

Santa Barbara County UC Cooperative Extension Programs Progress Report January - March 2013



**Santa Barbara County 4-H Presentation Day
Olga Reed School in Los Alamos
January 26, 2013**

ADMINISTRATION

Note: This progress report covers the period from January 2013 – March 2013.

County Director Richard Enfield kept in contact with SB Agricultural Commissioner Cathy Fisher throughout the quarter. Richard Enfield and Cathy Fisher worked together to bring two UC Davis Graduate Students studying the impacts of the Williamson Act to the January meeting of the Agricultural Advisory Committee to present their findings and respond to inquiries from the Committee.

A representative from UCCE attended all the Agricultural Advisory Committee and Farm Bureau meetings during the quarter.

Rangeland and Watershed Advisor Dr. Royce Larsen serves on the Santa Barbara Agricultural Preserve Committee and he attended all the meetings during the quarter.

NOTABLE HIGHLIGHTS FROM THE REPORT

Mark Battany (Viticulture & Soils Advisor) and his staff re-installed the tall meteorological towers in vineyards in late February and early March during the second season of his three-year regional study. These 35-foot tall towers are instrumented to measure the air temperature at the top and at the five-foot vine level. The difference in air temperature (or inversion strength) will indicate the potential additional warming to be gained through the operation of wind machines for frost protection; this information will be critical for vineyards facing water supply restrictions that limit their use of sprinkler frost protection. There are 20 sites in Santa Barbara. This project is made possible with funding from the CDFA Specialty Crops Block Grant program.

Surendra Dara (Strawberry and Vegetable Crops Advisor) co-organized two workshops for Hispanic strawberry growers regarding various pest and diseases and their management. He provided Integrated Pest Management (IPM) training to a group, gave a talk at a Pest Control Advisors (PCA) meeting, and provided research and extension updates to the Farm Bureau and Ag Advisory Committee. At the request of Ag Commissioner Cathy Fisher, Surendra also volunteered to be on the Asian Citrus Psyllid (ACP) Task Force to be formed by Ms. Fisher. Since Dr. Dara is an entomologist and is also an Affiliate UCCE Advisor with the UC ANR Integrated Pest Management (IPM) Program and has immediate access to all the latest research on ACP and the associated Citrus Greening Disease, his involvement with the task force is especially important to both the agricultural industry and the people of Santa Barbara County.

Ben Faber (Soils and Water, Avocados and Minor Subtropicals Advisor) participated in a grower meeting in February with Ag Commissioner Cathy Fisher concerning Asian Citrus Psyllid (ACP) and its control. This insect can carry a bacterium which eventually kills citrus trees. Asian citrus psyllid attacks citrus and closely related plants. The psyllid attacks leaves and stems of citrus. When it feeds, it injects a toxin that causes twisting and death of the leaves. More importantly, it is an efficient vector of a bacterium that causes Huanglongbing disease (HLB). This disease is one of the most devastating diseases of citrus; causing leaves to yellow, fruit to become bitter and eventually death of the tree. Ben also provided information to

Santa Barbara Master Gardeners by presenting a talk on this disease and others, so that they can pass on information to the public about how to prepare for HLB and other plant epidemics.

Mark Gaskell (Small Farms & Specialty Crops Advisor) and his team conducted field trials on organic strawberry management with collaborating growers in the Santa Maria Valley. These trials examine the factors limiting efficient organic fertilization practices for strawberry with emphasis on fertigation and application of certified organic fertilizers through drip irrigation systems. Additional trials will also look at practices that may contribute to long-term increases in soil organic matter on the light textured soils commonly used for strawberries in the Santa Maria Valley. The project entitled “A Collaborative Research and Extension Network for Sustainable Organic Production Systems in Coastal California” has been funded by the USDA National Organic Research program.

UCCE Farm Advisor Mark Gaskell and the UC Master Gardener Coordinator were asked to join the Allan Hancock College Ag Advisory Committee to help guide the new agriculture expansion program and offer advice on site development, training of future staff and student employees and offer public outreach and education.

Dr. Max Moritz (Wildfire U.C. Cooperative Extension Specialist), in conjunction with Santa Barbara County Fire and the SB Botanic Garden, finalized arrangements for two live fuel moisture sampling locations. This process included identifying sites, developing sampling protocols, securing a drying oven for the SB Botanic Garden facility, and helping to train docents to perform sampling themselves. In addition to sharing fire danger levels with the public, results will be made available to the Southern California Geographic Area Coordination Center (official multi-agency focal point for coordinating wildland fire resources) for inclusion into their regular fuels discussion updates. Results will also be uploaded to the National Fuel Moisture Database, expanding the coverage significantly for Santa Barbara County.

