good irrigation after harvest or it has been a while since water was applied, a light irrigation just before or after any fall rains may be helpful.
- If water penetration has been a problem, a fall gypsum application - or a fall lime application in low pH soils - can help winter rains soak in, but spring time is often better with first irrigation.
- No nitrogen should be applied now, but potassium can be applied now or early next year, as it won't move through the soil like nitrogen does.
- Pruning is okay, but not on young trees. In general less pruning is necessary than previously thought to keep production up, especially if the budget is tight. Even skip it for a year.
- Mark trees or limbs which are more easily seen as needing to be removed before next spring.
- Note any problem weed species to make appropriate herbicide or weed control changes.
- Review your delivery sheets and try to determine exactly what caused the damage (worms versus ants or shrivel or maybe just chipped nuts).
- Renew your Ag Waiver Discharge membership.
- Update your air pollution mitigation plan if you have 100 acres or more in a single orchard.
- Also, review your pesticide use reports and get everything up to date as there is continued interest in making sure agriculture is held "accountable" for any and all problems real or perceived that could be traced back to orchard sites.
- Think about a dormant spray if it has been more than three to five years and worm or early season mites or possibly scale has become more evident. Although dormant copper sprays have never been proven to prevent blast, there may still be some benefit to suppress

an increasing incidence in your orchard. Remember to try to avoid dormant sprays just before a rain, especially near waterways or natural drains.

- Check orchard or areas where beehives are placed for ant mounds that are very big and/or have different looking "red ants". The red imported fire ant is spreading.

Paul Verdegaal, Farm Advisor

Fusarium Diseases of Tomatoes

In general, *Fusarium* diseases tend to be specific to a single crop host or closely related crops. In other words, the *Fusarium* attacking onion poses no threat at all to a subsequent crop of tomatoes. There are some exceptions to this. For example *Fusarium moniliforme* is associated with corn and *Fusarium* problems in asparagus seem to be worse following corn crops. Most *Fusarium* diseases are soil-borne and therefore cannot be controlled once symptoms are noticed. In general, management of these diseases involves use of resistant varieties and/or avoidance of infested soils. Therefore, right now is the time to be thinking about avoidance, as you are selecting varieties and fields for next season. Photographs of symptoms are available on the web at <http://www.ipm.ucdavis.edu/PMG>.

Foot rot of tomato, caused by *Fusarium solani*, attacks the roots of tomatoes, causing discrete corky brown lesions ½ to 1 inch long. A toxin formed by the pathogen moves upwards in the plant and causes foliar symptoms that can resemble tomato spotted wilt symptoms: necrotic spots and inter-veinal chlorosis. These symptoms may be seen in only some branches, while others are healthy. This disease occurs in the counties of Sutter, Yolo, Solano, Contra Costa, Sacramento, San Joaquin and Stanislaus, and perhaps occasionally further south. This pathogen also causes a similar disease of potatoes grown in the San Joaquin River Delta. Rotation out of tomatoes and potatoes for several years should significantly reduce soil inoculum levels. No resistant varieties are available, although resistance has been identified in wild tomato species.

Fusarium wilt of tomato, caused by *Fusarium oxysporum* f. sp. *lycopersici* (the f. sp. is abbreviated Latin for "special form" referring to its specialization to tomato), causes yellowing and wilting of foliage and dark brown vascular discoloration that extends far up the stem. Sometimes only one branch or one side of the plant is affected ("flagging"). The vascular discoloration is typically much darker than that caused by *Verticillium*,

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although laboratory isolation is often required to differentiate these diseases. Fusarium-infected plants usually die, while Verticillium-infected plants are merely stunted.

Fusarium wilt can occur when non-resistant varieties are grown. However, talking about resistance can become complicated because the pathogen exists as three "races". Most processing tomato varieties grown in the Central Valley are resistant to both races 1 and 2 (denoted 'FF' in variety resistance descriptions), although a few are resistant only to race 1 (denoted 'F'); this is also true for fresh market varieties. There are a few processing tomato varieties with resistance to race 3 (denoted as 'FFF'); fresh market varieties typically grown in California don't have this resistance. Race 3 of Fusarium wilt first appeared in California in 1987 in the Sutter Basin. It remained a problem only in that area for many years. However, it is now present in the counties of Sutter, Colusa, Yolo, Sacramento, Solano and San Joaquin. This past season, I was aware of three fields with Fusarium wilt attributable to race 3 in San Joaquin County. Each infected plant can produce millions of spores which can remain in the soil and even reproduce on other crops and weeds (without causing disease). Therefore, although rotation out of tomato for several years can reduce incidence of the disease, the pathogen is long-lived in soil. To avoid spreading the pathogen from infested fields, equipment leaving infested fields should be washed to remove adhering soil.

