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Cooperative Extension: Serving the People of Riverside County

The mission of the University of California Cooperative Extension in Riverside County is to serve the people of Riverside County by providing science-based research, education and public service to help them solve problems in agriculture, natural resources (including environmental quality), food and nutrition, food safety and human community development.

The areas of staff expertise in agriculture

include: agronomy, vegetable crop production, integrated pest control and entomology, field crop production, viticulture, plant pathology, subtropical crop production, agricultural economics and poultry and animal sciences, and environmental resources. We also have expertise in the human resources including 4-H youth development, nutrition and consumer sciences, family well-being, environmental enhancement and community development.

New Director of Cooperative Extension in Riverside County

It has been an eventful and positive year of growth for Cooperative Extension in Riverside County. On October 29, 2001, Dr. Peggy Mauk was given the opportunity to serve Riverside County as the Acting Director for Cooperative Extension. She was given the privilege to work with the County of Riverside's Executive office where they were successful in authoring a new Memorandum of Understanding between the University of California and the County of Riverside. On February 1, 2002, Dr. Mauk was appointed permanent Director of Cooperative Extension in Riverside County.

There are a number of changes in the CE office. Most notable are the changes in the 4-H program. The past few years



Peggy Mauk, Director of Cooperative Extension and Subtropical Horticulture Advisor, discusses production problems with a local grower.

have been characterized by conflicts. Problems have been resolved, financial management systems have been implemented, and a clean slate has been celebrated by all. Although conflicts will arise from time to time, Dr. Mauk has an open door policy. She is excited to have the opportunity to help rebuild an



George Rendell,
Consultant for
Cooperative
Extension.

B.S. Animal
Science, Uni-
versity of Cali-
fornia, Davis

M.A. Public
Administration,
American Uni-
versity

*“...to make
life better for
Californians
in all walks of
life...”*

New Director (continued from page 1)

exciting program for Riverside County's youth. Dr. Mauk has a staff of people helping her with the 4-H program. Mr. George Rendell is a former 4-H advisor and University of California Administrator who is in the office helping to help train volunteers, design management systems, and improve relations with 4-H volunteers. Mr. Rendell has been a tremendous asset to Riverside County. One of his most notable accomplishments is improving the management of 4-H funds. He has helped to set policies for the oversight of 4-H funds. We are planning to transfer the accounting of funds to our Riverside County Office Accountant, pending approval by the Board of

Supervisors. Mrs. Jeanne Lothridge, Program Representative, is helping with the day to day activities in the 4-H office. Together, Rendell and Lothridge will be continuing their efforts to enhance and build the Riverside County 4-H program while we recruit for a new permanent 4-H Youth Development Advisor. We plan to interview for this position in September, 2002.

This is the first issue of a series of reports on Cooperative Extension. Annually, we will provide an overview of program highlights. We will also provide periodic reports with details of a specific activities and accomplishments for each program.

History of Cooperative Extension in Riverside County

In 1891, the University of California Board of Regents instituted short courses and demonstration trains to extend the University's teaching over the entire state. In 1897 the Department of Extension in Agriculture was created that later became the Division of Agricultural Extension in 1913.

On May 8, 1914 Congress passed the Smith-Lever Act, providing federal funds to the USDA's Extension Service for cooperative work with Land-Grant universities and colleges.

In 1915, the California state legislature authorized the UC Regents to conduct the Agricultural Extension program. This empowered county boards of supervisors to appropriate and use county funds to support Extension work in agriculture, in cooperation with the USDA.

This three-way cooperative arrangement

was created to bring agricultural education and research to the public.

In 1917, a cooperative relationship was formed between the University of California and the Riverside County Board of Supervisors. In 2001, the Memorandum of Understanding was revised further formalizing this relationship.

Cooperative Extension (CE) tailors its programs to meet local needs. CE's many teaching tools include meetings, conferences, workshops, demonstrations, field days, video programs, newsletters, manuals and personal consultations.

In Riverside County and throughout the state, thousands of volunteers extend CE's outreach, assisting with 4-H youth development programs along with Master Gardeners.