Advisor Julie Newman was able to quickly pull together a team of UC ANR experts from UC Riverside and other UCCE offices in Southern California to address the Bagrada bug (*Bagrada hilaris*), also called painted bug, which is a new invasive pest in Santa Barbara County. Although primarily a pest of field-grown cole crops, it has also become a major problem in nurseries where bedding plants, plugs, and transplants are produced - attacking young vegetable and ornamental plants in the mustard family *Brassicaceae* (*Cruciferae*). Julie received many requests for assistance from growers in the county during the quarter because there is no written information available for managing this pest in nurseries. This is an excellent example of a quick response from UCCE to deal with a sudden area of concern and problem in the agricultural industry. The team consisted of two researchers in the Dept. of Entomology, UC Riverside and three Farm Advisors from Southern California.

The newly organized Orcutt Hill 4-H Club received a 4-H Charter from the 4-H National Headquarters at the United States Department of Agriculture and the University of California Cooperative Extension on January 7, 2013. The 4-H Charter recognizes the Orcutt Hill 4-H Club organization and its agreement to meet the requirements outlined by the Cooperative Extension System, and authorizes the group to use the 4-H name and emblem for educational purposes in accordance with the laws and regulations established by the Congress of the United States of

America, the Secretary of the United States Department of Agriculture, and the land-grant university. (A 4-H Club cannot exist without a 4-H Charter).

4-H Science, Engineering & Technology (SET) Key Leader Kathy Foltz and a team of volunteers and youth presented the 4-H Agua Pura watershed education model at the Foothill Elementary School Science Night in Santa Barbara on February 12, 2013.

UCCE Master Gardeners in Santa Barbara County devoted 667 hours of community education from January 1- March 31 on sustainable gardening, including information and education on water conservation, Integrated Pest Management, composting, and reduced urban pesticide use. During this time period, outreach and education activities for the Master Gardener Program in Santa Barbara County resulted in 493 educational contacts through volunteer events throughout the county.

UC Cal Fresh's comprehensive nutrition education materials are in SMBSD classrooms every day of the school year. Thirteen of the district's 15 schools participate in the program. From January to March 2013, 117 SMBSD educators delivered classroom nutrition education to approximately 3300 students. Families of the students received indirect nutrition education via parent letters and recipes sent home with students.

UC Cal Fresh continued its collaboration with THRIVE Santa Maria, *Cradle to Career*, an SMBSD program that collaborates with local agencies to promote successful living amongst district students and families. Through THRIVE's Healthy School Pantry (HSP) program, UC Cal Fresh provided family centered nutrition education to an estimated 300 family members. Of these members, approximately half of the adults participated in a cooking demonstration utilizing emergency foods being distributed. HSP reaches families with students from Bruce Elementary, Fairlawn Elementary, Bonita Elementary and El Camino Junior High.

PLANT SCIENCES/HORTICULTURE

**Advisors Dr. Surendra Dara Dr. Ben Faber, Mark Battany,
Mary Bianchi, Dr. Mark Gaskell, and Julie Newman**

This program specializes in the science and art of growing fruits, vegetables, flowers, and ornamental plants. Advisors conduct local field research to test new crops and varieties that are best adapted to local soil and water conditions, implement improvements in cultural practices and pest control methods, and offer information that optimizes production, conserves natural resources, and protects the environment.

Allan Hancock College Ag Advisory Committee

Allan Hancock College is expanding its agriculture program to include courses such as agribusiness, Ag communications, animal science, horticulture, fruit science and entomology. UCCE Farm Advisor Mark Gaskell and the UC Master Gardener Coordinator were asked to join the committee to help guide the expansion program and offer advice on site development, training of future staff and student employees, and public outreach and education.

SURENDRA DARA - STRAWBERRY AND VEGETABLE CROPS & AFFILIATED IPM ADVISOR

During the quarter, Surendra worked with several strawberry and vegetable growers planning research projects for 2013. In addition to the pest and disease management issues, he expanded his research to fertility management in strawberries and vegetables. During this quarter, the strawberry fertility trial started and the collaborative project on fumigation alternatives is in progress. He also initiated another study to evaluate technologies that promote strawberry plant health and growth.

Surendra co-organized two workshops for Hispanic strawberry growers regarding various pest and diseases and their management. He provided IPM training to a group, gave a talk at a PCA meeting, and provided research and extension updates to the Farm Bureau and Ag Advisory Committee.

In addition to his extension meetings, Surendra spent a significant amount of time preparing educational materials for clientele in the vegetable and strawberry industries.