Know the history of the field you are planting in! If you need help with variety selection with regard to disease resistance, please call me.

Brenna Aegerter, Farm Advisor



Yellowing and browning of leaves caused by Fusarium foot rot. Photo by Jack Kelly Clark.

Weed Control Makes You Money in Alfalfa

Controlling weeds in alfalfa - starting with new plantings to the last years of production - is necessary. Weed control will extend the life of an alfalfa stand several years and allow production of high quality hay at top dollar. Weeds reduce hay quality and rob alfalfa of water and nutrients. Weed-free alfalfa improves harvest efficiency by speeding up the uniformity and reducing time for wind-row drying. The presence of poisonous weeds can cause even bigger problems. For example, common groundsel (*Senecio vulgaris*), coast fiddleneck (*Amsinckia intermedia*) and poison hemlock (*Conium maculatum*) significantly reduce the value and marketability of the hay. In today's market, where prices of quality alfalfa hay have reached \$200 dollars per ton, it is worth the extra time and inputs to keep it clean.

Weed management should start long before the alfalfa is planted. Crop rotations reduce and change weed patterns, diseases and other pest problems. Correcting pH, as well as some nutritional needs, can only be addressed ahead of planting for perennial crops like alfalfa. Finally, spend time on selecting the dormancy type best suited for your operation and market. Choose the variety that has proven performance for pest problems in the area. These decisions will insure production of higher quality hay, greater yields, and better weed control.

As alfalfa fields age, plant populations decline, weed pressure increases, and management intensifies. Weeds need to be managed in alfalfa both winter and summer. Being on the early side of herbicide timing gives better results, prevents weeds from developing seeds for next year, reduces weed competition, and reduces incidence of spring leaf diseases. Treating early when weeds are small allows for herbicides to penetrate and absorb into tissues more quickly, requires less herbicide per acre, and avoids the necessity of dealing with older plants that are more difficult to kill.

Weather conditions can impact herbicide timing and effectiveness. Common groundsel, an especially important weed to control in the winter, has shown inconsistent results with Velpar herbicide. We initiated a field study in November of 2003 to examine post-emergence timings of Velpar and paraquat applications. Identical treatments of herbicides were applied in November, December and January, approximately 30 days apart. The results showed 100% control of common groundsel when applied at the November and January timings but only 30% control when applied in December. The only difference

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we could identify for the December timing was prolonged foggy and overcast conditions that lasted several weeks. Knowing that the activity of many herbicides is dependent on plant photosynthesis and light, we considered this as possibly linked to the problem. A third field experiment was initiated to test this theory under limited sunlight or when cloudy and foggy conditions existed. We used shade cloth to simulate 50% shade and black plastic for no light for six days after treatment. We uncovered and evaluated the plots after 21 days. Groundsel control was reduced up to 75% under dark plastic and 50% in partial light. Paraquat was not affected by the partial light treatment. Velpar is still very effective when applied early as a pre-emergent herbicide but should not be used alone once groundsel has germinated. Paraquat in conventional alfalfa or glyphosate in Roundup Ready alfalfa is recommended as tank mix partners. More details about the study can be found at the website <http://cesanjoaquin.ucdavis.edu/>, under Field Crops.

What's new in alfalfa weed control?

Prowl[®] H₂O (*pendimethalin*) is now registered for use in established alfalfa. It is a pre-emergent soil-active herbicide that provides long-term control of most annual grasses and many broadleaf weeds. Prowl is a good fit for controlling summer foxtail and watergrass, dodder and some winter weeds. Similar to Treflan[®] (*trifluralin*), which has gained a reputation for dodder and foxtail control, Prowl has been consistently equal to or better than Treflan in our trials. The label requires a 60 day preharvest interval, which means a January or early February application is needed for first cutting. This limits the flexibility of the product for year-round use. During the winter dormant application, it should be tank mixed with a post-emergent herbicide such as paraquat, Velpar, or with glyphosate in Roundup Ready alfalfa. Our work with Prowl in alfalfa began in the mid 1980's and we found it to be a superior pre-emergent herbicide for dodder control, most annual grasses, and many other weeds of alfalfa. Some important weeds it controls are purslane, knotweed, chickweed, seedling curly dock, and yellow foxtail. It would be effective where Roundup resistant ryegrass is a problem. It binds tightly to the top inch of soil so groundwater leaching or surface water runoff issues are not a factor.

