

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

**University of California**  
Agriculture and Natural Resources

*Making a Difference for California*



**2011 PROGRAM HIGHLIGHTS**  
**COOPERATIVE EXTENSION**  
**SACRAMENTO COUNTY**

*Serving Sacramento County residents in delivering research and educational programs in  
Agriculture, Horticulture, Youth Development, Nutrition and Food Safety*

*The University of California working in cooperation with Sacramento County and U.S. Department of Agriculture*

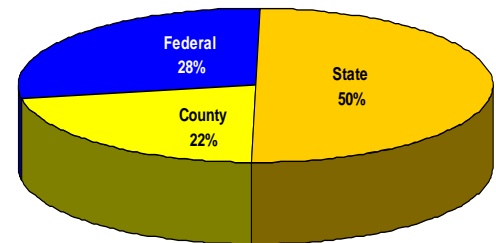
## COOPERATIVE EXTENSION: WHO ARE WE

**Cooperative Extension** is the county-based educational and research branch of the University of California's Division of Agriculture and Natural Resources financed jointly by Federal, State, and County Governments.

The **mission** of UC Cooperative Extension is to serve the citizens of the County by providing science-based research, education, and public service to help solve problems in agriculture, natural resources (including environmental quality), food and nutrition, and food safety.

Cooperative Extension's **goal** is to improve agricultural viability and sustainability, increasing public wellness and nutrition, and advancing youth development.

The Sacramento County UC Cooperative Extension research and educational programs address priority issues identified by the County Board of Supervisors. Federal, state, and county funding provide \$1.6 million for direct program delivery to promote strong and healthy families, public health, and sustainable communities.



During 2010/11, collaborative partnerships with the Agricultural Commissioner, Department of Water Resources, and Environmental Management Department expanded our clientele base and extended research and knowledge to enhance the quality of life and economic capacity of county residents.

Volunteers provide a strong base of support for program and project delivery. Volunteers contributed over 60,000 hours of service to assist residents with food safety, preservation, home gardening, and 4-H youth development needs. Volunteer service hours are valued at \$1.2 million.

Sacramento County UC Cooperative Extension has a long history of assisting county residents to solve issues through research and educational programs in 4-H youth development, food safety, nutrition, agriculture, and horticulture. The changing economy, demographics, and climate are a few factors that impact the quality of life and financial health of the county. Cooperative Extension commits resources in collaboration with local partners to ensure Sacramento is the most livable community with the highest quality public service.

## 4-H YOUTH DEVELOPMENT PROGRAM

At 4-H, our motto is: “Head, Heart, Hands, and Health. Growing Youth who Thrive.” Our mission is to help young people reach their full potential as competent, confident, leaders of character who contribute and are connected to their communities. In 4-H, youth design and participate in their own programs and activities. This unique learn-by-doing model teaches essential skills that youth will use throughout their lives. Whether youth are building rockets, raising companion dogs, or planting vegetables, 4-H gives young people the skills they need to thrive and succeed throughout their lives.

4-H brings this style of education throughout Sacramento County and delivers its programming in a wide variety of ways, from clubs and camps to in-school and after-school settings.



### *Community Clubs*

The most familiar 4-H delivery method is the Community Club program. Eighteen Clubs are scattered throughout Sacramento County, offering unique opportunities for hands-on learning. Within each club, 4-H members can choose to participate in a variety of projects, each designed to promote growth in a fun, positive learning environment. Youth members can also hold officer positions, allowing for direct influence over their club’s operation.

In 4-H, there is truly something for everyone! This year members took a tour of the UC Davis Veterinary Hospital, presented their animals at the state and county fairs, and attended workshops on robotics.

In Sacramento County, 200 volunteers help provide this rich programming to over 700 youth members.

### *Learning through Nature*

4-H offers a variety of camp options for those looking to get outside and explore the great outdoors. During the summer 4-H members attended Mountain Horse and Resident Camps. In May and June, 4-H teen teachers and adult volunteers took over 150 4<sup>th</sup>, 5<sup>th</sup>, and 6<sup>th</sup> graders to Camp Gold Hollow in Nevada City, CA to learn about nature through hands-on activities. During this environmental science camp, On the Wild Side, campers braved the elements to explore the lake water, animal inhabitants, and the trees of Gold Hollow.



