

University of California Cooperative Extension Merced County



ANNUAL REPORT

2011



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

Research and Education For Merced County Residents

Cutting edge technology, in the hands of people who can put it to work. Cooperative Extension is rural America's link to the latest research in agriculture and natural resource management. Whether it comes from UC, USDA or private research, we are looking for ways to put it to work here in Merced County. We don't just pass on technology, we do a lot of our own research ourselves with real live farmers right here in Merced County.

Research-based information is also distributed by our trained Master Gardener volunteers. Whether it be landscape or intensive garden – we can find the answer you need.

Raising tomorrow's leaders is one of the focuses of our 4-H youth development program. Reaching into all communities around the county, our network of 4-H volunteers are creating meaningful experiences that help children grow into effective adults.

Dairy

Alejandro Castillo, Farm Advisor



My main goal has been to help dairy producers become more efficient in improving dietary nutrient utilization in lactating dairy cows. Improving nutrient utilization will help dairy producers reduce feed cost per unit of milk produced and reduce manure production to comply with environmental regulations. My program is based upon on-farm research. I performed two surveys (2003 and 2008) on nearly 100 dairy farms in Merced County. In the last year I have been working on information from my latest survey. I have published eight articles and I presented information at several meetings at national and international levels. I wrote two peer review papers that are being edited by the co-authors. These papers are concerned with how we are feeding minerals to lactating dairy cows. They focus on how we can improve feeding minerals and how to predict excretion of some minerals that may be an environmental concern in the near future.



The goal of publishing this data in the peer review paper is to reach the dairy farmers' private consultants. Many of these consultants should change the methodology of supplementing minerals for dairy cows. Changing the actual methodology of feeding minerals to lactating dairy cows may have an important impact on dairy farm economy and on manure production and composition. The long-term economical and environmental sustainability of our high scale, high production dairy systems should be founded upon completely controlled dietary nutrient utilization (nitrogen and minerals), and connecting feeding and manure management programs.



Pomology

David Doll, Farm Advisor



Trials for Studying Fumigant Alternatives for Orchard Replanting Established Within Merced County

Orchard replanting is one of the most critical times of orchard maintenance. Almond orchards removed and replanted back into almond often demonstrate symptoms of slow growth, yellow leaves, and in some cases tree death. The precautionary measure of soil fumigation can prevent the occurrence of this disease, but is facing increasing scrutiny for its environmental impact. To study the effects of fumigants and alternatives to fumigants, four trials have been established. These trials are studying four different fumigants and their effects on tree growth. These plots are also evaluating non-fumigant alternatives which include steam applied through an auger, brassica seed meal, and commercially available biological control agents. These experiments will be followed for the next six to eight years. This project will help local growers make the proper decision about fumigation upon replanting an almond orchard.

The Almond Doctor: An Online Forum for Research Based Information, News, and Timely Information

Considerable time has been spent in the continual development of the website “The Almond Doctor” (<http://www.thealmonddoctor.com>). The website focuses on providing weekly updates of almond growing conditions and/or tips based upon research performed by the University of California. Topics have included disease diagnosis and control, pest management, horticultural practices, and almond news updates. This online form of extension allows users to ask questions and comment on articles written. From January through December 2011, 32,174 hits with 103,253 page-views were made on the website from 139 countries and all 50 states. Over 70% of the hits came from within California with an estimated 1,100 hits from Merced County. It is estimated that 15% of the almond growing clientele from across the state accesses and uses the web-site.

Summer Almond Meeting Held in Merced

On June 16th, nearly 100 growers attended an almond meeting discussing the topics of orchard replanting, summer disease and pest management, and nutrient management. Growers provided good feedback and are looking forward to future meetings.



Meetings Hosted: 3

Presentations Delivered: 25

Farm Visits: 105

Phone Calls: 375

Authored Publications: 65

Research Project Collaborations: 12

Direct Contacts made: 3,463

A trial determining the effectiveness of soil fumigants and fumigant alternatives for almond replant disease was established. Steam was delivered by an auger to the tree site in attempts to suppress replant problems.



Master Gardener Program

David Doll, Farm Advisor



The Master Gardener Program is a volunteer-based program tasked with extending to the public, UC research-based information about home horticulture and pest management. 2011 was the third year of a Master Gardener program in Merced County. During the year our volunteers built upon the work of previous years assisting the UC Cooperative Extension office in the providing information on gardening to the public.



Our Master Gardener team grew to 40 members from throughout the county this year. Presentations and speeches were made for the Golden Valley Health Center, 4-H Garden Club, school classes, head starts, garden clubs, and service organizations. Several workshops covering roses, water sustainability, and community gardens were held in 2011. One of our workshops covered Community Garden Networking engaging many volunteer groups interested in or beginning community gardens in Merced County. Through this workshop a group called “The Community Garden Network” was formed and is made up of local organizations that have an interest in community gardens.

The new Master Gardener help line is now manned every Thursday from 9:00 a.m. - 11:00 a.m. when a Master Gardener is available to answer gardening calls and visitors to our office. Farmers markets, the Master Gardener help line, and many County events provided gardening tips and information, and a venue for the public to receive answers to their questions.