He wrote three newsletter articles for the UCCE Central Coast Agriculture Highlights newsletter available at: <http://ucanr.edu/ccah>

- 1) Strawberry IPM: Botanical and Microbial Options
- 2) Feeding behavior and host preference of the Bagnada bug
- 3) Year-round Strawberry IPM Program

He wrote and distributed two handouts in English and Spanish available at: <http://cesantabarbara.ucanr.edu/files/163916.pdf>

- 1) Whiteflies and their control
- 2) Spider mites and their control

He wrote eight blog articles which are available at: <http://ucanr.org/blogs/strawberries-vegetables>

- 1) Managing aphids on broccoli and thrips on lettuce with chemical and microbial control options
- 2) Compatibility of the entomopathogenic fungus, *Beauveria bassiana* with some fungicides commonly used in strawberries
- 3) Bagnada bug host preference: Crucifers and green beans
- 4) Managing strawberry pests with chemical, botanical, and microbial pesticides
- 5) An update on the Bagnada bug
- 6) Year-round IPM program for strawberries: An annual plan for pest management
- 7) Whiteflies becoming a concern for the strawberry growers
- 8) Low temperature injury to strawberries

Surendra also wrote two magazine articles, worked on updating Pest Management Guidelines, wrote a Spanish Strawberry Production Manual, and continued preparing material for smartphone applications in progress.

He also met with several growers and answered phone calls or emails addressing various strawberry and vegetable production issues. He continued to use all communication tools to stay in touch with his clientele during the quarter.

Surendra is now a member of the Central Coast Chlorpyrifos Technical Advisory Committee.

BEN FABER - SOILS AND WATER, AVOCADOS AND MINOR SUBTROPICALS ADVISOR

In February, Ben participated in a grower meeting with Ag Commissioner Cathy Fisher concerning Asian Citrus Psyllid (ACP) and its control. This insect can carry a bacterium which eventually kills citrus trees. Asian citrus psyllid attacks citrus and closely related plants in the Rutaceae. See the [California State Quarantine](#) for the known hosts of ACP. The psyllid attacks leaves and stems of citrus. When it feeds, it injects a toxin that causes twisting and death of the leaves. More importantly, it is an efficient vector of the bacterium *Candidatus liberibacter asiaticus* that causes Huanglongbing disease (HLB). This disease is one of the most devastating diseases of citrus; causing leaves to yellow, fruit to become bitter and eventually death of the tree. For more information on the disease, see [ANR Publication 8218 Citrus Bacterial Canker Disease and Huanglongbing \(Citrus Greening\)](#).

Ben also provided information to Santa Barbara Master Gardeners by presenting a talk on this disease and others, so that they can pass on information to the public about how to prepare for HLB and other plant epidemics.

Ben is just one of the numerous UCCE Farm Advisors keeping abreast of the ACP situation in the county and collecting information from UC and other land grant institution agricultural scientists and providing this information to growers and others in the agricultural industry as it becomes available. In California, ACP was first found in 2008 in Imperial and San Diego counties and has since spread to Orange, Los Angeles, Ventura, San Bernardino, Riverside Counties and now Santa Barbara County. In March 2012, HLB was found in a tree in Los Angeles in an urban situation, but the tree was destroyed to prevent spreading. The tree that was found with HLB in Los Angeles is believed to have been infected through grafting a bud (taking plant tissue from one tree and inserting it into another to form a new branch) from another infected tree. Other than this find, the disease has not yet been found elsewhere in California. For more information on the biology of the Asian citrus psyllid, see [ANR Publication 8205 Asian Citrus Psyllid](#) or the homeowner pest note [ANR Publication 74155 Asian Citrus Psyllid](#)

MARK BATTANY - VITICULTURE & SOILS ADVISOR

Springtime temperature inversion assessment

In late February and early March 2013, Farm Advisor Mark Battany and his staff re-installed the tall meteorological towers during the second season of his three-year regional study. These 35-foot tall towers are instrumented to measure the air temperature at the top and at the five-foot vine level. The difference in air temperature (or inversion strength) will indicate the potential

additional warming to be gained through the operation of wind machines for frost protection. This information will be critical for vineyards facing water supply restrictions that limit their use of sprinkler frost protection. The 20 sites in Santa Barbara County are accompanied by similar measurements in San Luis Obispo and Sonoma Counties. The project is being led by Mark and made possible with funding from the CDFA Specialty Crops Block Grant program.

Vine training height and the air temperature microclimate

In 2012 Mark conducted a pilot study to assess how temperatures vary over small differences in height above the ground. The goal was to determine if changes in the typical vine training heights might bring some advantages for frost protection and for protection from excessive summer heat. The results of that pilot study showed important temperature differences over short heights and received broad interest in the grape industry. Recognizing the limits of using data from one site in one season in early 2013, the pilot study was expanded to a larger scale project which is measuring detailed air temperatures at three locations in Santa Barbara County and four locations in San Luis Obispo County. At each site, the team is measuring temperature at one-foot height increments from one to eight feet above the ground. Very advanced temperature measurement equipment is now being used, which allows for very precise readings. This instrumentation will be in place for the entire growing season. Findings on how temperature patterns vary with respect to height above the ground will then be summarized. The team expects this information to be a critical factor to consider when growers are designing new vineyards or renovating existing vineyards; their choice of vine training height will have important implications for the temperatures experienced by the vines.