Our Role in Riverside County

The delivery of Cooperative Extension programs including 4-H is a partnership between federal, state, and county governments. The Smith-Lever Act of 1914, as amended, provides guidelines and specific functions for extension programs.

The Vice President (Reg Gomes) of the Division of Agriculture and Natural Resources (ANR) is the Director of Cooperative Extension and is responsible for all programs within Cooperative Extension.

Cooperative Extension exists in almost every county in the United States and always involves a partnership between the USDA, the state's Land Grant University, and the county or local government. Each partner plays a key role in providing funding and support for Cooperative Extension programs.

The University provides academic and program support staff who plan and conduct programs for county residents. The USDA provides program support dollars for EFNEP (Expanded Food & Nutrition Education Program), FSNEP (Food Stamp Nutrition Education Program), and Youth EFNEP low-income nutrition education programs. The County of Riverside provides clerical and other support personnel, office space, program supplies, staff travel, and other administrative support.

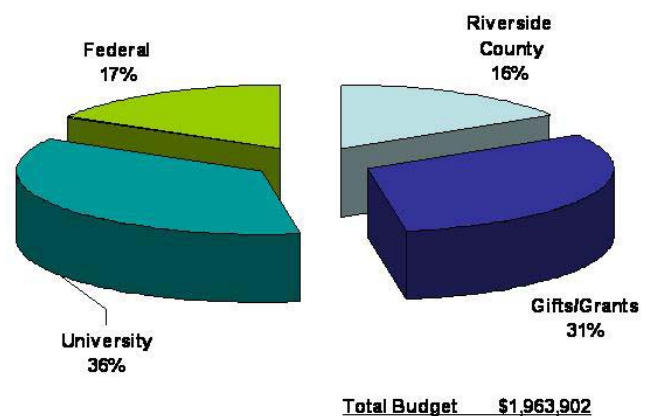
The Director of Cooperative Extension for Riverside County (Peggy Mauk) is the liaison between the University of California and the County Board of Supervisors. In Riverside County, Peggy Mauk in cooperation with the Cooperative Extension Regional Director, Susan Laughlin, are responsible for the program staff and the administration and management of county extension programs.



Cooperative Extension staff at our retreat in June 2002.

Peggy Mauk is responsible for ensuring that the Cooperative Extension programs conform to: University policy; federal, state, and local laws; safety and health regulations; affirmative action guidelines; and the mission core values and educational objectives of the 4-H Youth Development Program.

Dollar for dollar, Cooperative Extension is a great value



Volunteer contributions (4-H and Master Gardeners) are not factored into the total budget. Volunteers are estimated to contribute \$1,368,822 of service for Cooperative Extension, annually.

4-H Youth Development Program



The History of the 4-H Team

The 4-H Youth Development program is the youth education component of the University of California's Division of Agriculture and Natural Resources Cooperative Extension.

Nationwide the USDA governs the use of the 4-H name and emblem. In California, this authority resides with the University of California Vice President, Reg Gomes, who is also the statewide director of Cooperative Extension. The Vice President, in turn, delegates this authority to the Regional Director, Susan Laughlin, or the statewide 4-H Youth Development Program Director, Carole MacNeil, as appropriate.

Adult volunteers are critical to the success of the 4-H program. Volunteers must be at least 18 years of age and must complete an enrollment form as well as a background screening check. After attending an orientation meeting conducted by county 4-H staff, the candidate will be appointed by the Director of Cooperative Extension for Riverside County (Peggy Mauk) as a 4-H volun-

teer. From that point forward, the volunteer is considered an "Agent of the University of California".

Every county has a Volunteer Management Organization (VMO) or County 4-H Council. Cooperative Extension assigns certain responsibility and authority to the County 4-H Council. The County 4-H Council helps implement programs and projects based upon the educational goals and standards of the 4-H program. The County 4-H Council raises and accounts for 4-H funds. They establish and oversee, in conjunction with Cooperative Extension staff, the citizenship program, awards and scholarship programs, summer and winter camp programs, and a number of other programs. Additionally, the County 4-H Council develops mechanisms to resolve conflicts within the club programs.

The County 4-H Council is composed of representatives of all 4-H adult volunteers and senior youth members (ninth grade and up) in Riverside County.



