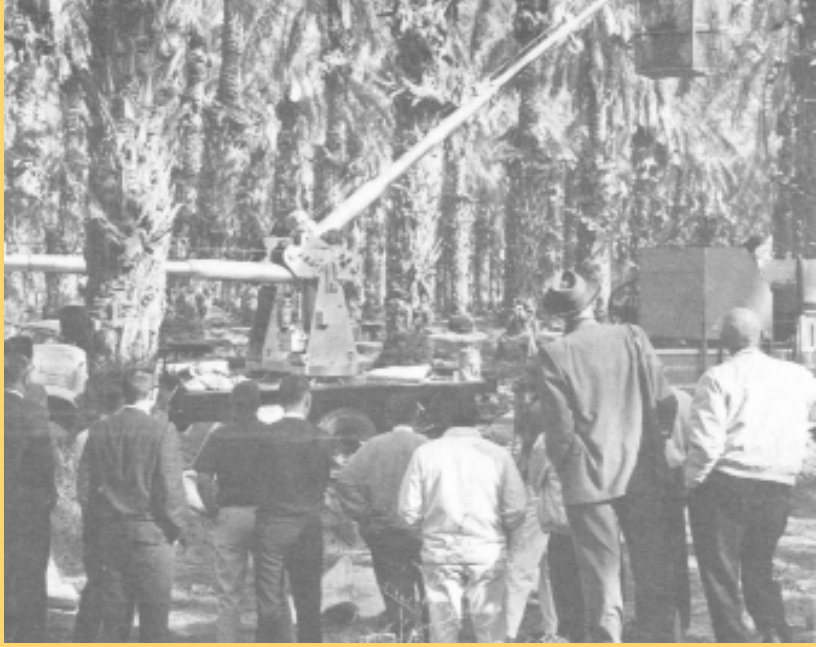


University of California Cooperative Extension Riverside County

2014 Annual Report
Centennial Edition

Front Page Photos Top Left-Right:

Workers of the Howard Rose Company of Hemet are harvesting roses. Bare-foot roses from this company are shipped throughout the United States. Photo Credit: Riverside County Farm Bureau News, Jan 1964.

Farm-City Tour participants in Coachella Valley early this month got a good look at the California Date Grower Associations new mechanical harvester. Photo Credit: Riverside County Farm Bureau News, May 1965.

Bottom Left - Right: The first nutrition staff in Riverside County, 1969. Photo Credit: UCCE Riverside, NFCS.

Carol Ann and Nita Sides of the Moreno Merrymakers 4-H Club helped to observe June Dairy Month by attending the June meeting of the Board of Directors of the Riverside County Farm Bureau in full uniform and serving milk to the Board members. Photo Credit: Riverside County Farm Bureau News, June 1965.

UC Cooperative Extension | University of California Agriculture and Natural Resources

This year, May 8, 2014 marked the passing of the Smith-Lever Act, legislation that created the national cooperative extension system. Since then, the University of California in partnership with counties has delivered research based information and education to farmers and the public with a vision and goal to create healthy Californians, healthy communities, healthy environments and healthy food systems. In Riverside, the University of California entered a Memorandum of Understanding with the County in 1917 to conduct programs in agriculture, nutrition and 4-H Youth Development.

In agriculture, Farm Advisors have provided cutting edge research and education that has met the changing needs of agricultural production. Agriculture in Riverside County is significant to the economy with value of $1.32 billion in 2013. With the multiplier effect (Crop Report Context: Agricultural Production Report 2013), agricultural contribution to the economy approximates to $3.87 billion and providing about 25,000 jobs. Despite the fact that expanding urbanization has caused a shift of farm land to non-agricultural uses in the western part of Riverside, Agriculture in the County especially in the eastern part has remained viable. A key factor in Riverside County's agricultural strength is in the diversity of crops produced (more than 120 different commodities in 2013). The unique geography and climate have allowed multiple cropping of fruits, vegetable crops and herbs. Our programs address irrigation efficiency, development of new crops and varieties, increasing productivity, farm management economics, pest and disease management in viticulture, subtropical horticulture, vegetable crops and small farms, and field crops. We also get program coverage from cross county Advisors in dairy management, environmental horticulture, natural resources management, nursery production and agronomy.

Our nutrition educators have targeted reducing the high rate of obesity and diabetes in Riverside County especially targeting those areas with the highest obesity rates for children. Obesity rate in Riverside County is 14.1% for ages 2-11 and 36.3% for ages 12-17 in 2013 (UCLA Center for Health Policy Research).