Wind machine efficacy trials for frost protection

As part of Mark's continuing research regarding the efficacy of wind machines, he and his team conducted data analysis of its extensive 2012 season measurements. The purpose of this work was to validate previous studies which indicated relatively poor performance of small upward-blowing wind machines. Mark conducted two types of wind machine trials in 2012; the first component was a regional study in which he installed temperature monitoring equipment at 34 wind machines in use in vineyards throughout four counties; most of the sites used upward-blowing wind machines. The second component was to conduct very detailed measurements at two sites that had medium-sized upward-blowing wind machines. The results of the 2012 study supported previous work; the operation of the upward-blowing wind machines did not result in significant or very useful changes in temperature at the vine level, while the conventional type wind machines did produce such useful effects.

MARK GASKELL - SMALL FARMS and SPECIALTY CROPS ADVISOR

As reported in the previous quarterly report, UC Small Farms and Specialty Crops Farm Advisor Mark Gaskell is a collaborator on a new research and education project with organic strawberry production that is receiving external funding in support of Santa Barbara County agriculture. The project entitled "A Collaborative Research and Extension Network for Sustainable Organic Production Systems in Coastal California" has been funded by the USDA National Organic Research program. Mark is part of a network of advisors and other UC faculty from Salinas, Santa Cruz, Watsonville, and UC Davis working as part of a research /extension network supported by this project. They are working on the following:

- Mark is conducting field trials on organic strawberry management with collaborating growers in the Santa Maria Valley. These trials examine the factors limiting efficient organic fertilization practices for strawberry with emphasis on fertigation and application of certified organic fertilizers through drip irrigation systems. Additional trials will also look at practices that may contribute to long-term increases in soil organic matter on the light textured soils commonly used for strawberries in the Santa Maria Valley.
- The project got underway in late 2012 and was in full swing during this quarter. Varying organic fertilizer rates were applied to two organic farms in the Santa Maria Valley beginning in late 2012 and weekly fertilizer treatment regimens are continuing during the first 5 months of 2013. Data collection began in February 2013 with weekly soil sampling and measurement of soil nitrogen. Yield data collection began in March 2013 and will continue until early June. These trials will be summarized during mid to late summer 2013, and initial results will be presented at grower meetings during 2013 and 2014.

Mark also has pruning management trails underway with a collaborating grower in Santa Barbara County whose farm is located between Los Alamos and Lompoc. These trials evaluate different mow-down and tip pruning regimes for new primocane fruiting blackberry varieties growing under high plastic tunnels. Results from these trails will be compared with open field blackberry trials near Santa Maria. Different treatment regimens have been applied during this reporting period and different treatments will continue into mid-2013. Harvest will begin in July 2013.

Additional coffee varieties were planted at Condor Ridge Ranch near Goleta during the reporting period. These new plants will eventually be planted out on additional farms in the Santa Barbara area where coffee variety trials are continuing to be established.

JULIE NEWMAN- FLORICULTURE AND NURSERY PRODUCTION

Julie continued to participate in monthly meetings as chair of the UC Nursery and Floriculture Alliance (UCNFA) educational committee to plan statewide educational events for flower and nursery growers, including growers in Santa Barbara County. She was a key organizer for a statewide Best Management Practices Programs for California Nurseries workshop for the nursery industry held on Mar 20. There were 58 participants, which included growers from Santa Barbara County and representatives from the Santa Barbara County Ag Commissioner's office. Presentations and handouts from the meeting are posted online on the UCNFA website. Another local meeting is being planned for June 13 called, "ABCs of Nursery and Greenhouse Pests."

The Bagrada bug, (*Bagrada hilaris*) also called painted bug, is a new invasive pest in Santa Barbara County. Although primarily a pest of field-grown cole crops, it has also become a major problem in nurseries where bedding plants, plugs, and transplants are produced, attacking young vegetable and ornamental plants in the mustard family *Brassicaceae* (*Cruciferae*). Julie received many requests for assistance from growers in the County during the quarter because there is no written information available for managing this pest in nurseries. To assist growers and the

industry, she wrote an article for UCNFA News which is in press. She also worked with Darcy Reed at UC Riverside to develop a handout which was presented at the Best Management Practices meeting and is available on her website at <http://ceventura.ucdavis.edu/files/163391.pdf>. The UC team submitted this handout for publication as a UC IPM Floriculture and Nurseries Pest Management Guideline. This is an excellent example of a quick response from UCCE to deal with a sudden area of concern and problem in the agricultural industry. Julie was able to quickly pull together a team of UC ANR experts from UC Riverside and other UCCE offices in Southern California. The team consisted of: Darcy A. Reed, Dept. of Entomology, UC Riverside; Julie P. Newman, UC Cooperative Extension, Ventura and Santa Barbara Counties; Thomas M. Perring, Dept. of Entomology, UC Riverside; James A. Bethke, UC Cooperative Extension, San Diego and Riverside Counties; John N. Kabashima, UC Cooperative Extension, Orange and Los Angeles Counties.