Jeanne Lothridge,
4-H Program Representative.

B.S. Physical Education/Recreation, Cal-Poly, Pomona

The 4- H Pledge

*"As a true 4-H member I pledge my **HEAD** to clear thinking, my **HEART** to greater loyalty, my **HANDS** to larger service, and **HEALTH** to better living for my club, my community, my country and my world."*



Program Overview

The objective of the 4-H Youth Development program is to help youth develop into responsible, self-directed, and productive members of the global society. The goal is to improve the well being of youth, their families, and their communities.

In Riverside County, there are currently thirty 4-H Clubs with 668 youth members and 196 adult volunteers. The following table breaks down this membership by supervisor districts.

District	Youth Members	Adult Volunteers	Clubs
1	96	33	7
2	170	57	8
3	168	48	8
4	164	43	6
5	70	15	1

The members and volunteers participate in educational efforts covering over 51 different projects and programs, both short term (6 weeks or less) and long term. 4-H members and volunteers are actively involved in their communities in “community service/pride” projects.

In 2002, the 4-H movement celebrates its centennial as America's premier youth development organization. The



Woodcrest Sheep at Farmer's Fair



4-H VMO, Small Animal Advisory—Dog project and workshop.

4-H movement, with 6.8 million members, is our nation's only youth development resource capable of reaching and including all our youth. 4-H members are still well rooted in the historic base of rural America, but--to the surprise of many--more than 35% of today's membership is urban youth.



Mission

“The University of California 4-H Youth Development Program engages youth in reaching their fullest potential while advancing the field of youth development.”

4-H Youth Development



*4-H's
California
Focus
teaches kids
about our
government.*



Riverside County 4-H delegates pictured here with Congressman Ken Calvert during Washington Focus (1998)

Youth Citizenship Program

The 4-H Citizenship project introduces youth to both community service and to state and national government. The objectives are not only to introduce youth to government, history, and cultures, but also to help them get involved in community service opportunities.

This program maintains a dual focus: California Focus Citizenship Program and the Washington Focus Citizenship Program. Both programs last for one year and involve in-depth study of the state and national governments. Participants travel to the centers of government, meet government officials, and learn the legislative process. In addition, participants study history and culture while improving their leadership and communication skills by developing a deep appreciation for citizenship involvement.

This year three Riverside County 4-H members were chosen to participate in the California Focus Program. They are Erin Morrison and Kristina Miller of the Perris Panthers 4-H Club and Emily Brown of the Alvord Aggies 4-H Club. They will travel in June 2002 to Sacramento to spend one week with 400 other 4-H youth members and learn about the state's government. They will meet

with their legislators and see history in the making, as well as visiting the sights in the capital.

California Focus delegates in 2001 included Karen Jonas and Lindsay Vromans, both from the Norco Trailblazers 4-H Club. Washington Focus participants were Lisa Bouris and Tabatha Foster, Perris Panthers 4-H Club and Faythe Van Cleave and Jeanette Lothridge of the Glen Avon Livestock Boosters 4-H Club. Pam Gates accompanied the group as an adult advisor.



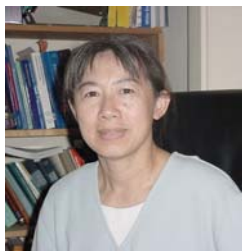
Riverside County 4-H delegates pictured here with Congressman Ken Calvert during Washington Focus (2001)

Riverside County 4-H'er wins Leadership Award

Lianne Garcia from Woodcrest and the Jurupa Epics 4-H Club has been chosen to serve as a State Ambassador representing California. This is one of the highest honors for a 4-H member and reflects Lianne's leadership skills and accomplishments in 4-H. Lianne will

be traveling throughout California sharing her knowledge and experiences with other 4-H clubs and communities. She will also plan and conduct leadership training and serve as a model for 4-H youth members.

Nutrition, Family & Consumer Sciences



Chutima Ganthavorn,
Nutrition, Family and
Consumer Sciences
Advisor

Ph. D. Food Science,
Washington State
University.



Program Overview

Nutrition, Family and Consumer Sciences Program (NFCS)

provides educational information in the areas of nutrition, food safety and consumer economics.