The 4-H Youth Development program plays a special and vital role launching young people into healthy and productive lives. Research (Waves of the Future by Tufts University) has shown that youth have the capacity to thrive when presented with resources for healthy development found in families, schools, and communities regardless of their background, socioeconomic status, race and gender (Lerner, et. al., 2009).

Riverside County pioneered the establishment of a Master Gardener volunteer program and has became instrumental for the expansion of the program throughout the state. Since its inception in 1980, we approximate to have disseminated 1,500 Master Gardener graduates into the community with knowledge to extend environmentally safe and economically efficient gardening and landscaping.

The University of California Cooperative Extension (UCCE) has provided the residents of the County of Riverside with continued and advancing research and education in agriculture and consumer sciences for 97 years. It has also advanced youth and community development through the 4-H and Master Gardener volunteer services. We acknowledge the leadership of both the University and the County of Riverside for the vision and partnership that has benefited the residents of the County of Riverside. We envision a thriving future where a close partnership between the UCCE and Riverside County continues to promote healthy food systems, environments, people and communities in Riverside County.

Sincerely,
Etaferahu Takele, County Director

Viticulture/Integrated Pest Management Program

Brief Program Overview: Past and Present

Riverside County has two general areas for grape production; table grapes are grown in the Coachella Valley (CV) and wine grapes are grown in the Temecula Valley. In 2013, grapes value was at $138 million generated from multiple table and wine grape varieties (Riverside County Agricultural Crop Report).

In the 1920s, the table grape industry began in the CV. The local Farm Advisors and the University of California (UC) experts helped table grape growers resolve planting, trellising and pruning problems. At the time, the best method to bring the latest information to grape growers was through field demonstrations. The first table grape pruning demonstration in the CV was by Professor F.T. Briolette, Division of Viticulture at UC Berkeley and Farm Advisor Myron Winslow of Riverside County who attracted an attendance of over 100 local farmers.

Wine grape production on the other hand started in the 1960s in the Temecula Valley of Riverside County and acreage increased steadily. The first Temecula Valley winery was Brookside Winery. UC experts introduced sterile filtration to the industry eliminating many post-bottling problems (Viticulture & Enology Dept., UC Davis). By the 1970s, several wineries appear, and Temecula Valley became, and continues to be the center of today's southern California wine industry. During this period, UC research on malolactic cultures improved spoilage (Viticulture & Enology Dept., UC Davis). In the 1980s and 1990s, UC innovations included the first standardized lexicon of wine and DNA fingerprinting techniques revealed the parentage of Cabernet Sauvignon, Pinot noir and other varieties (Viticulture & Enology Dept., UC Davis).

At the time, Rudy Neja, a Viticulture Advisor transferred from Monterey County to Riverside County. His research included color enhancement of red grapes and addressing production issues of wine and table grapes including rootstocks for nematode control; powdery mildew control; pulse irrigation; and control of Glassy-winged sharpshooter (GWSS) and Pierce's Disease (PD).

Glassy-winged sharpshooter on a grape leaf.
Photo credit: Regent of the University of California.

Pierce's Disease (PD) on grape leaf.
Photo Credit: Carmen Gispert.

In the late 1990s, the GWSS and PD infested the Temecula Valley. The GWSS, *Homalodisca vitripennis*, is a leafhopper that obtains nutrients by feeding on plant fluids in the water-conducting tissues of a plant (xylem) and can transmit the bacterium *Xylella fastidiosa* from one plant to another spreading the disease. This bacterium is the causal agent of the devastating PD (UC IPM). By August 1999, over 300 acres of grapevines in the Temecula Valley were infested with GWSS, which vectored PD and ultimately destroyed vineyards resulting in $13 million in damage (California Department of Food and Agriculture).

Upon Rudy Neja's retirement after 30 years as Viticulture Advisor serving Monterey and Riverside counties in 1999, Carmen Gispert became the Viticulture and Integrated Pest Management Advisor for Riverside, San Bernardino and San Diego counties. Gispert immediately got actively involved and became the chair of the taskforce to combat the GWSS and PD; the program led by Dr. Nick Toscano, Entomologist at UC Riverside. Toscano was the author and leader of the Area-wide program to control GWSS and PD. His program was implemented as a model in the state of California. Gispert participated in an economic analysis with Farm Advisor Etaferahu Takele which helped the California Department of Food and Agriculture (CDFA) evaluate disaster assistance for the growers and led to the recovery of the wine grape acreage in the Temecula Valley. In the CV, Gispert and UC Riverside scientists discovered that GWSS populations were higher near citrus groves than urban landscapes or in vineyards. Then program focus changed to developing surveillance and detection to treat citrus orchards adjacent to vineyards to reduce the GWSS.