On the Wild Side provided teen teachers the opportunity to be leaders and become more confident with themselves and their public speaking ability. Guided by adult coaches the program is meant to be led by teens. Teens and campers had to be extra flexible during the second weekend of the program, when the weather was cold and rainy. Monica, a new teen teacher explained, “Because of the rain, all of the outdoor activities had to be brought to a dry, covered area. Many of the activities were based on the natural settings, like the lake. Nevertheless, teen teachers were able to adapt to teaching their lessons indoors and completely changing their lessons to fit the indoors. The students and teen teachers had fun being in a new and exciting environment with cool activities!”

Teen teacher Sarah described the success of camp this year: “Our team and project was able to accomplish many great feats. We showed elementary school students the abundance that nature had to offer through interactive activities and educational lessons set in the woods. For example, one of the activities was a scavenger hunt in which students were able to locate and identify signs of animal life in the region. Another popular activity that all the students enjoyed was the Energy Game, an active game of tag that intertwined the relationship between decomposers, producers, carnivores, and herbivores. Each of the other three lesson activities focused on water testing, life in beautiful Lake Vera, and the importance of trees. Placing students in the wilderness gave them opportunities to experience activities that many urban students do not normally have access to. They were able to go canoeing as well as sleep under the bright stars that one cannot find in the city. The knowledge from the lessons and the outdoor activities like sleeping under the stars can lead them to impact their communities.”

### ***Science After-School***

Teens in our Youth Experiences in Science project (YES) delivered science lessons to 9 afterschool programs. 4-H YES works with established after-school programs to strengthen science education for young elementary school-aged children living in Sacramento's most economically challenged communities.

The 4-H YES curriculum is designed to foster inquiry and engage children ages 5 to 8 in the process of exploration. Young children are introduced to the formal scientific process by performing a variety of scientific tasks including observing, organizing, comparing, and communicating.



Teens volunteer to lead these lessons to gain invaluable teaching experience while also benefiting from giving back to the youth in their community. Youth in these after-school programs become engaged in science curriculum by being allowed to explore nature on their own through hands-on activities. Whether discussing the value of recycling or testing the food preferences of snails both youth and teens are engaged.

After leading YES lessons at Del Paso Heights Elementary school during the Spring semester, Madeeha returned to teach again in the Fall. After a summer break, she missed working with the youth in Del Paso Heights. She explained, “I found out that I really like teaching and the kids were so much fun to work with. They were so excited each week when we would come to give another lesson!”

In 2011, 30 teens participated in the YES program, bringing fun science activities to over 200 youth in the Sacramento area.

## **NUTRITION, FAMILY & CONSUMER SCIENCES PROGRAM**

Cooperative Extension provides evidenced-based nutrition education to limited resource audiences to promote obesity prevention awareness. We act as a vital bridge between the learning and knowledge of the UC system and our community, tailoring the latest science, curriculum and information to the needs, culture and language of diverse communities throughout Sacramento County.

### ***Families Eating Smart and Moving More***

Our programs assist families with limited resources in making simple changes in eating behaviors and daily physical activity so that, over time, healthy choices become healthy habits. Using “hands-on” experiences, participants are taught to make wise choices with their food dollars, improve eating habits, and practice food safety principles. Our goal is to help families make better nutrition decisions, maximize limited food budgets and plug-in to our county’s unique opportunities.



Graduates of our adult nutrition sessions reported: 1) decreased consumption of sugar-sweetened beverages, 2) decreased consumption of fried foods, and 3) reduced use of salt in food preparation. Program graduates shared the following comments about what they learned through participation in Cooperative Extension’s nutrition programs:

*“I now know about easy preparation and simple changes. I feel that a healthier diet and better eating habits will not be so hard to change”*

*“During the sessions, I learned that eating smart can also taste good. Also, reading the labels is very important. Making changes is a healthy move and one can also become creative when trying to eat healthy. To break it down: Eat smart, healthy, and see the change you make for yourself. Can’t go wrong when you do it right. Eat Smart, Live Longer”*

*“I try to eat less garbage food than before. Now I read food labels. Reading the ingredients on the package lets you know what is inside the food. When you read the ingredients, you make healthier food choices for yourself and your family. Always read the ingredients on the package--it’s the best way to eat healthy”*