This program has an academic advisor, Dr. Chutima Ganthavorn and 7 nutrition education assistants.

The program forms partnerships with a number of local community agencies, church groups and public schools to bring nutrition and food safety education to limited resource families and youth countywide.

- ✧ The Expanded Food and Nutrition Education Program (EFNEP) graduated 874 families and enrolled 3,805 youth participants during FY 2000-2001.
- ✧ The Food Stamp Nutrition Education Program (FSNEP) enrolled 232 adult participants and 1,062 youth participants during FY 2000-2001.
- ✧ The EFNEP & FSNEP Home Study Program was implemented for the first time in Riverside County. The program was very successful with 108 graduated participants. The percent of graduates with desirable nutrition practices increased from 17% at entry to 38% at exit, and those with desirable food safety practices increased from 48% at entry to 79% at exit.

The following are highlights of the NFCS program:

Summer Nutrition Camp for Food Stamp Families



Through a grant funded by the Regional Access Project Foundation, two nutrition camps were conducted in Indio

during August 2001. Seventeen families attended the two, one-week camps. Parents and their children learned side by side about good food habits & healthy lifestyle while helping each other to reinforce what they learned.

CV-WIN Leadership Training



At-risk youth from CV-WIN (Coachella Valley Workforce Investment Network) Youth Opportunity Center in Indio participated as youth leaders in the summer nutrition camp project. We trained CV-WIN youth to lead groups of children in nutrition activities.

TWIGS in the Classroom



Youth EFNEP and Youth FSNEP have brought our nutrition and gardening curriculum known as TWIGS (Team With Intergenerational Supports) into several schools all over Riverside county. The curriculum teaches children about gardening basics as well as nutritious products that come from the gardens. Collaborating in this effort are our Master Gardeners who provide guidance and answer gardening questions that teachers may have.



Vegetable Crops/Small Farms — Coachella Valley



Jose Aguiar
Vegetable Crops
and Small Farms in
the Coachella Val-
ley

B.S. Agronomy,
California State
Polytechnic Uni-
versity, Pomona

M.S. Vegetable
Crops, University
of California, Davis



Program Overview

The vegetable crops/small farm program addresses those critical needs and issues that affect vegetable crop producers in the Coachella Valley. The program assists large and small-scale growers and Pest Control Advisors. The educational program consists of a series of seminars titled “**Coachella Valley Farmers Meetings**”. It is our goal to identify specific problems and present research based information. The vegetable industry is evolving and everyday a new disease or pest makes its presence felt.

Overall Goal

To establish a research and extension program to maintain and promote the viability of the area farms. This includes a sustainable approach and an efficient management of irrigation, soil fertility, and integrated pest management. Through the farm advisor the resources of the University of California are applied to assist the farming community. Thus the University and the farming community are linked together.

Squash Leaf Curl Virus

Squash Leaf Curl Virus (SLVC) is a Begomovirus that is transmitted by the silverleaf whitefly. SLVC symptoms appear as yellow mosaic, leaf curling, stunting and reduced yields. Limited scale-producers had severe crop losses from this virus in 2000-2001.



Yellow squash plant infected with Squash Leaf Curl Virus in the Coachella Valley.

Tomato Bushy Stunt Virus

Tomato Bushy Stunt Virus (TBSV) is a relatively new virus on lettuce. Little is known about this virus. In this picture it is on romaine lettuce in the Coachella Valley.

The Farm Advisor cooperates with other agencies and works closely with the USDA-NRCS Indio.



Field showing symptoms of Tomato Bushy Stunt Virus in the Coachella Valley

Field and Vegetable Crops — Palo Verde Valley

Program Overview



Michael Rethwisch,
Field and Vegetable
Crops Advisor

B.S. Entomology and
Agronomy

M.S. Entomology,
University of Ne-
braska

*“Plant
Growth
regulators
can improve
returns”*

Agricultural and Natural Resources activities in the Palo Verde Valley included a number of field research projects in addition to educational meetings and information delivery via newsletters and mailings. Large-scale research projects have primarily centered on various production aspects of cur-

rent local crops while small plot research evaluated potential new products and crops.

