

University of California Cooperative Extension



"Protect, Preserve, Produce"

# Annual Report 2007-2008



Stephanie Larson, County Director  
University of California Cooperative Extension  
Sonoma County

<http://cesonoma.ucdavis.edu>



# Sustainable Sonoma County

TO: County of Sonoma Board of Supervisors – Mike Kerns, Paul Kelly,  
Valerie Brown, Shirlee Zane, and Efren Carrillo

The University of California Cooperative Extension is best known for its outstanding research-based solutions for local, State and National issues, but our presence in Sonoma County extends well beyond the traditional boundaries. Our Sonoma County services in agriculture, human and natural resources began in 1917. This is a partnership we are proud to share with the County of Sonoma.

The Sonoma County University of California Cooperative Extension is committed to sustaining and promoting agricultural productions that use cutting edge methods and resources. We developed the Sonoma County Meat Buying Club that is specifically focused on locally grown vegetables and livestock products. Additionally, we have developed demonstration orchards of mandarins, chestnuts, blueberries and raspberries that show local producers how these crops can be grown profitably. Through our efforts, new small-scale olive oil growers have four processing mills to produce local olive oil. Our research demonstrates new techniques to reduce soil erosion, increase water capture, reduce Sonoma County's carbon footprint, and increase biodiversity of critical habitat. Our University Advisors offer scientific research results regarding many matters of concern such as, the control of the light brown apple moth and glassy-winged sharpshooter pests, the recovery of endangered coho salmon, and the development of new innovative tools to meet the ever changing environmental challenges caused by climate change and sea level rise.

We strive to meet the many needs of our diverse community which consists of vineyard growers and their workers and rural citizens dealing with Sudden Oak Death to organizations addressing the recovery of coho salmon and teens participating in 4-H Youth Development Programs. We are different because we tackle local problems by using the resources and services of the University of California for the benefit of Sonoma County citizens. We also look beyond the University by partnering with other colleges, local and State agencies, and individual citizens to address the needs, issues, and opportunities in Sonoma County.

The University of California Cooperative Extension in Sonoma County looks forward to continuing our partnership with the County of Sonoma and its many residents.

Stephanie Larson  
Sonoma County Director

# University of California Cooperative Extension

*“Our mission is to sustain a vital agriculture, environment and community in Sonoma County by providing University of California research-based information in agriculture, natural resource management, nutrition and youth development.”*

## University of California Academic Advisors

**Stephanie Larson**  
County Director  
Livestock & Range Management

**Evelyn Conklin-Ginop**  
4-H Youth Development

**David Lewis**  
Watershed Management

**Paul Olin, Ph.D.**  
Sea Grant Extension Program Director  
Marine Sciences

**Rhonda Smith**  
Viticulture

**Lucia Varela, Ph.D.**  
Integrated Pest Management

**Paul Vossen**  
Specialty Crops

**Linda Garcia**  
Emeritus, (Retired 09-30-08)  
Director/Family, Nutrition &  
Consumer Sciences

## University of California Program Staff

**Assistant County Director**  
Wanda Tapia

**Integrated Pest Management/Viticulture**  
Andrea Pecharich  
Rebecca Strode

**Master Gardener Program Coordinator**  
Deborah Curle

**Sudden Oak Death Program Coordinator**  
Lisa Bell

**Natural Resources**  
Miguel Huerta      Sarah Nossaman-Pierce  
Michael Lennox      Joe Pecharich

**Coho Restoration Monitoring Coordinator**  
Mariska Obedzinski

**Family, Nutrition & Consumer Education**  
Kathy DeMartini      Vanessa Kenyon  
Linda Forney      Carla Vaughn

**Sonoma County Meat Buying Club Coordinator**  
Jacqueline Rotlisberger

## Sonoma County Program Staff

**Office Manager**  
Allie Stabler

**4-H Program Assistant**  
Judy Ludovise

**Senior Office Assistants**  
Vivian Blake      Kati Fein  
Kathy Perry      Vicki Rios

**Sonoma County Field Staff**  
**Agriculture Program Assistants**  
Lisa Bell  
Deborah Curle  
Julie Davis  
Brian DeRousseau  
Andrew Wilber  
John Yeo