New grape variety, Valley Pearl. Photo Credit: Carmen Gispert.

For the last 10 years, Gispert in a partnership with the United States Department of Agriculture (USDA), the California Table Grape Commission and the CV table grape growers, conducted field studies to identify new early market table grape selections suitable to grow in desert conditions. After six years of research a successful new early green selection named Valley Pearl has been patented in 2013 and will be in the market for consumers soon.

Gispert and collaborators have done research to control the vine mealybug (VMB), *Planococcus ficus* (Signoret), pest of exotic origin that infests wine, table and raisin grapes. VMB excrete large amounts of honeydew that foul the fruit on the vine. Gispert assessed and monitored the susceptibility of VMB populations to a broad selection of insecticides that represent different chemical classes including organophosphates, carbamates, neonicotinoids and insect growth regulators (IGRs) in the Coachella and San Joaquin valleys and documented the geographical variation of VMB susceptibility to insecticides.

Gispert is currently doing research to control Canker diseases in young table grape vines. Canker diseases are caused by fungal pathogens that invade grapevines primarily through pruning wounds on cordons and spurs. Grapevine cankers are an important factor limiting vineyard longevity and productivity. They cause dieback, death of spurs, arms, cordons, and trunks, and eventually vine death. This project is aimed at evaluating the level of protection of young grapevines from Canker diseases by spraying the fungicide Topsin immediately after pruning and restricting overhead irrigation while the pruning wounds are open.

Grapevine infected with Canker disease. Photo Credit: Carmen Gispert.

Temecula Valley Winegrower Research and Demonstration Project: The Rancho California Water District in partnership with the UC Cooperative Extension and the Temecula Valley Winegrowers Association is conducting a study on the use of technologies for implementing Regulated Deficit Irrigation (RDI) as a best management practice for enhancing water use efficiency while improving the quality of red wine grape varieties.

Gispert does outreach of her program through website, newsletters, seminars and conferences.

Entomology/Integrated Pest Management/ Crop Production Program Palo Verde Valley

Brief Program Overview: Past and Present

The desert valleys of southeastern California are among the most intensely cultivated farming areas worldwide, constantly evolving with rapidly changing technology. Major crops in the Palo Verde Valley (PVV) include alfalfa, cotton, vegetable crops and melons. Agricultural value in the PVV was at $167 million generated from over 20 commodities (Riverside County Agricultural Crop Report, 2013).

We have had 10 (Vegetable and Field Crops) Advisors working in the PVV since the 1940s: W.B. Gardener in the 1940s and Robert Kasmire in the 1950s; Win Lawson, Robert Cowan and Les Ede in the 1960s and 1970s. During the earlier years, activities included field trials on variety selections for alfalfa and grain crops, orange tree pruning demonstrations, irrigation system demonstrations, and production cost studies.

The advent of irrigation made alfalfa a major crop in the Imperial and Palo Verde valleys in the early 1900s.
Photo Credit: Imperial County Historical Society.

In the 1960s and 1970s, Farm Advisors addressed multiple alfalfa production issues including alfalfa stand persistence and blue alfalfa aphid to name a few. Les Ede's variety trial on sandy soil revealed fairly heavy populations of several species of nematodes including root-knot, stubby root rot, stunt, ring and lesion nematodes. The variety trial provided information on stand persistence and found that any one of the nematode species could have been responsible for stand loss in the area. Continued research and trials focused on improving nematode damage in alfalfa production.

In the late 1990s and early 2000s, Robert Kallenbach followed by Michael Rethwisch investigated the economics of deficit irrigation and various insect management strategies for fall alfalfa production. They got involved in outreach programs like the California Alfalfa Symposium and sharing research and education information with regional and statewide clientele.

Vonny Barlow is the current Farm Advisor in Entomology/Integrated Pest Management/Crop Production for the PVV. The primary goal of his program is to conduct applied research and education addressing alternative crop production of high economic value and pest and disease management.

Pest Management

As an Integrated Pest Management (IPM) affiliate Advisor; Barlow's research and education program include: (1) Increasing utilization of ecologically based integrated pest management; (2) Leadership in IPM including building coalitions and partnerships that link with communities and public agencies in his and neighboring counties; (3) Increasing the predictability and effectiveness of pest management techniques; (4) Developing science-based pest management programs that are economically and environmentally sustainable, and socially appropriate; and (5) Protecting human health and the environment by reducing risks caused by pests or pest management practices.

Chemical efficacy trial: Use of an insect growth regulator applied at the 2nd week of cotton squaring for management of lygus bugs, 2011-2012.
Photo Credit: Vonny Barlow.