An article Julie wrote on sustaining agriculture on the urban edge, which describes the problems faced by greenhouse growers in Carpinteria, was published in the February issue of the national trade magazine, *Greenhouse Management* and can be accessed at <http://www.greenhousemanagementonline.com/digital/201302/index.html>. Julie also submitted an article to be published in the May issue on reducing light intensity in greenhouses.

FIRE ECOLOGY AND MANAGEMENT **UCCE Specialist Dr. Max Moritz**

This program is focuses broadly on scientific questions in fire ecology and management. Research includes analysis of where various fuel management techniques are likely to succeed and be sustainable, mapping of fire weather patterns, and quantifying linkages between fire and climate change. Outreach efforts emphasize fire-related policy decisions and education of the general public to live more safely on fire-prone landscapes.

During this quarter Specialist Max Moritz continued to develop his fire research and outreach program based out of the Santa Barbara County Cooperative Extension office in Goleta. This included ongoing attendance and communication with the Santa Barbara Fire Safe Council, as well as Max teaching classes in the California Naturalist Program at the Santa Barbara Botanic Garden. He also attended the Santa Barbara County Farm Bureau meeting on March 5 and provided an update on his fire programs.

In conjunction with Santa Barbara County Fire and the Santa Barbara Botanic Garden, Max finalized arrangements for two live fuel moisture sampling locations. This included identifying sites, developing sampling protocols, securing a drying oven for the Santa Barbara Botanic Garden facility, and helping to train docents to perform sampling themselves. In addition to sharing fire danger levels with the public, results will be made available to the Southern California Geographic Area Coordination Center (official multi-agency focal point for coordinating wildland fire resources) for inclusion into their regular fuels discussion updates. Results will also be uploaded to the National Fuel Moisture Database, expanding the coverage significantly for Santa Barbara County.

**UC CALFRESH NUTRITION EDUCATION PROGRAM (UC CalFresh NEP)
Advisor Richard Enfield, Program Representative III Kimberlee Hampton, Program
Representative II Lisa Paniagua & Program Representative I Andrea Keisler**

The University of California's CalFresh Nutrition Education Program (UC CalFresh) is funded by the USDA and delivered by the University of California Cooperative Extension to San Luis Obispo and Santa Barbara Counties. In collaboration with local partners, UC CalFresh provides evidenced-based nutrition education to CalFresh recipients and other low-income individuals and families. It acts as a vital bridge with the community by tailoring the latest science, curriculum, and nutrition information to the needs of low-income families.

The program also provides educators at qualifying schools with research-based nutrition education curriculum and high-quality nutrition education training utilizing the USDA MyPlate as a guidance tool. Recognizing that healthy eaters are better learners, the goal is to help these community members make better nutrition decisions by focusing on increasing vegetable and fruit consumption, choosing low-fat/low-sodium foods, and balancing caloric intake by an awareness of portion size.

In Santa Barbara County approximately 38,000 public school students qualify for free and reduced school meals. More than 12,000 students (32%), attend school in the Santa Maria Bonita School District (SMBSD) located in Northern Santa Barbara. These students and their families are the target audience for UC Cal Fresh Nutrition Education Program.

UC Cal Fresh and Santa Maria Bonita School District

UC Cal Fresh's comprehensive nutrition education materials are presented in SMBSD classrooms every day of the school year. Thirteen of the district's 15 schools participate in the program. From January to March 2013, 117 SMBSD educators delivered classroom nutrition education to approximately 3300 students. Families of the students received indirect nutrition education via parent letters and recipes sent home with students.

Healthy School Pantry

UC Cal Fresh continued its collaboration with THRIVE Santa Maria, *Cradle to Career*, an SMBSD program which collaborates with local agencies to promote successful living amongst district students and families. Through THRIVE's Healthy School Pantry (HSP) program, UC Cal Fresh provided family centered nutrition education to an estimated 300 family members. Of these members, approximately half of the adults participated in a cooking demonstration utilizing emergency foods being distributed. HSP reaches families with students from Bruce Elementary, Fairlawn Elementary, Bonita Elementary and El Camino Junior High.

Housing Authority Food Demos

UC CalFresh NEP in collaboration with the Santa Barbara County Food Bank offers monthly family centered nutrition workshops at Evans Park Housing Authority, which serves families with students from Rice Elementary School. On average, 35-40 family members participate in a cooking demonstration and a nutrition lesson and take home a nutrition tip newsletter and

healthy recipe (both in English and Spanish) reinforcing the nutrition concept learned. Participants are evaluated using the intent-to-change evaluation.

UC Cal Fresh and Santa Barbara County Food Bank Collaboration

As an agent of the Santa Barbara County Food Bank, UC Cal Fresh receives donations of local fruits and vegetables to taste and prepare with SMBSD students and families. In return, adult food demo nutrition trainings are conducted at Food Bank distribution sites. UC Cal Fresh utilizes Food Bank produce in classroom activities, classroom taste tests extended by participating educators, Healthy School Pantry cooking demonstrations, and Evan's Park Housing Authority cooking demonstrations.