Mick Canevari, Farm Advisor



Common groundsel, *Senecio vulgaris*, flowers.

Photo by Jack Kelly Clark.

Egg on Your Face: Quality Control Object Lesson

Pablo Muñoz, Farm Manager
Gregorio Billikopf, University of California

We were about to start our 2007 apple harvest this year and were considering some important changes. Among them, was to move from an hourly-based pay to a piece rate approach. Our biggest worry was *maintaining quality*.

Quality. We began by meeting with our crew workers and explaining the commercial importance of our apples, as well as the typical injuries produced by improper harvesting. We encouraged worker questions and discussed forms of improving quality. Each picker would work two rows at a time. We had observed that they often banged their ladders against the apples when moving them from one side of the tree to another, so we provided three ladders per picker: one for the middle row, and one each for the outside rows. A base quality standard was established for all picked fruit. This first year we kept it to a simple "pass or no pass." Next year we may also incorporate a quality bonus.

Our management team decided to use an object lesson to illustrate the importance of quality. The general idea came from Chris Peereborn, our field consultant, although we came up with the details. We bought enough raw eggs to fill half a bin. We then invited the pickers and field equipment operators out to the orchard. The workers were quite surprised when they saw the eggs. We instructed the pickers to take the eggs from one bin and fill their harvest bags, climb up and down the ladders, and

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then deposit them in an empty bin about 15 yards from the original one. The tractor driver would take the bin to the cold storage shed when we were done. The reactions were quite varied. We overheard such comments as:

Pickers. "But these are eggs, they are going to break." "I will only place a few in the harvesting bag so they don't break." "The key is emptying the bags slowly into the empty bin."

Equipment operators. "I will have to be very careful." "I will choose the roads that are in the best condition to drive to the shed." "It will take me twice as long to drive to the shed." "I will pile no more than two bins on top of each other with the fork lift, and do so much slower." The fork lift driver at the cold storage did not have the benefit of seeing the contents of the bin ahead of time. He began to handle the bin quite roughly and got quite upset when he noticed the broken eggs. "You could have told me the bin had eggs!" he complained. At the end of the day, our object lesson was clear. If you do not want egg on your face, handle the apples as if they were raw eggs.

Benefits for the workers. We introduced a straight piece rate (so a worker picking twice as many bins would earn twice the money). We provided cold water and toilets that were close by. We also gave each worker two pairs of gloves. Workers who move from hourly to piece rate often worry that they will not get credit for all of their work. Our orchard manager, Don Alejandro, suggested posting the daily quantity and quality results on a board for all to see. (It is important that worker names are substituted with a number or some other way of maintaining anonymity. Otherwise, slower workers may feel humiliated.)

When workers are paid by the hour it is the farm enterprise that pays for the break. When paid by the piece, it is the workers who pay for it. For this reason, most workers resent being made to stop and take their break when paid by the piece. So we insisted that our workers take their full morning and afternoon breaks but we paid for these. That is, we calculated the amount of work each crew worker was performing per minute, and paid them for their break as if they were working without stopping. Another way of saying this to the workers was, "Come and take a break and pretend you were still out there working, because we will pay you for the break time as if you were indeed working." It took us three days before they relaxed a little and began taking the breaks without a

major struggle. They had trouble believing us at first and were delighted when they were able to see that we did indeed follow up with this payment.

We finished our harvest and are pleased. We reduced the number of apple injuries during harvest. Workers



were able to pick twice as fast as last year on the average. The fastest worker picked four times more than the slowest. We did not retain the slowest workers, so the ratio was reduced to 1:2.6 by the end of the harvest. It is true that our trees were loaded this year and we harvested double the amount over last year, making it easier for the crew workers. But even so, we reduced the man-days-person from 1,200 to 800.

For more information on designing an effective piece rate or bonus system, go to tinyurl.com/99cq or contact Billikopf at gebillikopf@ucdavis.edu or (209) 525-6800.

