

# UC Cooperative Extension Merced County

## ANNUAL REPORT FOR 2014 YEAR

University of California  
Agriculture and Natural Resources



University of California, United States Department of Agriculture, and Merced County Cooperating

The last year has been exciting with all the new projects and new faces. Our staff has continued to grow with the addition of new Staff Research Associates in nut crop research, Program Representatives for 4-H Youth Development and Family Nutrition Education, as well as our usual summer university student interns.

Our continuing education course (coordinated by Larry Burrow) for pest management professionals has been very well attended. Our clients seem to like the new format of a longer morning but fewer classes to get their required hours in. Compared to other fee-based courses in the state this is an affordable option right here in the county. Many thanks to the Agriculture Commissioner office staff for their help in this effort.

2014 marked the 100<sup>th</sup> anniversary of the University of California Cooperative Extension in California, which opened its first office in Humboldt County. In 1917 the Merced County Board of Supervisors approved starting our own program here in Merced County. We are planning our own Merced County Cooperative Extension celebration in 2017, including assembling a special exhibit at the Merced County Courthouse Museum, to review our own 100-year history.

### Trees and Vines

**Maxwell Norton, Farm Advisor**  
**County Director**  
Merced County



July 1, 2015 marked my retirement and Farm Advisor Scott Stoddard taking over as County Director. Scott continues his vegetable crops and sweet potato research program and will take this on as an added responsibility. I am very grateful for the opportunity to be a Farm Advisor. As Farm Advisor Bill Weir used to say – “This is the best job in agriculture.” Thirty-six years went quickly. I truly love Merced County and the whole Central Valley.

### Vegetable Crops

**Scott Stoddard, Farm Advisor**  
Merced and Madera Counties



UC Cooperative Extension has conducted research trials in sweetpotatoes and tomatoes in Merced County since our inception nearly 100 years ago, but 2014 marked an important milestone as the 50<sup>th</sup> anniversary of the annual sweetpotato winter meeting. First started in 1965 by then Farm Advisor Bob Scheuerman, it covered much of the work that was done the previous production year, discussed current issues and what to do about them, and featured guest speakers. In those first meetings, Bob covered projects that dealt with soil fumigation, pest management, and plant production. Though the location and those in attendance may have changed, this format continues to this day. Bob was even able to be at the meeting and give historical perspective.

The use of soil fumigants remains a constant issue for the sweetpotato industry in Merced County – strict regulations limit the amount, type, and timing of applications. A potentially new soil fumigant, Dominus, which has federal but not state registration, was evaluated in two large test plots in the Livingston and Turlock areas on sweetpotatoes and showed definite potential. Yields closely matched the standard soil fumigant, Telone.

While the ongoing drought is having its impact, vegetable crop production remains an important industry for Merced County. 2014 saw large increases in processing tomato acreage because of water availability, especially on the west side around Los Banos. Sweetpotato acreage also increased due to strong consumer demand. My program goal is to help producers by providing research based information on pest management, fertilizer use, and variety development.

# UC Agriculture and Natural Resources Mark UC Cooperative Extension Centennial in 2014

Cooperative Extension was established by an act of Congress - the Smith-Lever Act of 1914. Lawmakers sought to boost agricultural productivity and enhance the lives of rural families by creating a service that channels research advances from college campuses to rural Americans. Anticipating passage of the Smith-Lever Act, Thomas Forsyth Hunt, UC Berkeley's ag college dean, brought B.H. Crocheron from Maryland in 1913 to organize California's Cooperative Extension Service. Crocheron hired advisors in Humboldt, San Diego, San Joaquin and Yolo counties in 1913.



We thank all Merced County citizens who joined us in celebration of the 100 years of cooperation between Merced County, the University of California, and the California and United States governments in serving our community and our state.



## Pomology

**David Doll, Farm Advisor**  
Merced County



Several almond trials around the County have reached bearing age. These locations compared Telone-II, Telone-II C35, and methyl bromide pre-plant soil fumigation to an unfumigated control. Telone-II broadcast and Telone-II C35 rowstrip treatments have consistently out-performed the unfumigated control. Research plots were established in areas with the presence of *Prunus* replant disease and nematodes. Both provide challenges in re-developing almond orchards.

A pistachio fumigation trial was established to determine the impact of pre-plant soil fumigation on pistachio growth in sandy soil with the presence of known plant parasitic nematodes. After two years of monitoring growth and vigor, there were no detectable differences in different pistachio rootstocks between fumigated and unfumigated soil. We will continue to follow the performance of the plot.

A pruning study was established in a commercial orchard in 2011 comparing unheaded pruned walnut trees to traditionally pruned walnut trees. Yields from the first year of production (3rd year, 2013) were doubled in the unheaded walnut trees in comparison to the pruned treatment (0.67 ton/acre v/s 0.34 ton/acre). There were no significant differences in the second year of production (4th year). Yields were 1.56 v/s 1.36 ton/acre for unheaded and traditionally pruned walnuts, respectively). Pruning costs were estimated to be around \$20/acre for the unheaded treatments and were due to maintenance and access cuts being performed. This compares to an estimated \$125/acre for traditionally pruned trees.

Within the past year I hosted four meetings, made 33 presentations, and 162 farm visits were made to almond, walnut, and pistachio growers. All of these meetings are open to the public, ADA accessible, and free of charge. Weekly updates of the website *The Almond Doctor* ([www.thealmonddoctor.com](http://www.thealmonddoctor.com)) were also continued and website traffic has continued to increase.