UC Cal Fresh Expanded Programming

In March 2013 UC Cal Fresh received approval to restructure the program in order to expand its programming in SMBSD. It will have a full time bilingual adult program representative on staff working with two full time youth representatives, to create family-centered programs with the goal of generating a culture of health in SMBSD schools and surrounding communities.

MASTER GARDENERS

Advisor Mary Bianchi & Program Representative II Fiona Brennan

UCCE Master Gardeners (MGs), through their volunteer activities, provide the primary outreach and extension method for improving horticulture and science literacy for homeowners and back yard gardeners. They provide research based information for home horticulture, pest identification, landscape management, and other environmental and natural resource information. They interact directly with homeowners and back yard gardeners to provide information on plant selection, alternatives to pesticides, water conservation, and environmentally sound solutions for pest problems.

MG Program goals are to support healthy people and communities, healthy food systems, and healthy environments in Santa Barbara County through the extension of research-based knowledge and information on home horticulture, pest management, and sustainable landscape practices.

There were 69 Master Gardeners in the Santa Barbara County Program as of March, 2013. Master Gardeners volunteered 667 hours to community education on sustainable gardening. Using the estimate of \$22.14 for volunteer hours (http://www.independentsector.org/volunteer_time), this represents \$14,761 in support of education that includes water conservation, Integrated Pest Management, composting, and reduced urban pesticide use.

Important outreach and education activities for the Master Gardener Program in Santa Barbara County from January 1, 2013 through March 31, 2013 resulted in 493 educational contacts through the following volunteer events:

- Master Gardeners provided information and resources on sustainable landscape practices through a telephone helpline for a total of 24 hours. The Master Gardeners volunteer at an information table at the Santa Barbara Farmers' Market four times a month.
- Master Gardeners continue their monthly collaboration with the Santa Barbara Food Bank "Grow Your Own Way" project. The project distributes seeds and educational instruction and promotes gardening for home food production. Each month, at least two bilingual Master Gardener volunteers provide gardening information and answer any gardening questions for clients. Approximately 80% of the clients are Spanish speaking. The UC MG Program plays an integral role in assisting families with gardening questions and helping them grow their own food in their backyard.
- Master Gardeners developed and delivered one workshop this quarter, *Backyard Beekeeping and the Amazing Honey Bee!* It was presented by 2011 Master Gardener Barbara Hughes, who is also a member of the Santa Barbara Beekeepers Association. The workshop was held at the Watershed Resource Center in Santa Barbara.
- Master Gardeners continued their support of school gardens through programs at local schools and public education on gardening with their efforts at the Santa Barbara Botanic Garden, the La Huerta Project at the Santa Barbara Mission, and Santa Barbara FoodBank.

SANTA BARBARA COUNTY 4-H YOUTH DEVELOPMENT PROGRAM
Advisor Richard Enfield and Program Representative III Sherry Mills
Office Assistant Rosemarie Aigner, Program Representative II Andrea Borunda

4-H is a positive youth development organization that empowers young people to reach their full potential. A vast community of more than 6 million youth and adults working together for positive change, 4-H enables America's youth to emerge as leaders through hands-on learning, research-based 4-H youth programs and adult mentorship, in order to give back to their local communities. 4-H is the youth development program of our nation's Cooperative Extension System. The 4-H Youth Development Program is brought to SB County by the University of California, Agriculture & Natural Resources.

4-H Program Expansion

The newly organized Orcutt Hill 4-H Club received a 4-H Charter from the 4-H National Headquarters at the United States Department of Agriculture and the University of California Cooperative Extension on January 7, 2013. The 4-H Charter recognizes the Orcutt Hill 4-H Club organization and its agreement to meet the requirements outlined by the Cooperative Extension system, and authorizes the group to use the 4-H name and emblem for educational purposes in accordance with the laws and regulations established by the Congress of the United States of America, the Secretary of the United States Department of Agriculture, and the land-grant university. (A 4-H Club cannot exist without a 4-H Charter).

On March 31, 2013, there were 857 youth member enrollments and 245 adult volunteer applications processed through the ca.4honline.com system for FY 2012-2013. Staff continues

processing additional enrollments and applications during the fourth quarter and then they will close the annual enrollment cycle on June 30, 2013.

The eighteen 4-H clubs throughout the county continued to add new projects and activities, expanding the variety of hands-on learning opportunities available to their youth members. At the county level, the 4-H Program Development Board key leaders and their committees continued planning a variety of county-wide events and activities.