Ag Labor Management book available

Gregorio Billikopf, of the University of California, has begun work on the 2nd edition of the book *Helping Others Resolve Differences*. Interested readers who would like a free copy of the first edition, can send 1) \$1.99 in USA stamps (it has to be stamps); and 2) a label that can be adhered to an envelope. We provide the envelope and the book! Send these to:

Helping Others Resolve Differences
c/o Gregorio Billikopf
University of California
3800 Cornucopia Way # A
Modesto, CA 95358-9492

For more information, call (209) 525-6800.

Time to Irrigate Your Orchard?

If you have not already done so, it is time to consider whether your orchard would benefit from an irrigation or two before rains (hopefully) begin. Due to low rainfall last winter, many orchards entered the past season with very little stored water and irrigations likely just kept pace with ongoing seasonal water use. Combined with our low rainfall to date and warm temperatures this fall and, in many cases, a long time since a final irrigation was made, many orchard soil profiles are likely to be very dry. Several problems that could be remedied by irrigating now include:

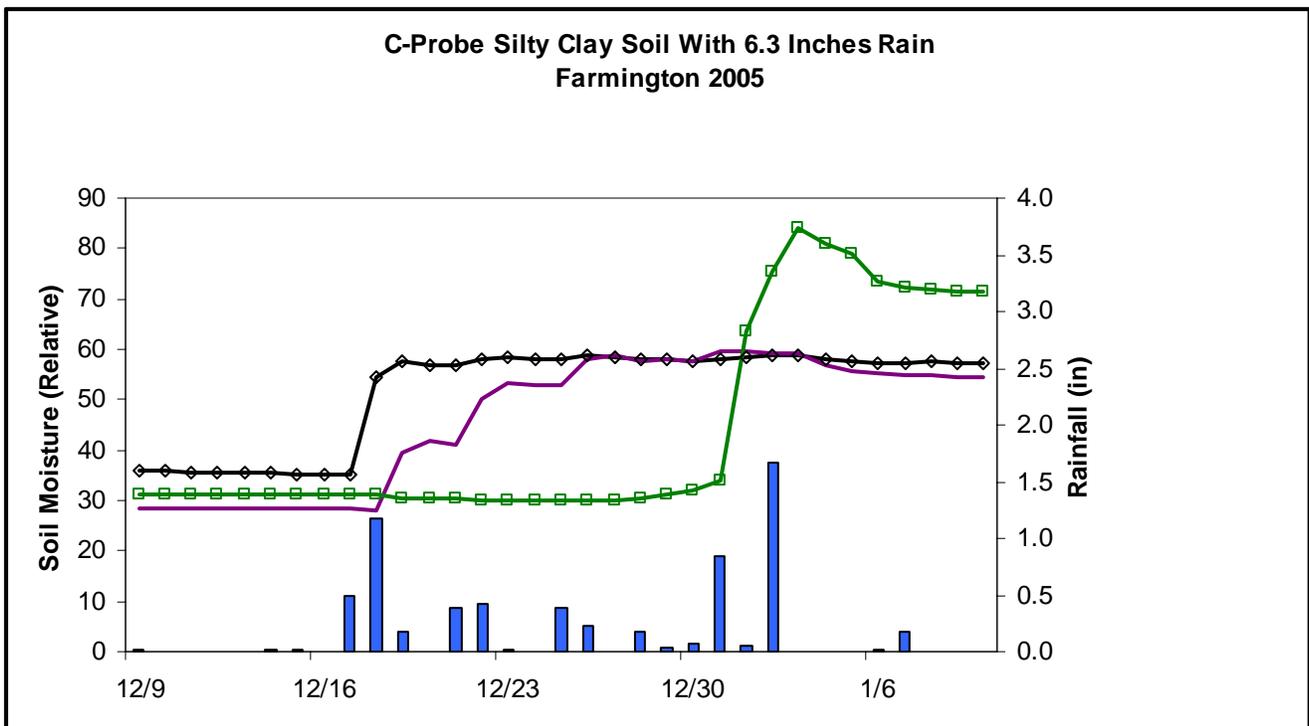
- Relieving dry conditions that predispose trees to winter injury.
- Storing water in the soil profile in preparation for next season, should this turn out to be a dry winter.
- Improved germination and early winter growth of cover crops, where they have been planted.
- Assuming good quality irrigation water, get a head start on leaching of accumulated salts (including chlorides from fall-applied potassium chloride) out of the soil profile.