# Protect Sonoma County

## Sudden Oak Death (SOD) Program

### Outreach:

UCCE provides outreach and disease management guidance to the citizens of Sonoma County. UCCE partnered with outside agencies and neighboring county experts and completed the County's Strategic Response Plan for Sudden Oak Death. The Plan outlines research, educational needs, and the potential costs to implement these strategies. It also describes the potential impacts of SOD on wildfire behavior.

### Outcomes:

Sixteen educational meetings for landowners, land managers, and tree service professionals were held, reaching 1,625 Sonoma County residents. The SOD Coordinator consulted with approximately 200 residents about SOD management through phone calls and e-mails, contributed to media coverage of SOD issues, participated in US Forest Service aerial mapping, and conducted 60 field visits to locate new infestations within the County.

*“Sixteen educational meetings...were held, reaching 1,625 Sonoma County residents.”*

## Water Quality

### Outreach: On-Farm Water Quality Management

David Lewis and Stephanie Larson identified sources of water pollution and assessed the effectiveness of management practices to ensure water quality.



This study reached over 65 producers through the Sonoma Marin Animal Resource Committee and other local producer forums. The research also provided area dairy operators a data driven evaluation of where and when impacts occur and what practices and combination of practices are most effective.

The Ranch Nutrient Budget Planning Tools developed for local dairy producers meet the guidelines set by agencies mandating producers to have Nutrient Budget Management Plans.

## Watershed Restoration

### Restoration Research:

Michael Lennox and David Lewis coordinated the documentation of outcomes of 103 stream revegetation projects. Next steps include



the comparison of different revegetation and project management methods that contribute to restoration success. Findings shared with Resource Conservation District staff, local landowners and managers, and other interested citizens will improve efforts to restore the habitat functions of Sonoma County streams and rivers. Over 5,000 acres of the Estero Americano and Green Valley watersheds have been assessed and management practices have been implemented.

## Carbon Sequestration

Grassland ecosystems managed for livestock production represents the largest land-use footprint in Sonoma County, covering more than one half of the County's landmass. These economically important ecosystems play a crucial role in the storage of carbon (C) in soil and vegetation.

### Outreach:

Stephanie Larson is conducting research to further understand carbon sequestration potential in rangeland soil on local dairies and ranches. The goal is to determine which "best management practices" will improve carbon sequestration, giving landowners options to maximize revenues through connections with a local carbon economy, while contributing significantly to the sustainability of local agriculture.

### Outcomes:

The goal is to maintain livestock as a viable industry while contributing to the health of rangelands in Sonoma County. In addition, sequestering carbon in this major land source will reduce the carbon footprint of Sonoma County.

# Protect Sonoma County

## Focus on Integrated Pest Management and Viticulture

*Pest and disease management are high priorities for grape growers and Cooperative Extension addresses this challenge by conducting research and extension programs focused on exotic and established pests and diseases.*



Dr. Lucia Varela and Rhonda Smith are investigating sustainable control measures for vine mealybug and extending information on light brown apple moth, two exotic pests that affect management practices in vineyards in which they are found. Since the first detection of vine mealybug in Sonoma County in 2002, Varela and Smith

have created outreach programs to educate a diverse audience. Annual classes on how to monitor with pheromone traps and identify male mealybugs caught in the traps are given to Pest Control Advisors and vineyard managers. They have also given numerous presentations and developed publications in both Spanish and English to train vineyard workers, managers and growers to distinguish vine mealybug infestations from those of the native grape mealybug, also a pest on grapevines. Strong emphasis is given to the prevention of the spread of mealybugs through implementation of winery waste sanitation practices and by encouraging neighbors to share information on trap counts. Publications are posted at <http://ucanr.org/mealybugs>.