4-H Professional Development and Volunteer Training

On January 17, 2013, Andrea, Santa Barbara County 4-H Management Board Director Mary Thieleke Jackson, and Los Padres 4-H Club Leader Ron Vieira and Los Padres 4-H Club Officers Crystal Arroyo and Olivia Loyola attended the Fielding Graduate University's presentation on Liberating Latina/o Communities through Education, Developing a Latina/o Behavioral Health Workforce, at the Doubletree Hotel in Santa Barbara.

All Star Advisor Tiffany Crane and All Star Bailey Albin represented Santa Barbara County 4-H at the South Section 4-H Leaders Council Meeting at Mt. San Antonio College in Walnut on January 12, 2013.

Chaperones Ron Vieira, Tiffany Crane, and Rose, and teens Emily Martinez, Bailey Albin, Ashley Sacks, Cole Breck and Sierra Aigner served as the Santa Barbara County 4-H delegation to the South Section 4-H Leaders Council's TIC (Teen Involvement Conference) at the Pathfinder Ranch in Mountain Center the weekend of January 18 – 20, 2013.

Santa Barbara County 4-H Adult Leadership Key Leader Linda Greco and the Adult Leadership Program Development Committee put on two workshops for volunteer leaders, The 4-H View and Share the Knowledge, on January 20, 2013, in Sisquoc. These informal gatherings provided volunteers with the opportunity to network and share ideas to take back to their club and project meetings.

On January 24, 2013, Andrea, Sherry and Mary Thieleke Jackson participated in the first presentation in the Webinar series, "Improving the Lives of Latino Families through Effective Practice and Research," presented by North Carolina State University's College of Agriculture and Life Sciences. Topics included defining the population, strengths and assets, general needs for effective support, cultural competence in working with Latino families, marketing and engagement, and community and environmental considerations.

Sherry oversaw the Santa Barbara County 4-H Program Development Board meeting in Los Alamos on January 27, 2013, with the PDB Key Leaders and Management Board Assistant Director/Liaison to the Program Development Board, Carla Renard, in attendance.

Mary Thieleke Jackson conducted the Santa Barbara County 4-H Management Board Meeting in Los Alamos on January 28, 2013, with the adult and youth members of the board and Sherry in attendance.

On February 1, 2013, Andrea and Sherry attended a conference, “It Starts with Me: Building a Community without Bullying,” presented by the Asset Development Network of SLO, held at Cuesta College, San Luis Obispo Campus.

On February 2, 2013, Sherry hosted a 4-H Filmmaking Workshop, presented by the California 4-H Technology Team, and funded by a grant from Best Buy. Twenty-five teens and adults from Santa Barbara, SLO, Ventura, and Los Angeles County 4-H attended the training.

Management Board Treasurer Mary Anne Christensen and Sherry coordinated the 4-H Club Treasurer’s Training and Book Review on February 10, 2013 in Los Alamos, attended by the club treasurers and their adult treasurer advisors.

Sherry, Andrea, Mary Thieleke Jackson, and Linda Greco represented Santa Barbara County 4-H staff and volunteers at a California State 4-H Conference held in Sacramento on February 11-13, 2013. The focus of the conference was the systems approach to the county-level organizational structure of the 4-H program. This structure, which Santa Barbara County 4-H began implementing in FY 2011-12, has proven to be beneficial to the growth of the program. Richard Enfield presented the process of moving from a traditional county council structure to the systems structure. Sherry, Mary, and Linda participated in a panel discussion highlighting the positive growth and synergy experienced by Santa Barbara County 4-H in the past two years.

On February 27, 2013, Andrea, Sherry, Mary Thieleke Jackson, and Ron Vieira participated in the second presentation in the Webinar series, “Improving the Lives of Latino Families through Effective Practice and Research,” presented by North Carolina State University's College of Agriculture and Life Sciences. Topics included engaging Latino children and teens, effective practice and education, examples of programs and practice, and future directions.

Shooting Sports & Safety Key Leader and Certified 4-H Archery Trainer Steven Adam taught a 4-H Archery Training Workshop on March 2, 2013 in Santa Maria. Five 4-H adult volunteers took the training to become certified 4-H Shooting Sports & Safety Archery Project Leaders.

Annette Leland, Executive Director of the California 4-H Foundation joined Sherry and Mary Thieleke Jackson in representing 4-H at the Partnership for Excellence Conference at the Doubletree Hotel in Santa Barbara.

The 2nd Annual Santa Barbara County 4-H LEaD (Leadership, Education & Development) Conference was held March 8 -10, 2013 at Camp Ocean Pines in Cambria. Nearly 80 teens and adults from throughout Santa Barbara County attended the conference, plus a few members from Ventura and San Luis Obispo Counties. Linda Greco and the Youth Leadership Committee spent months planning and preparing for the conference. Sessions were presented by over 25 4-H adult and teen volunteers and staff, including a staff member from the State 4-H Office at UC Davis.