Exploring alternate cropping system: Canola as an alternate fuel crop in Southern California. Photo Credit: Vonny Barlow.

Cultural: Managing Three-cornored alfalfa hopper, Spissistilus festinus and Potato leafhopper, Empoasca fabae with a single "at stubble" insecticide application in forage alfalfa. Photo Credit: Vonny Barlow.

Barlow works with a key component to protect beneficial insects such as pollinators, predators and parasites through judicious use of environmentally safe insecticides. Currently, his research is addressing the development of IPM programs through reduced use of number of insecticide applications necessary to manage the Three-cornered alfalfa hopper (TCAH) and Potato leaf hopper (PLH) in alfalfa.

Cropping Systems

Research is also ongoing to identify winter production plant varieties for growers to diversify and be economically viable. These are multi-year projects investigating production, disease and pest management of oilseeds, feed and biofuel.

Outreach

Barlow's educational program includes a monthly progressive farmers' meeting and presenting topics that are relevant to crop production in the PVV. He regularly reaches his clientele electronically and through various forms of technical and clientele publications including IPM publications, popular articles and newsletters. He is involved in teaching 4-H youth pest management practices.

Subtropical Horticulture

Subtropical horticulture is a significant industry in Riverside County. Production of lemons and grapefruit in the Coachella Valley; and avocados in the Temecula Valley have been sustainable. Several Advisors including Myron M. Winslow, H. R. Richardson, Dean Halsey, Marvin Miller, Leonard Francis, Donald O. Rosedale and Peggy Mauk have contributed to the sustainability of these industries via irrigation management (including introducing the micro sprinkler system), pruning, pest and disease management and economics. One project by Peggy Mauk identified miticides for control of Bank's Grass Mite in Dates. After collaborating with various chemical companies and trials she identified Savey to be the best product which led to it being EPA registered. Through effective extension, growers' adoption has saved millions of dollars in fruit loss.

The subtropical horticulture position was vacant for a while, but we are pleased to announce that it is filled by Sonia Rios, a plant pathologist. She will be joining the University of California Cooperative Extension Riverside County team effective November 17, 2014 as an Advisor. Rios will be working with citrus, avocados, dates and minor crops such as mangoes that are being introduced into the county.

Vegetable Crops and Small Farm Program
Coachella Valley

Brief Program Overview: Past and Present

Riverside County produces multiple vegetable crops; the major production area being in the Coachella Valley (CV). In 2013, vegetable crops value was at $340 million (Riverside County Agricultural Crop Report). The CV is one of the main districts in Riverside County for vegetable production. It is well known for abundant winter and spring vegetable production. Winter production includes leaf lettuce, broccoli and cauliflower; Spring production includes bell pepper, sweet corn, watermelon, okra and many more.

Alfonso Durazo was the first advisor in the Coachella and Imperial valleys (one of 6 advisors hired to cover the Small Farm Program in California) hired to help Hispanic growers in 1976. The program eventually grew to focus on small-scale grower's sustainability and viability.

Durazo and okra grower in the field. Photo Credit: Source unknown.

Durazo introduced the Coachella and Imperial Valley small-scale growers to new squash varieties, drip irrigation; use of plastic mulch and fumigation technology for weed and disease control; efficient fertilization on crops such as okra, eggplant and squash; and was able to work with the Farmers Home Administration to make credit available to small growers. He left the University in 1986.

In the western Riverside County, Aziz Baameur was hired in 1984 to conduct programs in field and vegetable crops production. He did varietal trials for field crops and many vegetable crops. He introduced specialty crops such as edamame, chili pepper and sweet potatoes. He found and reported the first Verticillium wilt of alfalfa caused by V. Abo-atrum Raud B in southern California; and cooperatively with colleagues worked on control and management. He introduced the first trials for "ley farming" system in California; did research on seedless watermelon and pioneered the use of drip irrigation in many crops. He transferred to the University of California Cooperative Extension (UCCE) Santa Clara in 2002.

In the early 1990s, the position in eastern Riverside County was restructured to cover vegetable crops for large and small farms and was filled by Farm Advisor Jose Aguiar. Aguiar has been with the UCCE for over 20 years. His program addresses research and education in cost effective control of vegetable crop diseases and pests; and developing production practices of new and specialty crops of high economic value adaptable to the desert growing conditions.

The summer heat and the short production period for most of the crops in the desert causes outbreak of viruses, pests and diseases. Aguiar's most recent work dealt with the identification and control of the Tomato bushy stunt virus (TBSV) in lettuce fields; and the cotton mealy bug in okra. His timely field investigation and growers education led seed companies to develop new resistant varieties such as Rio Bravo and Del Sol. He limited the spread of TBSV from field to field through equipment and supplies movement and soil contamination.