Collaborative projects were also conducted with the University of Arizona and Prairie View A&M University in addition to the University of California at Davis.

Improving Alfalfa Quality/Pest Control

A plant growth regulator trial to improve alfalfa quality resulted in moderate success as one product (Apogee) increased quality from good to premium, during late spring, but not in the summer. The product is not yet regis-

tered in alfalfa.

An insecticide trial conducted on alfalfa evaluated the effects on several insect pests including western flower thrips. Western flower thrips causes significant damage on vegetable crops, such as melons, during the spring harvest of alfalfa. The insecticide efficacy data are thought to be some of the first ever collected for western flower thrips on alfalfa.



Improvements for higher value crops

Dehydrator Onions: A plant growth regulator involving Auxi-Gro on dehydrator onions increased tonnage by 0.6 tons per acre for each application, and 1.2 tons/acre for two applications. Economic benefit from using this product is expected as dehydrator onions are worth about \$95/ton.

Cotton Variety Trial: A joint University of Arizona/University of California cotton variety trial was of very high interest to area growers who are looking for the best economic returns based on yields and quality of crop.

Viticulture and Pest Management



Carmen Gispert, Viticulture and Pest Management Farm Advisor

B.S. Biology, National Autonomous University of Mexico

M.S. Entomology, College of Postgraduates, Mexico

Ph.D. Entomology, University of California, Riverside

“Research conducted in 2001 indicated that Pierce’s Disease had not been detected in the Coachella Valley”

Overall Goal

To establish a program to maintain vineyards with a more sustainable approach that includes an efficient management of water and vineyard floor, and the reduction of chemical use to control pests and pathogens.

The viticulture program is conducting research and educational programs to address critical needs and issues that affect wine grape and table grape production in Riverside, San Bernardino

and San Diego counties. The educational program consists of a series of seminars and workshops to train vineyard managers and field workers to identify specific problems. Dr. Gispert’s research program is focused on finding solutions to two of the most devastating pest/disease problems on grapevines, Pierce’s disease (vectored by the glassywinged sharpshooter) and the vine mealybug, a new pest of grapes in the Coachella Valley.

Pierce’s Disease

This program is part of a collaborative effort between Dr. Gispert, California Department of Food and Agriculture, and Riverside County grape growers who support the research program. One objective is to document the current levels of Pierce’s disease and to determine the numbers of glassy-winged sharpshooter (GWSS) on grapes throughout the year in the Coachella Valley. Although, Dr. Gispert has found the GWSS in high numbers on grapes in the Coachella Valley, however, she has not found Pierce’s disease on grapes in the Coachella Valley. Additionally, Dr. Gispert is partici-

pating in a survey to identify alternate sources of inoculum for Pierce’s Disease around vineyards in the wine-growing region of Temecula.



Symptoms of Pierce’s Disease on wine grapes in Temecula.

Vine Mealybug

The research on vine mealybug is part of an innovative integrated pest management program combining mass release of parasites and ant control. The overall goal is to establish a cost-effective biological control system to manage the vine mealybug and reduce growers reliance on pesticides for control. The incorporation of natural enemies and the development of a containerized ant-bait will offer to the growers an effective method for mealybug and ant control in vineyards.



Vine mealybug (white spots) on grapevines in the Coachella Valley.

Agricultural Economics/Farm Management

PROGRAM OVERVIEW



Etaferahu (Eta) Takele

Area Advisor, Agricultural Economics/Farm Management

M. S. Agricultural Economics, University of North Dakota

M.A. Development and Environment Economics, University of California, Riverside

How much does it cost to produce avocados? Click on our website and find out.

The Agricultural Economics Program in Farm Management provides research-based education and analyses in crop production economics including investment estimates, production costs, profitability, risk and financial management. An area advisor responsible for the southern California region covers this program for Riverside County.

This program provides coverage for Southern California and has reached to over 100,000 clientele nationally and

internationally with the dissemination of publications. There are nine studies available for Riverside County that can be downloaded from the following web-sites:

<http://coststudies.ucdavis.edu>

<http://www.vric.ucdavis.edu>

<http://anrcatalog.ucdavis.edu>

<http://www.sfc.ucdavis.edu>

Approximately 500 people attended educational seminar series.