4-H County-wide Events and Activities for Youth Members and Adult Volunteers

Expressive Arts Key Leader Kathy Thompson and a committee of volunteers coordinated the annual Santa Barbara County 4-H Presentation Day, held January 26, 2013 at Olga Reed School in Los Alamos. This event gave youth aged 5 through 19 years old the opportunity to share the

knowledge and skills gained in their 4-H projects and activities. Sixty members from eleven 4-H Clubs performed demonstrations, prepared talks, impromptu speeches, and skits, interviews, the 4-H Pledge, the 4-H Creed and/or participated in a judging boards contest. Toastmasters and local citizens served as judges. More than 120 people attended the event. Youth who earned a Gold award qualified to present at Sectional Presentation Day.

Kathy Thompson and her committee coordinated Sectional 4-H Presentation Day, held at Olga Reed School in Los Alamos on March 2, 2013. The event brought together over 250 people from Santa Barbara and San Luis Obispo Counties. Ninety-five members from twenty 4-H Clubs performed a wide variety of presentations including demonstrations, illustrated talks, audio-visual presentations and skits. Youth who received gold medals qualified for State 4-H Presentation Day at UC Davis on May 25, 2013.

On January 12, 2013 the Santa Barbara County-wide Horse Mastership Program, led by Brenda Gilardone, held a Horse Showmanship Clinic at the Guerra Ranch, between Lompoc and Buellton. Accredited horse show judge Deborah Pearson served as the guest speaker.

Plans were put in place for Santa Barbara County 4-H Camp Wahoo, the annual summer camp for 9 through 13 year old boys and girls to be held at Camp Yeager in Cambria on July 21-27, 2013. Under the leadership of Camp Director Pat Bradley, the Santa Barbara County-wide 4-H Camp Wahoo! Leadership Project completed the application and screening process for the teens selected for camp staff and counselor positions. They began their series of six half-day camp leadership trainings held from February through July. The camper registration period opened on March 1, 2013.

On February 3, 2013, the Santa Barbara County-wide Hi 4-H Project held a dodge ball and movie event for teens at the Anderson Recreation Center in Lompoc.

On February 9, 2013, Small Animal Science Key Leader Jacquie Voorhees and the Small Animal Science Committee put on a 4-H Showmanship Clinic & Field Day for leaders and members of rabbit, chicken, turkey, cavy, and dog projects.

4-H Educational Outreach and Service to the Community

On February 12, 2013 4-H Science, Engineering & Technology (SET) Key Leader Kathy Foltz and a team of volunteers and youth presented the 4-H Agua Pura watershed education model at the Foothill Elementary School Science Night in Santa Barbara.

On February 21, 2013, Mary Thieleke Jackson and Linda Greco visited the THRIVE Santa Maria Healthy School Pantry where they made contacts with other community/youth organizations such as Food Bank, Cal Fresh, Promatores, and Central Coast Future Leaders. From that meeting they also initiated the idea of inviting the families of Robert Bruce School and Fairlawn School to the 4-H Project Extravaganza at the Town Center Mall in Santa Maria on April 6, 2013.

Andrea created an English/Spanish invitational flyer for the 4-H Project Extravaganza, which she sent to Karin Dominquez on March 6, 2013 for distribution to the families at Robert Bruce School and Fairlawn School.

Andrea participated in the THRIVE Santa Barbara County Carpinteria Design Institute Day 1 at the Carpinteria Lion's Club in January 30, 2013, and 4-H Leader Ron Vieira joined Andrea for Day 2 at the Carpinteria Children's Project at Main in March 21, 2013. They learned more about the Strive framework, provided input into the design and development of the THRIVE Carpinteria Action Plan, and identified ways in which Santa Barbara County 4-H could work with THRIVE Carpinteria.

Looking to expand the reach of 4-H by developing new entry-point programming for new clientele, on March 20, 2013, Andrea and Sherry met with Jessica Wetzel, Eureka! project manager at Girls Incorporated of Carpinteria. They discovered that the 4-H science curricula, "Exploring Your Environment and Junk Drawer Robotics," would fit well with the Eureka! project. Sherry followed up by providing Jessica with resources and information for ordering the curricula.

Andrea and Sherry also met with David Bleecker, Children's Program Director at the Boys & Girls Club of Carpinteria Inc. on March 20, 2013. They discussed ways to collaborate, support mutual goals, and contribute to the overall mission of THRIVE Carpinteria. The 4-H Youth Experiences in Science program was identified as a possible joint venture. Sherry began researching its potential.

Citizenship Key Leader Allan Jones and five teens from the Lucky Clover and Santa Ynez 4-H Clubs make up the Santa Barbara County 4-H delegation for the 2013 4-H Washington Focus Program. The group continued planning for their local service learning project, and 9-day trip to the Washington D.C. and the East Coast in June.

On March 26, 2013, Mary Anne Christensen, a 4-H Adult Volunteer in her 26th year of service, was honored as the Santa Ynez Valley Foundation's Woman of the Year at their Annual Man & Woman of the Year Awards Banquet at the Buellton Marriott.

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