Left to Right: Okra plant infested with the cotton mealy bug. Healthy okra plants when the cotton mealy bug has been controlled. Photo Credit: Jose L. Aguiar.

Most recently, his work resulted in preventing huge economic loss of okra growers from the cotton mealy bug that had been transmitted from field to field via workers' clothes and onto new plants by ants who fed on the honeydew secretion of the mealy bug. Through a multidisciplinary approach, he identified the life cycle of the bug and registered chemicals available for control.

Aguiar is looking into the benefit of greenhouse technology for reducing insects and diseases in vegetable production. The technology is capital intensive. He is working with large scale bell pepper growers in the desert to evaluate its economic benefits. Other ongoing research include investigating adaptability of economically viable new crops such as pitahaya, olive, and stevia to desert production condition. He is working on plant water conservation practices; and helping the small scale growers enhance marketing strategy to stay viable.

Pitahaya is a new viable crop developed for the desert. Photo Credit: Jose L. Aguiar.

The vegetable crops and small farm program will continue using resources from the University of California and industry experts to help farmers reclaim and manage the desert soil, develop new crops, conserve water and educate on food safety. The desert has available raw land, a steady supply of good irrigation water through the local water district, and excellent ground water; all indicate a good future for the agricultural industry in the Coachella Valley, Riverside County.

Jorge Torres said he relies on UCCE Farm Advisors for crop production information and assistance. Alfonso Durazo introduced Torres to drip irrigation, efficient fertilization and water use (1976-1986). Torres has continued working with Jose Aguiar and has stayed sustainable and viable.

Farm Management/Agricultural Economics Program

Brief Program Overview: Past and Present

The early 1900s saw increasing food production and farm sizes and heavy acquisition of farm equipment and capital. Growers needed help in determining costs of production and profitability for their enterprises. Such studies in Riverside County began in 1919. Mr. Nathan, a Farm Management Specialist from the University of California (UC), Berkeley visited Riverside County to train local farmers on "farm record book" and began collecting data for a cost of production study on apricots. The cost of production study involved multiple years of data collection for establishment and production and was completed in 1927.

After the apricot study was published, growers showed even greater interest in getting cost of production and profitability analyses for other crops. By 1931, MyronWinslow, N.L. McFarlane, Farm Advisors and J.L Millar, Assistant Farm Advisor completed multiple cost studies for poultry, milk, tree crops, beans and rabbits. Cost of production and profitability studies demand continued to grow.

Etaferahu (Eta) Takele, Area Agricultural Economist has been with the UC for over 30 years. Her extension and research programs included enterprise cost and profitability analyses; marketing potential analyses; financial and risk management and selection of an optimum input combination of alternative production practices. Specific programs also include assisting small farms and minority clientele in feasibility analyses for new and specialty crops. The program uses a multidisciplinary team approach involving several scientists and economists within the UC system as well as integration with other programs such as the Western Region Risk Management Center.

Takele conducted over 100 production cost analyses for Riverside County and the central and southern California. These studies have been instrumental for determining growers' profitability and guiding efficient production practices and risk and financial management. Cost analyses also helped the government to determine disaster assistance such as in the Glassy-winged sharpshooter and wine grape acreage loss in Temecula in the 2000s. Assistance received helped growers to replant and the Temecula Valley continued to be known as the wine country in southern California.

Cost studies can be retrieved from the Farm Management/Agricultural Economics website: http://ucanr.edu/sites/Farm_Management/Costs_and_Returns/.

Since the early 2000s, cost studies targeted new and high value crops and helped southern California growers diversify and mitigate the high and rising costs of production resulting from expanding urban development and increased competition for land and water. Cost studies published for organic and conventional blueberries, lychees, longan, guava, cherimoya, and mandarin have led several small scale growers to invest in these crops.

Cherimoya, Longan and Guava. Photo Credit: University of California, Davis.

Collaborative Farm Advisor colleagues and farmers have continued exploring the adaptability of these crops in several localities. Takele along with colleagues is currently investigating if increasing yield of narrow space planting would offset the high cost of production and improve the profit potential of avocados in southern California.

Farm Management educational programs use conferences, workshops, seminars and newsletters to reach growers. The development of a user friendly Microsoft Excel-Visual Basic interactive Farm Budget Generator (FBG) computer program has also enabled growers to develop and analyze their enterprise budgets.

Adult Asian Citrus Psyllid (ACP).
Photo Credit: Regent of the University of California, 2006.