Light brown apple moth was first detected in the Bay Area in 2007 and has been found in coastal counties from Los Angeles to Sonoma. This pest will need to be managed in our vineyards, thus UCCE has developed handouts to teach growers how to distinguish the larvae of this new pest from those of two other leafrollers commonly found in vineyards. Publications containing the description and biology of light brown apple moth as well as its status as a quarantine pest are available at <http://ucanr.org/leafrollers>.

## Targeted Grazing Management

Research is being conducted to determine if livestock grazing is an effective tool in removing targeted species such as Himalayan blackberry. The pilot project will investigate using livestock to achieve vegetation management goals and reduce abundance of undesirable species, in addition to reducing the use of labor, mowing, herbicides, and fossil fuels.



## Fisheries Enhancement

### Russian River Coho Salmon Captive Broodstock Program:



Dr. Paul Olin and David Lewis, along with Project Manager Mariska Obedzinski, coordinate a monitoring

program that documents the response of juvenile coho salmon re-introduced into seven tributaries of the Russian River. The results are being used to improve the success of salmon recovery in the Russian River and to inform similar programs in other California rivers. The first group of coho was released in 2004 and UCCE documented successful oversummer and overwinter survival of juvenile coho each subsequent year, as well as the first program-released coho to return to spawn in Russian River tributaries. This program is funded by the California Department of Fish and Game's Salmon Restoration Grants Program with additional support from Sonoma County Fish and Wildlife Commission, NOAA Fisheries, U.S. Army Corps of Engineers, the Sonoma County Water Agency and several other area agencies, organizations and consultants.

### Halibut Tagging Program:

Dr. Paul Olin supports this program in collaboration with the California Department of Fish and Game and commercial and recreational fisherman. The tagging program generates information to better understand the distribution, abundance and range of halibut populations in the region.

# Preserve Sonoma County

## Marine Sciences

### Research Program:

Dr. Paul Olin's research and outreach program promotes the sustainable use and management of coastal and marine resources. It includes projects addressing aquaculture, endangered fish recovery, fisheries, and watershed management.

### Extension Program:

Dr. Olin's outreach program includes working with local watershed groups and agricultural landowners to improve water quality throughout the coastal region. Research results from local projects and the Sea Grant Extension Program are presented to help ensure that long-term water quality goals are achieved, and that shellfish aquaculture continues as a viable industry. Dr. Olin also provides information on the restoration of salmon habitat in the Russian River. In addition, Dr. Olin's background enables him to provide assistance to owners of small farm and irrigation ponds who require information on fish stocking, managing water quality and control of aquatic vegetation.

## Nutrition:

Good nutrition is important to everyone's health and well-being. Healthy eating and exercise contribute to the prevention of obesity, anemia and other nutrition-related diseases such as diabetes and heart disease.

### Outreach:



Using the USDA MyPyramid guidelines, participants were taught via lecture, interactive activities, video and hands-on food demonstrations, how to

shop for low-cost nutritious foods, plan meals, safely handle and prepare foods and eat "right and light."

### Outcomes:

- Information on the benefits and risks of fish consumption are part of the Adult Program Curriculum.
- Over 3,500 families and children received nutrition education through the Adult and Youth FSNEP (Food Stamp Nutrition Education Program)
- Surveys indicate that participation in FSNEP workshops increased the consumption of fruits and vegetables and decreased consumption of fat, soft drinks, and high sugar foods.

## 4-H Youth Development Program:

Sonoma County has a large stake in the healthy development, productivity and leadership capacity of its next generation in order to build strong communities and address the many challenges facing the future.



Through hundreds of hands-on, learn-by-doing projects and activities, youth have opportunities to develop responsibility, resolve conflicts, master skills and practice making choices that will impact their future in positive ways.