Newly released study provides ways to analyze profitability of avocado production

Recently, Eta Takele developed an estimate of establishment and production cost and analyses of profitability in avocado production. This information is for growers and investors to evaluate the increasing challenges affecting agriculture such as urban expansion and the resulting increase of water and land values, so that their ability to choose production sites and systems that are profitable would increase. In addition, having

locally developed industry baseline economic and profitability indicators will allow local farmers, bankers and government agencies to assess and compare the relative efficiency and profitability of agricultural operations in Riverside County. Making decisions based on current, locally developed information will have a significant impact on the viability and sustainability of agricultural operations in Riverside County.

Risk Management Seminars

Through a grant funded by USDA, a risk management seminar was conducted that focused on challenges and opportunities for tree crops producers. Over 90 people from Riverside and San Diego counties attended the seminar and field day. The seminar presented risk management tools such as opportunities in new and specialty crops production, marketing channels, and the impacts of labor laws and labor supply on agriculture.



Etaferahu (Eta) Takele, Ag Economist, discusses the potential of Lychee production with seminar participants.

Subtropical Horticulture

Banks Grass Mite on Date Palms

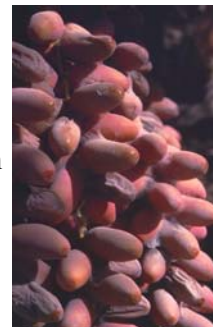


Peggy Mauk, Director of Cooperative Extension and Subtropical Horticulture Advisor

M.S. and Ph.D. Plant Pathology, University of Arizona, Tucson

In response to the economic crisis in 1997, Peggy Mauk initiated a research program that was designed to find low risk pesticide alternatives to sulfur dust. Low risk pesticides are less toxic to the environment as well as non-target, beneficial insects. In 1997, the miticide, Savey, was found to be highly effective and gave season long control after just one application. US EPA and Cal EPA approved the Emergency Registration of Savey on Dates grown in California. This registration has saved growers thousands of dollars and has substantially increased the quality of the dates. Savey has turned a devastating problem

into an economic gain. Additionally, this product has revolutionized pest control in dates. Previously, all pest control was done using dusts. Use of this water based low toxicity product has reduced complaints from nearby residents. It has also reducing pesticide related illnesses and injuries in the field and in the packinghouse. Full registration of Savey is expected in 2002.



Dates infested with Bank's grass mite.

Insecticide, Savey, controls mites in dates saving growers thousands of dollars.

Potential Mandarin Varieties for the Coachella Valley

Mandarin production in the desert region of California provided stable farm income for nearly 3 decades. In 2001, tangerines were valued at \$6.0 million in contrast to this, in 1988 at the peak of the market, tangerines were valued at \$16.2 million. Consumers are demanding large, seedless, easy to peel mandarins. If suitable varieties could be found for the desert region, the marketing edge for California citrus could be regained. This project is designed to evaluate sev-

eral mandarin-types under desert conditions. The trial will be maintained for several years so that yield and quality of production can be evaluated. The Citrus Research Board funds this work.



Gold Nugget Mandarin, a seedless fruit currently being evaluated.

Research to Improve Lemon Size

Research is being conducted to determine if lemon growers in the Coachella Valley can apply fertilizers (urea and/or potassium phosphite) on the leaves of lemon trees during early fruit growth to increase fruit size. This technique has been used successfully to increase fruit size of navel oranges grown in the San Joaquin Valley. We are trying to delay maximum peel thickness so that more cells will make up the peel and thus effect a larger fruit size as compared to those fruit where maximum peel thick-

ness was not delayed. It is not known if these treatments will increase lemon fruit size in the desert. If the treatments are successful, the results of the research will provide growers with instructions for the optimal time on a calendar basis to apply urea and/or potassium phosphite to lemons to increase fruit size. In addition, temperature based guidelines will be developed to advise growers on which days during the year the treatments should be made.

Poultry Sciences

Program Scope

As an advisor, Mr. Kuney works with the table egg industry statewide. He is based on the UCR campus, and the majority of his research is conducted on Riverside County poultry farms. In addition, most of his daily contacts with the poultry industry are with producers located in San Bernardino, Riverside and San Diego counties.