Takele took an active role in educating the public about the Asian Citrus Psyllid (ACP) to protect our industries from the devastating effect it caused in Florida. A two year funding from the Citrus Research Board (CRB) and an aggressive educational program throughout Riverside and San Bernardino led to identification of areas where the pest was located and in collaboration with CDFA and County Agricultural Commissioner impacted quarantine when necessary. Multidisciplinary and multi-state proposals are aiming to develop long-term preventive controls via developing economically feasible production practices and various control methods of ACP and the Huanglongbing (HLB) diseases in citrus.

Agriculture in Riverside County is significant to the economy with direct value of $1.32 billion in 2013 and ~$3.87 billion and 25,000 jobs with multiplier effect from interdependence with subsidiary industries such as equipment, fertilizer, seed, etc. and from induced consumption spending by agriculture business owners and their employees. A key factor in Riverside County's agricultural strength is in the diversity of crops produced (more than 120 different commodities in 2013).

Takele discussing date niche marketing with grower in the Coachella Valley.
Photo Credit: UCCE Riverside, Farm Management Program.

Master Gardener Program

Brief Program Overview: Past and Present

Master Gardeners have assisted people through plant workshops, speaker's bureau, newspaper releases, and television and radio shows. Photo Credit: Source unknown, 1984.

In 1972, a County Agent named Gibby in Washington State trained a group of volunteers to assist local extension staff and provide horticultural information to meet increasing demand of suburban residents.

In 1980, Ted Stamen, an Ornamental Horticulture Advisor of the University of California Cooperative Extension (UCCE) partnered with Jim Grieshop, Community Education Development Specialist at the University of California, Davis, started a Master Gardener (MG) pilot program in Riverside County.

The program focused on training volunteers with science-based gardening education and promoting environmentally responsible and sustainable horticultural gardening practices. Forty-three volunteers completed the first training and donated 50 hours each in public service activities such as serving in the plant center diagnosing diseases and pests. The MG program in California is now in 43 counties. Statewide volunteer hours have now exceeded 3 million since inception.

Upon Ted Stamen's retirement, James "Mike" Henry, an Environmental Horticulture Advisor transferred from Orange County and provided academic oversight of the MG program in Riverside County from 1994 till his retirement in 2009. Henry was instrumental to the program expansion and creating an innovative on-line training. He also worked on many environmental horticulture projects including education to landscape and turf growers in water efficiency using the California Irrigation Management Information System (CIMIS).

Today, UCCE Riverside County graduate on average 50 volunteers per year that are trained in horticulture, integrated pest management, water management and other urban environmental issues; and increasing food production in home gardens. MG trainees take 50 plus hours of classes with seminars, quizzes and exams in order to receive certification. Each MG trainee also provide 50 hours of service prior to receiving the UCCE Riverside County MG volunteer appointment. Annually thereafter, each volunteer must complete at least 12 hours of education and provide 25 hours of volunteer services to remain an active member. The MG program through UCCE provides the County of Riverside over 15,000 hours of volunteer service annually (7 FTE equivalents).

Master Gardener program current projects and activities include conducting collaborative work/ partnership with several institutions and agencies:

Master Gardeners are docents at the Western Municipal Water District (WMWD) Landscape of Southern California demonstration garden. The one acre garden consists of more than 50 educational stations and more than 250 plant species and is open to the general public. Docent activities also include tours at the Riverside County Regional Medical Center Spring Garden, Riverside Community Flower Show and Garden, Wood Streets Green Team Garden and Valley Beautiful Home Garden.

A partnership with one of our volunteers; Lucy Heyming and family has allowed the MG program to have a Grow Lab at their property for educating the public using University-based vegetable gardening techniques including propagation.

MG volunteers preparing plants to sale at the grow lab. Photo Credit: UCCE Riverside, Master Gardener Program.

"Water Wise Garden" planting and maintenance at the Jurupa Mountain Discovery Center (JMDC) hosts many families, schools and youth clubs throughout the year. In 2014, JMDC received a donation of 50 trees (Crape Myrtles and Southern Magnolias) from the United Parcel Service (UPS) Supply Chain Solutions-Healthcare Distribution Department.

Speakers Bureau allows Master Gardeners to provide lectures on a wide variety of garden related topics. Also, information booth displays are made at home & garden events throughout the year and throughout the county such as at the Inland Empire Garden Friendly sale of Home Depot, Temecula and Palm Springs farmers markets and Coachella Valley Wildflower Festival. MGs also work in community and school gardens such as at the Family Rainbow Vegetable Garden, Corona Community Garden at Peace and Arlanza Community Garden.

Indio-Coachella Valley: In 2011, the UCCE Master Gardener program expanded to the desert area of Indio and the Coachella Valley. We now have an MG hotline and walk-in services at the UCCE Riverside County Indio office.