Water distribution to the lower root zone takes both water and time to move the water to the lower soil depths.

Water applied in fall or winter has reduced evaporation losses making more effective the irrigation applied. It also will add to the moisture content leveraging the rainfall to move water deeper into the root zone and leaching salts. In order to leach salts from the root zone, the entire root zone must be wetted; extra water is then required to move the salts down and out.

The figure below shows the effect of 6.3 inches of rainfall that occurred in the fall of 2005 on a silty clay soil. The 6.3 inches of rainfall moved down to 48 inches. So far this year there has been no soil recharge at any soil depth. We are less than two months away from root activity in most tree crops. For the spring root flush to take place, moisture must be available. Consider getting a head start on a full spring profile by irrigating now.

Joe Grant, Farm Advisor
Terry Prichard, Soils and Irrigation Specialist



Agriculture Center Demonstration Garden Update

Construction of the new Agriculture Center for San Joaquin County is well under way with plans for a 13,000 square foot demonstration garden in the west front area (Figure 1). The purpose of this garden is to be an educational tool with innovative ideas for homeowners and landscapers to use in their landscapes. The new Master Gardener program and the Environmental Horticulture program will be able to utilize this garden for hands-on education and helping visitors understand gardening concepts.

Five distinct gardens. The demonstration garden was designed after a successful model in Sacramento called Fair Oaks Garden. The Fair Oaks Garden was created and maintained by UCCE Sacramento County's Chuck Ingels, Judy McClure, and around 45 master gardeners with the help of funds and supplies from a variety of donors. The themes for the five gardens are California natives, Arboretum All-Stars, Perennials, Mediterranean, and Common Variety. Even though each garden will have a different look, all of them will have the potential to use less water than a traditional residential landscape. Specific criteria for the gardens were water-wise plant species and hardy to the central valley summer heat. Over 75 different plant species will be showcased, with plenty of room for creativity for the home gardener.

Building a foundation. What can make or break a garden is the quality or "health" of the soil. The soil type for the garden is a Hollenbeck silty clay. The high percentage of clay in the soil may create problems with compaction and slow drainage. In October of this year UC Cooperative Extension Director, Mick Canevari, and I visited the site to observe the soil conditions. The compaction observed was more than what is normal from construction equipment because of the high clay in the soil type (Figure 2). The top layer of the Hollenbeck soil was excavated out and top soil from the Stockton downtown area was used to replace the Hollenbeck soil. A ½ inch layer of compost (22 tons) was added to the top layer of soil to increase organic matter (Figure 3) and improve soil structure, nutrient holding capacity, increase the bioactivity in the soil, and reduce the incidence of soil-borne diseases. One ton of gypsum was mixed into the compost. The compost/ gypsum mix was tilled in within the first foot of the soil (Figure 4).

Innovative Improvements

One of the main purposes of the Agricultural Center garden is to give examples of residential landscapes that combine a beautiful garden with environmentally friendly



Figure 1. Construction of the new San Joaquin County Agriculture Center, October 2007.

attributes. After discussions with an advisory team (Dr. Loren Oki and Ellen Zagory from UC Davis, and Peter Larimer, landscape architect on the project), some modifications were made to the original plan.

The new irrigation design will have three different irrigation systems to demonstrate how each system works in terms of water application efficiency and amounts. A modified drip irrigation system will be used in the Mediterranean and California native garden. A rotary nozzle sprinkler system will be installed in the perennial garden and the Arboretum All-star garden. A rotary nozzle has a higher efficiency of water distribution than traditional spray nozzles by applying less water per hour with less misting. This type of water distribution allows for a slower infiltration of water and less runoff from the garden area. The most common nozzle used in the landscape setting is the spray nozzle, and this nozzle type will be installed in the Common variety garden.

The garden will have a "smart" landscape irrigation system that uses local weather data from a nearby CIMIS station and has a main controller that tailors irrigation schedules for each irrigation zone. This irrigation system is an innovative design created by ET Water systems LLC, which won the Wall Street Journal Technology Innovation Award for 2006. Users of the controller will be able to monitor and change the irrigation zones through a login website.