### Outreach:

- 1,250 youth participants and 450 adult volunteer leaders
- Teaches leadership development, citizenship, and life skills
- Contribution of thousands of hours of volunteer service

### Outcomes:

- Presentations on global warming
- Caring for seniors
- Cleaning parks and beaches
- Volunteering to help hospital patients and low-income children
- Supporting our troops and veterans with gifts of books, valentines and crafts

## Bloco Drum and Dance After School Program

### Outcomes:

- Greater cultural awareness and diversity appreciation
- Increased physical activity and consumption of fruits and vegetables
- Instrumental in gang prevention



# Produce a Sustainable Sonoma County

## Producing Food:

### Sonoma County Meat Buying Club



#### Outreach:

Stephanie Larson proposed to strengthen the local food economy in Sonoma County and developed a pilot project which explored a new county-based meat buying club. The Club has since enhanced local marketing opportunities for the County's livestock producers and continues to generate income streams that help keep ranching operations viable.

#### Outcomes:



Jacqueline Rotlisberger, Sonoma Meat Buying Club Coordinator, has reached over 400 people to join as members. Along with each shipment, members receive educational information about local organizations, livestock practices, cooking instructions and more. Each order presents a safe, quality product that is produced locally. Additionally, the producers chosen to supply the product use management practices that help to maintain the biodiversity of Sonoma County range and pasture lands.

Stephanie Larson and Jacqueline Rotlisberger will continue to partner with groups such as Sonoma County Health Action Committee, Go Local, Slow Foods, and Farm to Fork, in order to develop and deliver local food programs to the residents of Sonoma County. These efforts will facilitate county residents' access to local foods while maintaining a sustainable and profitable agriculture industry in Sonoma County.

## Specialty Crops:

Paul Vossen's research experience helps provide Sonoma County specialty crop farmers with scientifically valid information to improve production and save money. Specialty crops are an important part of Sonoma County's appeal and diversity. One example of his work is controlling olive fruit fly. Mass trapping and organically approved barrier film sprays are now being used by farmers to prevent olive fruit fly damage with minimal cost and no environmental contamination, while still producing excellent quality olive oil. His new organic olive production manual helps producers select the best site to grow olives, minimize their risks from nutritional problems, weeds, diseases, and insect pests, and eliminates the use of conventional pesticides that might contaminate the environment or pose a risk to the applicator.



#### Outreach:

- Spanish-speaking field laborers have learned pest identification, pruning techniques, and ways to apply pesticides safely, which make them more valuable employees.
- Established demonstration orchards for mandarins, chestnuts, oil olives, apples, blueberries, and raspberries with cooperating farmers. These orchards have demonstrated to growers how these crops can be grown profitably.

#### Outcomes:

- 150 new small-scale oil olive growers and four processing mills for oil.
- New small plantings of blueberries and specialty apples, plus a growing interest in preserving the

(continued on page 7)

# Produce a Sustainable Sonoma County

Gravenstein apple as a heritage product. Many of our farmers markets, restaurants, and roadside stands provide locally grown vegetables, herbs, and cut flowers to our citizens based on information and support from our UC office.

## Sonoma County Master Gardeners:



Our Master Gardeners (MGs) continue to provide research-based information to home gardeners in the County. During the fiscal year 2007-2008 they made over 27,000 contacts with the public, provided 17,000 hours of volunteer service, and enrolled 200 active MGs who were

involved with a variety of core projects such as; staffing the UCCE information desk, staffing booths at fairs and community events, conducting library workshops and administering a speaking bureau. The MGs have received over 40,000 website hits since the website revision, which is a 26% increase over 2006.