There are 19 commercial egg producing farms, and 5 pullet grow farms in Riverside County. Compared with other counties, Riverside County farms tend to be large and so account for more than 50 percent of the total southern California production of eggs.



Douglas R. Kuney,
Area Poultry Advisor

B.S. Microbiology
Colorado State University

M.S. Animal Science
Colorado State University



Egg-layers in a
local facility

Urban Ag Interface

Because many Riverside County farms are heavily encroached upon by housing developments, a great deal of his time is spent on reducing the negative impact that these farms can have on the surrounding community. Areas of concern are flies, dust and odor. Mr. Kuney works closely with the county Environmental Health Department and the regional mosquito vector control districts regarding fly control and conducts workshops for farm inspectors on fly biology, identification and control strategies on poultry farms.

Research Focus

Mr. Kuney's areas of research currently focuses on fly control strategies including pesticide resistance and fly bait resistance, the effect of Northern Fowl Mite infestation on egg production efficiency, the epidemiology of *Salmonella enteritidis* transmission and methods of disinfection of poultry equipment. His arthropod research is done in collaboration with the UCR Entomology Department and his disease research is done in collaboration with the Extension Veterinarian at Davis and the California Department of Food and Agriculture.

Disease Prevention

Each year the egg industry is threatened by the possible introduction of Avian Influenza and other highly infectious diseases. Mr. Kuney has held several educational workshops throughout the state on biosecurity on poultry farms. These workshops were provided to county Environmental Health and Agricultural Commissioner staff as well as to contracted vector control agencies.

He conducted 5 educational meetings on Avian Influenza and its control in Riverside during 2001 and 2002. He also conducts an Egg Processing and Marketing workshop, a Poultry Symposium and a

Poultry Disease Symposium each year in Riverside. In addition to meetings, all Riverside County producers receive six issues of the statewide California Poultry Letter each year.



One of several egg processing in
Riverside County

Environmental Horticultural Program

PROGRAM OVERVIEW



Mike Henry
Environmental Horticulture Advisor,
and Coordinator of
Master Gardener
Program.

B.A. Biology, Humboldt State University
M.S. Horticulture, University of California, Davis

“Study shows desert turf managers can save an additional 40% on water use”

The Environmental Horticulture Program conducts applied research and continuing education for the turf and landscape industries (landscape maintenance contractors, professional gardeners, park managers, sod growers and nurserymen).

Applied Research focused on water conservation in the landscape by evaluating new grasses, reducing applied irrigation water and nitrogen fertilizer, and in-

creasing the accuracy of predicting turf water needs in urban landscapes.

Educational Programs for professionals in the horticulture field bring new research developments to leaders and workers in the industry through field days, conferences, new publications and the Internet.

Turfgrass Research

Working with the UCR Turfgrass Research Lab. funded by a two-year grant from the National Turfgrass Evaluation Program (NTEP) 24 grasses developed for overseeing dormant Bermuda grass were studied in Palm Desert. The golf / resort industry now has the results of this independent study to select the best seed for this critical and expensive annual practice.



Researchers over seed Coachella Valley golf course with experimental turf varieties.

California Irrigation Management Information System

Irrigation managers in the wind-protected areas of the Coachella Valley can apply up to 40% less water than predicted by the State Dept. of Water Resources weather station in north Indio. Studies using portable weather stations set up at golf courses in La Quinta and Indian Wells, showed the reduced water need, while one at I-10 and Monterey indicated a water use 12% higher than the CIMIS weather station location.

Continuing work with the Coachella Valley Water District will develop a detailed map of water use for irrigation managers to more accurately apply water in the Valley. Future work will expand this more precise prediction of landscape water needs to the rest of Riverside County and southern California.

Master Gardener Program

Annually, Master Gardeners provide over 6,000 hours of educational outreach to the general public in Riverside County.

The Master Gardener volunteer program provides gardening and horticulture information to the residents of Riverside County through trained volunteers who disseminate university research-based information to the public. The volunteers provide over 6,000 educational contacts per year on topics ranging from planning a school garden to safely controlling insects in vegetable gardens.