### ***Healthy Eating for Seniors***

Internship opportunities were provided for local community college students enrolled in community nutrition courses. Students conducted a *Healthy Eating for Seniors* workshop series. The workshop sessions focused on increasing awareness of the importance of healthy dietary practices to reduce the complications of chronic health issues, such as hypertension. Participants gained knowledge about how much and what to eat based on their daily caloric needs. To promote physical activity, the senior participants were led through a series of chair exercises and given pedometers to encourage establishing

a regular walking routine on a daily basis. Eighty-nine percent of the workshop participants indicated “high” rate of confidence and skill ability to use the information presented in the classes to maintain a healthy lifestyle.

### ***Youth Nutrition Summer Day Camp***

Every summer when school is out many youth are no longer actively engaged in group settings on a daily basis. As a result, sedentary activity often becomes the norm and television becomes second to the care taker. However, through our Youth Nutrition Summer Day Camp program, we are able to keep

youth learning and having fun during the summer while showing them how to make healthier food choices. Our Nutrition Summer Day Camp sessions provide interactive learning experiences for youth ages six to eight years old. Each child had opportunities to make and taste fun and nutritious snacks from vegetables and fruits. We called this “Eat Your Art.” This was the first time some of the children had seen and tasted certain kinds of vegetables and fruits. After a fun activity of using these vegetables and fruits to build and decorate figures and shapes, the children were willing to try these foods, in many cases for the first time. In addition, our nutrition day camp program also engaged youth in creative and musical physical activity. The Payoff: Lots of nutrition reinforcements and lots of smiling faces! Many of the children that participated didn’t want to leave when our camp session ended. From fruit mobiles, colorful Choosing My Plate activities, to Parts of the Plant garden activities, by far the most popular were the edible art creations.



### ***Keeping Food Safe to Eat***

Preserving food offers the opportunity to have a wide variety of food year round. It’s economical. The motivation for preserving fresh foods, whether from the garden, farm, or market, often includes saving money as well as satisfying personal preferences. The Master Food Preserver (MFP) Volunteer program is a food safety public service component of Cooperative Extension. The Sacramento County MFP volunteers help to increase consumers’ knowledge and understanding of US Department of Agriculture’s recommendations for safe food handling and storage; and safe “home canning” preservation.

Our Master Food Preserver Volunteers conduct monthly public workshops that demonstrate research-based methods for preserving food safely at home to prevent bacterial contamination.

Workshop evaluations indicated 17% of participants have never done any home canning; 30% just starting; 43% do “a little bit” of home canning; and 28% have done home canning for years. The Sacramento County Master Food Preserver Volunteers donate close to 10,000 volunteer hours every year, to food preservation and food safety public service activities such as speaker bureau presentations to community groups, educational displays at certified farmer’s markets and county festivals; and answering consumer phone inquiries.

## **AGRICULTURE & HORTICULTURE PROGRAMS**

### ***Master Gardeners***

Working to ensure that UC research information is accessible to all residents, Master Gardener volunteers engaged the community by utilizing a variety of methods including radio, print media, Facebook, speaking engagements, workshops and one-on-one discussions. Printed materials, including the Master Gardener Gardening Guide and Calendar helped to further expand our imprint in the community. The Gardening Guide and Calendar was created by Master Gardeners specifically for the Sacramento area. The 12-month guide provides month-by-month gardening maintenance suggestions,

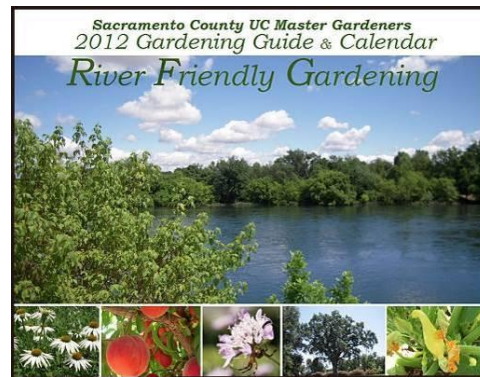
watering information, and techniques for pest and disease management. All information is based on University research. The River-Friendly Landscaping principles are featured in the guide. The principles promote techniques to improve soil health, conserve resources, reduce waste and prevent air and water pollution.