New and exciting projects in the desert area include a children's garden at Agua Caliente School and training propagation of succulents at Moorten's Botanic Garden. Also, UCCE Riverside MG program is working on an agreement with the University of California, Riverside (UCR) for a master gardener orchard at UCR Palm Desert campus.

About five years ago, one of the pioneers of the program, Lucy Heyming masterminded and formed a committee named "Gold Miner" to help volunteers find service opportunities closer to home. As a result, the Riverside County MG volunteers have reached their localities; even areas that have not traditionally been part of the program. Riverside County is divided into 9 areas covered by gold miners. Examples of outreach include annual participation in the Lavender Festival in Cherry Valley at Highland Springs Resort; quarterly presentations at the Temecula Public Library on gardening; and display and presentation booths at local events throughout Riverside County.

1st Place Winner for the SFE award. Lucy Heyming giving a presentation on the Gold Miners Project. Photo Credit: UCANR Master Gardener Program, 2014.

In 2014, the Gold Miners project won first place in the "Innovative Projects" UCCE competition in the Search for Excellence (SFE) Awards.

Hotlines Contact Info:
Riverside Email: anrmgriverside@ucanr.edu
Riverside Hotline: 951-683-6491
Indio Email: anrmgindio@ucanr.edu
Indio Hotline: 760-342-6437

Left-Right: First place trophy winners from Riverside County in the 12th Annual 4-H Club Field Day. First place winners for the World Ag Expo's 2013 "Agricultural: Feeding Tomorrow's World" video contest. Photo Credit: Riverside County Farm Bureau News, June 1961. UCCE Riverside 4-H Youth Development Program, 2013.

4-H Youth Development Program

BRIEF PROGRAM OVERVIEW: PAST AND PRESENT

**4-H Pledge: "I pledge, My head to clearer thinking, My heart to greater loyalty,
My hands to larger service and My health to Better Living
For my club, my community, my country and my world."**

In the early 1900s, the University of California participated in the formation of boys and girls clubs in rural areas which later developed into 4-H clubs. The mission was to educate and train youth in agricultural and home economics and influence the practices of adult farmers and homemakers.

Young men trained by Farm Advisors on production and management of animals and plants; raised cattle and poultry for exhibition at the local fairs; planted trees on highways; fund-raised for conferences and camps; and participated at community and at farm bureau events. Young women were educated by Home Economics Advisors in canning and sewing.

Several 4-H Youth Advisors have led the University of California Cooperative Extension (UCCE) Riverside County program over the years. One of those, Linda Araujo-Wilson from 1979 to 1999 worked with "at-risk" youth including citizenship, leadership and career exploration. We are pleased to announce the recruitment of a 4-H Youth Development Advisor, Claudia Diaz-Carrasco who began work in October of 2014. Diaz-Carrasco and Program Representative Cheryl Eggleston will be conducting programs that will help youth become responsible, self-directed and productive members of society. The goal is to develop productive leaders and good citizens in youth and to improve their well-being; as well as the well-being of their families and their communities.

Today, 4-H youth continues learning about agriculture and homemaking but also are involved in science, engineering and technology (SET), citizenship and many other programs designed to help the youth of today reach their full potential and to become productive members of society. The Riverside County 4-H program uses the most current youth development expertise and volunteer training such as the "Thrive" program to empower the youth. At its core, thriving is about communities where young people feel and know that they are persons of value and worth; that they have something unique to offer the world; and that they have the courage to act on their gifts.

Thriving focuses on the 6 C's:

- Competence is gained through self-control, positive behaviors, respect for rules and standards, morality, clear sense of right and wrong.
- Confidence is gained through empathy and identification with others and having compassion.
- Connection is gained through attainment of required skills and knowledge; success in the social, cognitive and vocational arenas.
- Character is gained through relationships with others, with schools and other institutions; youth-adult partnerships and spiritual growth.
- Caring is gained through behaviors that have a positive impact on self, family, community and society.
- Contribution is gained through self-esteem, identity and belief in the future.

A study (Waves of the Future by Tufts University) showed that the 4-H Youth Development program plays a special and vital role in the lives of America's young people. Youth have the capacity to thrive when presented with resources for healthy development found in families, schools, and communities regardless of their background, socioeconomic status, race and gender. 4-H programs launch young people into healthy and productive lives (Lerner, et. al., 2009).

Enrollment: Annually we have enrolled 500-700 youth with 150-200 volunteer leaders involved in over 60 different projects. 4-H youth on average stay with the program for about five years especially during elementary and junior high school. 4-H clubs reach and attract inner city, suburbs, homeschooled and any youth who have the desire to find their "sparks." In some schools, the 4-H projects are allowed to supplement the schools' curriculum. We also have reached 2,000-3,000 youth in after school programs and is one of the area the new 4-H Advisor plan to expand.