Additional volunteers are trained every two years, receiving nearly 50 hours of education to prepare them to deliver sound information based on applied research and other scientific facts to the citizens of Riverside County. Forty-five

new Master Gardeners completed their training June 19, 2002, joining the 180 active volunteers in the UC Cooperative Extension Riverside County Master Gardener program.

Master Gardeners work with other educational and community improvement programs often providing leadership for:

- Victoria Avenue For Ever
- Riverside County Master Composter Program
- California Dept. of Forestry Urban Forester volunteer program
- Keep Riverside Clean and Beautiful

Community Gardening Workshops Reach Interested Citizens in Temecula and Riverside

Over 600 citizens attended educational workshop series in the spring and fall.

Teaming with the City of Temecula, Master Gardeners organized a five-session series that featured current information on appropriate water-saving, plant selection and research results on new insect pests in the region.

- In Riverside, Master Gardeners and the Western Municipal Water District provided a Saturday morning educational series in the District's demonstration garden, *Landscapes Southern California Style* training residents to landscape with water savings in mind.



Community Gardening Workshop in Temecula

School Gardens Receive Curricula and "Tools" to Start Gardens and Teach Nutrition, Science from Master

School Garden Tool Kit – free information on resources for teachers to start and manage a successful educational garden.

TWIGS - curriculum combines gardening lessons and nutrition education for students and parents.

Junior Master Gardener program interests youth in science through gardening.



Vegetable/Field Crops—Western Riverside Co.

Advisor relocates to Northern California



Aziz Baameur,
Vegetable Crops
Advisor, Western
Riverside County.

B.S. Agronomy and
Soil Science, Uni-
versity of Minnesota

M.S. Horticulture,
University of Min-
nesota

While in Riverside County, Aziz worked on research and educational projects with emphasis on vegetable crops research. The overall goal of all these projects is to help local growers to be more competitive. Research projects were designed to help expand product choices available to growers, increase diversity of crop /cultivar selection, encourage small-scale growers

and roadside stand managers to consider growing some of the exotic plants, supply different minority groups with produce they like and can identify with, and clarify the effectiveness of certain cultural practices. In January 2002, Aziz accepted a Farm Advisor Position (Specialty Crops/Small Farms) housed in Santa Clara County.

Seedless Watermelon: Alternative Plant Ratios

Previous field research has indicated that increasing the ratio of seedless plants (to seeded) beyond 4:1 in the field resulted in lower yields. In this field study two modifications to the conventional system were proposed. One is to forgo the row segregation system of the two types of plants. The second is to increase the ratios from 2:1 to 5:1, seedless to seeded.

Preliminary results indicate that there is no noticeable decrease in yield (T/A) when a higher ration (5:1) was used. Overall, yield that was achieved with the tested seedless to seeded ratios was acceptable in all treatments (36-40 T/a). Additionally, melon size was not affected by planting ratios (15-17 #/melon).

Everyday Cover Crops

Cover crops are enjoying a welcome return to agriculture. In this field study, we investigated the effect rotating different cover crops on the soil quality and subsequent crops. The goals were to use cover crops to enrich soil organic matter, enhance soil physical & chemical properties, and determine the effects of cover

cropping on subsequent crops. The results were as follows: yield data showed a marked effect of legume and grasses on corn varieties, grasses outperformed control, corn quality (size, dimensions, and row count) improved with cover crop use, but was not significantly different.

*“New Advisor
will cover
Irrigation and
Water
Resources ”*

Health Fair 2001 Organization (Coachella Valley)

This effort is part of multi-organization effort to provide health care, during one designated day—Health fair Day—to farm workers, homeless people, and those that are under-insured. Lucky Farms, a local farming and marketing company, provides the necessary support and Chu Zi, a non-

profit organization, provides all the necessary medical care equipment and supplies. Over seven health fairs have been organized in the San Bernardino-Redlands area. In the 2001 fair, over 500 people received medical treatment, help, and referrals.

PROGRAMS PROVIDED BY COOPERATIVE EXTENSION

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Director/Subtropical Horticulture

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(Vacant) In recruitment

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(Vacant) Proposed position

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Dedicated to serving the people of Riverside County

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**County Paid Program
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