## 4-H Youth Development Program

**Russell Hill, 4-H Youth Development Program Advisor**  
Merced, Madera, and Mariposa Counties

**Darlene McIntyre, 4-H Representative**  
Merced County



In 2014, two new 4-H clubs were added, one in Merced City and the other in Santa Nella. The county has 18 clubs and 1,055 youth and 289 adult volunteers which thus represents a 10% growth in enrollment over the previous years and our third year of double-digit enrollment growth. We hosted a 5-day Science and Adventure Summer camp in Pincrest with 125 youth and teens. We also provided 6 weeks of science programming using our Junk Drawer Robotics Curriculum for 40 youth at Charles Wright Elementary School. We continue to work with afterschool programs to further our efforts to reach our underserved audiences.

4-H projects, events, and activities are developed to help youth explore, grow and improve skills in citizenship, leadership, science literacy, and healthy living. Our 4-H youth are learning leadership and goal-setting skills and how to become community-minded adults through youth / adult partnerships. Through experiential learning and leading together with adult mentors, youth focus their energy into their passions while also giving back to the community.





## Master Gardener Program

David Doll, Farm Advisor

Merced County

Kristine Randal, Program Representative

Mariposa and Merced Counties



The 2014/2015 year for the Merced County UCCE Master Gardeners was an exceptionally busy year beginning with the intensive 16-week MG training, which resulted in 20 graduating first-year Master Gardeners. We accomplished a lot by focusing on the drought and intensifying our educational outreach by providing 32 Farmers Market Diagnostic booths, staffing 200 hours of Helpline access to the public, supporting the 100 year anniversary of UCCE, and participating at the Statewide UC Master Gardener Conference in Mariposa. Our 46 Master Gardener volunteers reached out to 3,448 community members, while contributing 3,664 hours of volunteer time. We may be small, but we are mighty and we are committed!



### Merced County UCCE Master Gardeners Focus on the Drought

Formed the Drought Committee and created a partnership with the City of Merced to assist in teaching the public about drought awareness and water conservation techniques.

The Drought Committee held its first drought "lawn party" in which a local homeowner shared his lawn as a demonstration site for the Master Gardeners to teach the proper water-saving approaches to irrigating turf.

At all events, such as the Merced Fair, Farmers Markets, the Pick & Gather, nurseries and other venues, we have added many popular water conservation handouts to distribute to the public on vegetable gardening during a drought, how to keep trees alive, irrigation methods, and so on.

### Expanded Educational Outreach Efforts

Held Train the Trainer seminar for the Human Services Agency to teach their staff members how to teach vegetable gardening to their elderly clients.

Held 6 vegetable growing talks to the local Head Start groups with an emphasis on how to quickly, easily, and economically begin growing fresh produce for their families.

Developed a Pollinator Demonstration Garden at the UCCE office grounds to teach proper plant selection of drought-tolerant and water-wise native plants that sustain beneficial pollinators.



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## Livestock and Natural Resources

Fadzayi Mashiri, Farm Advisor

Mariposa, Madera, and Merced Counties



In 2014, I organized a Grazing Ecology and Management workshop that was attended by over 75 people. I also hosted two drought workshops: the first one provided ranchers with drought management strategies and the second one explored ways California ranchers can participate in the US Drought Monitor mapping process.

I also started working with a group of ranchers to develop collaborative niche marketing projects that will engage ranchers interested in producing and marketing niche products (e.g. grass fed beef, free range poultry and pork). The group is still in the planning stages and the participants are discussing how they want the group structured, anticipated products, and standards.

Medusahead control trials were established on three sites. In collaboration with other UC colleagues, we used the herbicide Milestone as the method of control. Despite the negative impacts of drought on forage production, medusahead density was relatively lower in the control plots compared to untreated areas, and livestock preferred to graze in the treated plots compared to the untreated areas, showing that the treatment improved the presence of more preferred grasses. I hosted a field day at one of the

trial sites to showcase and discuss the preliminary results with the members of the community.



## Dairy

**Jennifer Heguy, Farm Advisor**  
Stanislaus, Merced, and San Joaquin Counties



I took over the UCCE Merced dairy program in July 2014. With a background in ruminant nutrition, a major focus of my research and extension program is feeding and silage management. I conducted a corn silage management audit in summer 2014, and found that processing of corn silage varied among dairies. Processing corn kernels is important to increase the availability of starch to the cows, thus increasing the feeding value of corn silage. Regularly checking the degree of kernel processing on-farm, throughout harvest, will allow for adjustments and improvements in kernel processing. Another project was a comprehensive examination of silage losses, and where in the system the losses are occurring. Results indicated that real losses (shrink) from well-managed California corn and winter cereal silage structures were much lower than previously reported in the literature.



Annually I hold the UCCE Silage Day, a meeting highlighting the research efforts of the University of California. This year I also resumed the California Dairy Management Seminars, meetings aimed at dairy producers and their employees (held in English and Spanish) to improve on-farm production efficiencies.

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## Viticulture

**Lindsay Jordan, Farm Advisor**  
Madera, Merced, and Mariposa Counties



Lindsay Jordan became Merced County's Farm Advisor for Viticulture this year. Let us allow her to introduce herself.

I have been interested in grape growing ever since I took an introductory class my freshman year at college at UC Davis, where I graduated with a BS in Viticulture and Enology in 2011. I then went on to graduate school at Cornell University where I earned my M.S. in Horticulture in August of 2014. My graduate research focused on using under-vine ground covers as a sustainable alternative to herbicides. I also went to New Zealand to be a part of an under-vine management study in Marlborough for the 2014 growing season. I worked three harvests with different wineries before joining UCCE. I started as the Viticulture Area Advisor for Madera, Merced, and Mariposa counties in February and have been doing my best to connect with local growers.



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