Presentations Delivered: 32

Community Events Attended: 40

Direct Contacts Made: 2,662

Volunteer Hours: 1,492



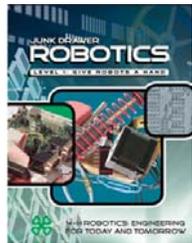
4-H Youth Development Program

Richard Mahacek, 4-H YDP Advisor
Darlene McIntyre, 4-H Representative



In 2011 Merced County 4-H based its focus on Club delivery and Camp. Sixteen clubs represent 1,020 youth and 256 adult volunteers. Our 4-H youth are learning leadership and goal setting skills and how to become community minded adults through youth-adult partnerships. Youth leaders, club officers, county All Stars and club leaders participated in an Officer Retreat at UC Merced. Youth and adults participated in the 4-H Thrive Program where they gained concrete tools that will help youth to reach their full potential. The Thrive program is helping our youth build positive skills toward success in life through nurturing their sparks, helping them develop a growth mindset and learning to establish goals. Several of our 4-H clubs are participating in pilot testing a new Bio Security Curriculum which is part of a state wide effort of the UCD Vet Med Extension and specialist Martin Smith.

The 2011 Science and Adventure Camp focused on Healthy Living where 18 high school staff, 16 Adult chaperones, and 103 campers in 4th - 8th grades worked together for 5 days and 4 nights at Camp Sylvester in Pinecrest, CA. The focus included learning about the new USDA My Plate, how to plan healthy meals, and include exercise in their daily activities.



The 4-H robotics curriculum that was being written and pilot tested here in Merced was published in 2011. It is the number one selling 4-H curriculum in the United States.

We ended the year with our annual **Leaders Appreciation Night** at Playhouse Merced. In addition to enjoying the show, the Clover Awards for each 5 years of leadership are presented by 4-H, city, county, state, and national representatives to the volunteers.

Nutrition, Family, and Consumer Science

Terri Spezzano, NFCS Advisor
Liliana Agundis de Aguilera, Program Representative
Houa Lee, Program Representative



The goal of the Nutrition, Family, and Consumer Science Programs in Merced County is to promote healthy living by increasing access to fresh fruits and vegetables and increasing financial literacy in our low income populations, promoting physical activity, and increasing breastfeeding rates to reduce childhood obesity and asthma rates.

New This Year - The nutrition program partnered with 4-H to help promote the Healthy Living Initiative and promote and support low-income 4-H clubs.

The youth in this program are very motivated. They are focused on nutrition and healthy living projects that they are taking back to their communities. Through this new program nutrition education classes are used to gain the trust of the parents in the target neighborhoods. By developing a relationship with the families they are more likely to allow the children to participate in 4-H activities. Currently there are 3 different models of outreach we are testing for this project. 1. In the Merced Housing Authority, clubs are set up at the apartment building. This is working well with Southwest Merced, 2. Dos Palos Housing Authority is a new site, 3. Circles of Merced has classes for residents from all over the area. Our hope is that they return to a club in their neighborhood.



Adult Nutrition Education – In our adult nutrition education program we promote healthy eating and active living to low-income adults and families. New this year we partnered with ANR Communication Services to promote healthy behaviors in new media in Spanish. This increased our outreach to 1,189,550 Spanish speaking audience. The lessons covered making healthy food choices, reducing sodium, healthy holiday choices, how to read nutrition labels and important food security topics such as meal planning and stretching their food budget.

We reached over 700 adults and families. After taking our classes 80% of the participants showed an improvement in one or more nutrition practices (i.e. planning meals, making healthy food choices, prepares food without adding salt, reads nutrition labels, or has children eat breakfast) and 50% showed improvement in 2 or more nutrition practices.

Financial Literacy –Participants are taught how to manage their resources by setting financial goals, saving money on food, not succumbing to marketing tactics, differences between needs and wants, and other budgeting basics. From September 2010 to October 2011 over 100 participants graduated from this program.



Trees and Vines

Maxwell Norton, Farm Advisor



In 2011 I continued my work on **reducing labor costs in peach production**. The latest technology we are testing and demonstrating is a mechanical device that eliminates some of the blossoms. This in turn, reduces the cost of hand-thinning the fruit a few weeks later. Hand thinning is one of the most costly operations, along with harvesting and pruning.

In November I organized the first Central Valley pomegranate meeting. This standing-room-only event introduced to growers and advisors current information about this emerging crop. Thousands of acres have been planted around the Valley and much information is needed about all aspects of its production.

I continue to work on evaluating some new fig seedlings for their potential in fresh packing. This is a long-term project that will take many years to conclude.

I enjoy providing technical assistance to growers who have tough questions. I also enjoy training our Master Gardener volunteers who eagerly serve the public.

We started a new ag. tourism project. We will be putting up signs along Highway 165 identifying the crops. We also have produced an audio tour of the route that visitors can download and play on various devices.

Vegetable Crops

Scott Stoddard, Farm Advisor

Larry Burrow, Agriculture Field Technician



In Merced County, tomatoes and sweetpotatoes dominate commercial vegetable production. The combined fresh market and processing tomato area exceeds 25,000 acres; sweetpotatoes are grown on about 17,000 acres with an estimated crop value in excess of \$150 million. In my research and education program I work directly with producers and crop consultants with the main objective of improving production for vegetable crop growers in Merced County. My program emphasizes integrated pest management, agriculture sustainability, and variety evaluation. In 2011, I made over 1,000 contacts with growers, consultants, and allied industry.

Two highlights: This fall, I held a first-ever sweetpotato harvest field day, which was done in conjunction with a visit from Dr. Don LaBonte, Horticulture Professor from Louisiana State University. Over 30 growers had an early opportunity to see a dozen potential new varieties in a production setting. New in 2011 was the installation of a drip irrigated tomato test site with Merced College. The intent is to establish this as a long-term testing location that mutually benefits Merced County, UCCE, and Merced College. Using the college agriculture farm gives me the ability to conduct more comprehensive projects than can be done on a grower's farm, while at the same time involving agriculture students enrolled at the college.



Local grower Dave Souza (center) with Louisiana State University Professor Don LaBonte (right) at the sweetpotato harvest field day, October 2011.

Injecting fertilizer into buried drip line at the tomato test site at Merced College.



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