Another environmental addition to the garden is a permeable walkway that meanders through the five different gardens. Regular sidewalks can be a problem with potential for high amounts of runoff (soil, fertilizer, pesticides) that goes directly to the drainage system. One

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solution to help prevent this runoff is to implement permeable hardscapes that will allow water to drain into the soil profile to help clean out pollutants rather than move directly to the water drainage system.

Benches made out of recycled materials will be placed in each garden to benefit from the shading of the small trees. At the entrance of the garden will be a walk through arbor and an educational sign that will give visitors updates of future educational workshops.

Cooperative Extension will share the San Joaquin Agriculture Center building with the Agricultural Commissioner's office. The Agricultural Center will house educational rooms for teaching and a large banquet hall for conferences and workshops. The grand opening is projected to be Summer 2008 and I encourage everyone to come see the new location when it opens.

Ashley Basinger, Environmental Horticultural Advisor



Figure 2. Compaction of the Hollenbeck clay in the demonstration garden area of the Agricultural Center.



Figure 3. Twenty-three tons of compost/ gypsum added to 13,000 sq. ft. future garden site.



Figure 4. Compost tilled into the loam top soil.

CALENDAR OF EVENTS

January 16, 2008
Cherry Research Review
Hutchins Street Sq., Lodi
Info: (209) 468-2085

January 17, 2008
8:00 am to 1:00 pm
Landscape Professionals
Soil & Plant Health Workshop
UCCE San Joaquin, Stockton
Info: (209) 468-2085

January 22, 2008,
No. San Joaquin Valley Almond Day
Stanislaus County Ag Center, Modesto
Info: (209) 468-2085

February 5, 2008
56th Annual Lodi Grape Day
Hutchins Street Sq., Lodi
Info: (209) 468-2085

April 18-19, 2008
The Short Course: Olive Production for Olive Oil
Lodi (exact location to be determined)
Info: (530) 754-9708

Thanking Our Cooperators

Every year, the advisors here at UC Cooperative Extension conduct applied research trials in fields, orchards, and vineyards across San Joaquin County. Many of these trials span multiple years. These trials would not be possible without the commitment, generosity, and patience of cooperating growers on whose farms they are conducted. We extend our deepest thanks to the following individuals and organizations who cooperated with us this past season. Please forgive us if we omitted your name!

Bob Aberle
 Jim Barosso
 Steve Biglieri
 Kelly Brakel
 Jim Burkhard
 Dale Carlson
 Louie Casale
 Larry Celle
 Tony Chiappe
 Jeff Colombini
 Wally & Nancy Condon
 Joe Cotta
 Rick & Dick Dawson
 Frank Debenedetti
 Kevin Delu
 Mike Devencenzi
 Richard, Chris, & Michael Dondero
 Ernie Dosio
 Jeff Dosio
 Kevin Delu
 Tom Dewitt
 Carlos Dutra
 Matt Ehlhardt
 Bob Ferguson
 Ray Figone
 Jerry and Bruce Fry
 Steve Fujinaka

E & J Gallo Vineyards
 Lupe Gerrero
 JJ Gonslves
 Jack Hamm
 Rita & Zenon Hitolito
 Jim Jerkovich
 Cindy Johnson
 John Kautz
 Jeff Klein
 Brad, Randy & Aaron Lange
 Stanton Lange
 Brett Lagorio
 Mark Lewis
 Bob Layman
 Steve Ley
 Dick Lind
 Chris Locke
 Tino Lopez
 Don Lutz
 Bill & Greg Machado
 Chris Machado
 Carl Maggio
 Richard Marchini
 Mick McQueen
 Alfonso Melgoza

Rudy & Lori Mussi
 Joe Mytich
 Pastor Steve Newman
 Matthew Perman
 Tony Piazza
 Greg Pombo Bill Race
 Keith & Hal Robertson
 Richard Rodriguez
 David & Farm Saelee
 Chip Salmon
 Joe Sanguinetti
 Steve Sanguinetti
 Lawrence & Tim Sambado
 Lynn Sheffield
 Mark Shimosaki
 Roger Sitkin
 John Spaletta
 Charlie Starr
 Dave Taylor
 Fred Thomas
 Larry Togninali
 Joe Valente
 Ken Vogel
 Carl and Paul Wolf
 Bill Vignolo
 Myron Yamasaki
 Richard Zolezzi

Thank You



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December 2007

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