## Special Projects:

**The Jail Industries Nursery Demonstration Garden:** This project is a collaboration between the UCCE Master Gardeners, the Sonoma County Sheriff's Department and the Sonoma County Office of Education. The Sonoma County Sheriff's Department is running a unique vocational educational program that teaches horticultural work skills to inmates on five acres near the UC Cooperative Extension office. Master Gardener volunteers assisted the program coordinator by securing a grant from the Sonoma County Water Agency and coordinating the design and installation of a large demonstration garden. The program was a winner in the "Search for Excellence" competition at the 2008 Statewide Master Gardener Conference. This project is featured through the "UC Delivers" program which highlights the impact that university projects have on communities. Website address: <http://ucanr.org/delivers/impactview.cfm?impactnum=716>

**Bloomin' Backyards Educational Garden Tour:** The last year six Master Gardeners opened their gardens to the public for an education garden tour. Approximately 150 Master Gardeners participate in this effort in many capacities. Over 850 people attended last year's garden tour. These are opportunities to learn about a variety of garden-related topics such as; water-efficient landscaping, composting and vermiculture, fire safe landscaping and Sudden Oak Death, plant propagation, pest management and beneficial insects.



Learn more about UCCE on  
our website!!

<http://cesonoma.ucdavis.edu>

- Learn about Water Use and Conservation
- Look for 4-H and Master Gardener events on our Calendar
- Read Advisors' publications regarding tips on olive oil production to indentifying mealybugs and much more
- Identify fish from local streams and rivers
- Sign up for the Sonoma County Meat Buying Club

# Thank You Sonoma County

UCCE is able to accomplish many of its goals through collaborative efforts, none of which would be possible without the devotion of our valued partners. Their continued dedication towards our common goals is greatly appreciated. Following is a list of some of the partners whom we collaborated with this past year.

4-H Foundation	National Sea Grant Office
A Unique Place	Natural Resources Conservation Service
American AgCredit	NOAA Fisheries
Alliance Medical Center	North Coast Regional Water Quality Control Board
American Society of Horticultural Science	NorthBay Woolgrower's Association
Athena House	Northern California Center for Well-Being
Boys and Girls Club Rohnert Park	Orenda Center
California Aquaculture Association	Pacific Aquaculture Caucus
California Association of Pest Control Advisers	Pacific Shellfish Institute
California Oak Mortality Task Force	Pesticide Applicators Professional Association
California Olive Oil Council	Redwood Empire Food Bank
California State University, Sonoma	Redwood Gospel Mission: Manna House
Carneros Vine Mealybug Workgroup	Resource Conservation Districts, Sonoma County
Catholic Charities	Santa Rosa City Schools
City of Santa Rosa	Santa Rosa Junior College
Clover-Stornetta Farms	School Nurses & Food Service Directors
Community Action Partnership of Sonoma County	Slow Food Movement
County of Sonoma Department or Agency:	Sonoma County Farm Bureau
Health Services	Sonoma County Grape Growers Association
Regional Parks	Sonoma County Vineyard Technical Group
Agricultural Commissioner	Sonoma Fish and Wildlife Commission
Agricultural Preservation and Open Space	Sonoma Marin Animal Resource Committee
Economic Development Board	Sonoma Olive Festival Association
Emergency Services	Sonoma-Marin Cattlemen's Association
Office of Education	State of California, Departments:
Fair	Fish and Game
Libraries	Food and Agriculture
Water Agency	Forestry and Fire Prevention
Extended Child Care	Pesticide Regulation
Families First	St. Joseph's Health Foundation Mobile Health Clinic
Family Action of Sonoma County	Trout Unlimited
Family Activity Nutrition Task Force	University of California, Davis
Family Support Center	University of California, Berkeley
Future Farmers of America	USDA Sustainable Agriculture Research and Extension Program
Grange Credit	US Army Corps of Engineers
Indian Health	Westside School
Jefferson Elementary School	Windsor Unified School District
Kaiser Permanente Medical Center	Women, Infants and Children
Kid Street Learning Center	YMCA
Latino Service Providers	
Migrant Education: Parent Advocacy Council	
Napa & Marin County Agricultural Commissioners	



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