To further expand our outreach in the community, 35 new Master Gardeners were certified by the University after receiving



*Harvest Day*

extensive training in numerous areas of horticulture including plant pathology, edible crop production, insect identification and management, water efficient landscaping, and turf management. In 2012 they will each volunteer 50 hours in the community. A total of 170 volunteers now work with the public in a variety of projects, including plant clinics and workshops, leading youth garden tours, and answering over 4,000 phone calls per year. A total of 12,000 adults interacted with a Master Gardener during the past year.



Residents representing all areas of Sacramento County and possessing a wealth of gardening knowledge attended Harvest Day 2011 at the Fair Oaks Horticulture Center. Recognized as Sacramento's largest annual educational gardening event, over 2,100 people attended the free event. Master Gardeners were prepared to answer questions regarding current economic and horticulture concerns of the community. They responded to inquiries about the recent detection of Japanese beetles and addressed the consequences of the 2010/11 excessive rainfall. The public questioned the Master Gardeners on topics relevant to household budgets; advice on reducing grocery bills by increasing home vegetable production, maintaining an attractive landscape without excessively large water bills, and lowering cooling costs by selectively placing shade trees. Many attendees learned how to retrofit irrigation systems to reduce water runoff, manage pests with effective non-toxic techniques, and successfully grow edible crops. Twenty-five government, non-profit and water agencies dispensed practical guidance at educational tables. A Harvest Day attendee reported, *"In the vineyard I received excellent advice on growing and pruning my grapes. The blueberry lady gave me great advice on my newly planted blueberries and I learned some facts about apricot trees I had never heard."*

### ***River-Friendly Landscaping: Turf Demonstration Project***

With the cost of water increasing, many property owners, landscape managers, and agencies are interested in drought-tolerant turf species. These alternative species may not only reduce water consumption and costs, they may also save energy and reduce greenhouse gas emissions. However, these species can have drawbacks as well, such as high installation costs or dormancy periods in summer or winter when some species turn brown and unsightly. We are working to overcome these barriers.

In partnership with the Sacramento County Department of



Water Resources, we received a grant from the US EPA to test potential low water-use turf species to see which species perform well with less water and which species require less mowing. The project, located at Florin Creek Park in Sacramento, is part of Sacramento County's River-Friendly Landscaping program. Included in the study are a standard tall fescue/bluegrass mix, buffalograss, and two sedge species under different irrigation levels, as well as six native grass species to determine their potential as turf.

In 2011, UC Verde buffalograss was found to be the most drought-tolerant species. Therefore, the use of UC Verde can lead to reduced fuel use, greenhouse gas emissions, and water use. In November a portion of each UC Verde plot was sprayed with turf colorant and a portion was planted to annual ryegrass to demonstrate how to overcome the aesthetic drawback caused by winter dormancy.



The project and the results have drawn much attention. In 2011, in-depth articles appeared in the Sacramento Bee and two statewide newsletters. An all-day meeting, "Sustainable Turf Grass Management for Landscape Professionals", was held in the adjacent community center; the workshop was attended by nearly 150 landscape professionals. A second meeting for the public drew 60 local residents.

This is the only site in Northern California where people can see so many turf species compared in one location and view the effects of irrigation treatments.



### ***Testing of Nutritional Program in Cherries Improves Fruit Quality***

Profitability in cherry production is greater the earlier the fruit ripen, and Sacramento County growers rely on harvesting earlier than the much larger Pacific Northwest district. Any advantage in early maturity significantly increases profitability. In addition, large fruit size and good quality (especially higher fruit firmness and sugar content) are key factors that every grower strives for to boost returns.

This 2011 on-farm study examined the effects of a complete foliar nutrition program on maturity and fruit quality of Bing cherries, compared to a standard fertilizer program. The enhanced nutritional program led to desirable results – advanced maturity and low variability in the overall fruit colors on the tree. In another 2011 study we tested a foliar-applied fertilizer product, potassium sorbate, on fruit quality. Fruit on trees treated with potassium sorbate showed increased sweetness and fruit firmness, as well as increased fruit size, compared to the untreated control.

Both of these studies show growers a way to enhance profitability by using certain foliar-applied fertilizers. Additional tests will be conducted in 2012 to further refine these treatments.

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