4-H Youth Community Contribution Examples

Left - Right: Bus bench shelter. Taylor's fresh produce donation. Photo Credit: UCCE Riverside 4-H Youth Program.

The Murrieta Mustangs 4-H club fundraised and collaborated in building a bus bench shelter close to the Murrieta Senior Center. The project was a great success and provided shelter and easy access to the bus system for many elderly citizens (2007).

The Desert Sandblasters 4-H club participated in the "Agriculture: Feeding Tomorrow's World" video contest and took 1st place (2013). The club members grew up and are invested in the farming communities where they are raised. The Sandblasters 4-H club created a video to highlight the many opportunities for youth interested in future careers in Agriculture.

David Taylor, a youth with the Ramona Rancheros 4-H club came up with an idea to give back to families in his community. He wanted many needy families that are shopping at the local market to have better food choices. With a generous donation from Nutrilite, he was able to plant an abundance of leafy greens. The fresh produce was donated to a local Food Bank.

Nutrition, Family and Consumer Sciences Expanded Food and Nutrition Education Program

Brief Program Overview: Past and Present

In 1917 when the University of California Cooperative Extension (UCCE) Riverside County was established, one of the programs was Home Economics. The names of the first three Home Economics Advisors were Carroll McConnell, Malinda H. Woodworth and Margaret Plumpton. The program emphasis was nutrition, food preservation, millinery, garment making, and a variety of skills geared to rural women. It was a time when women stayed home, kept gardens, canned their harvest and sewed their own clothing.

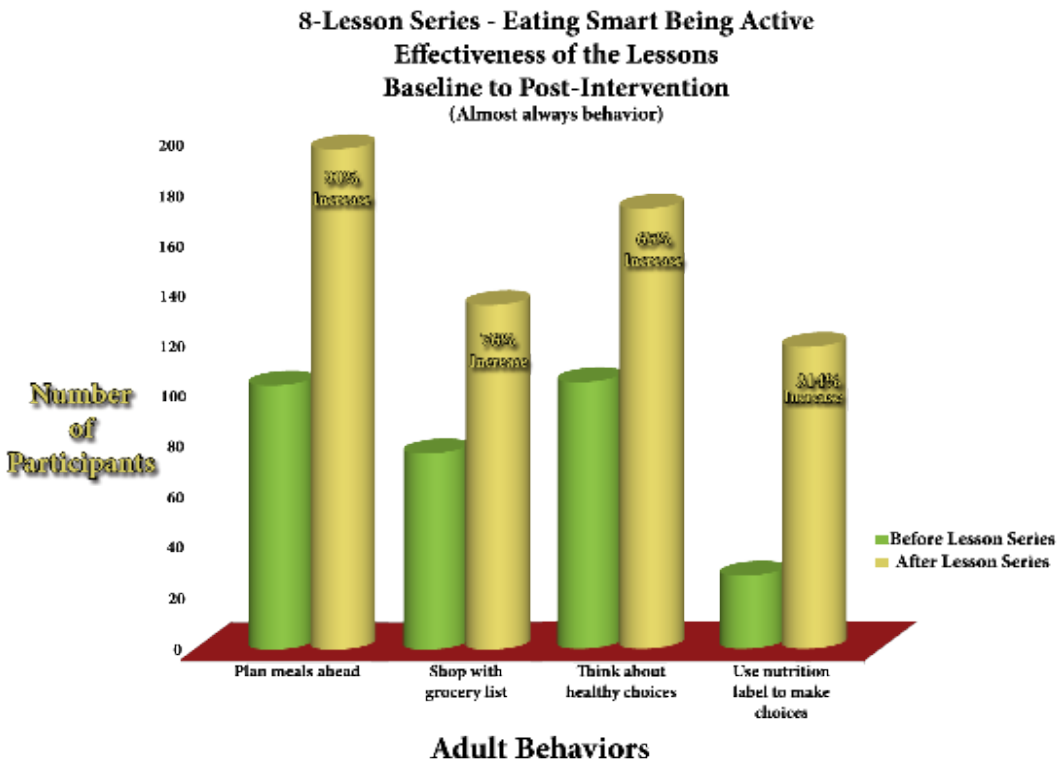
First Riverside County Nutrition program staffs.
Photo Credit: UCCE Riverside, NFCS, 1969.

As women joined the workforce, the Home Economics program gradually reorganized into Nutrition, Family and Consumer Sciences (NFCS) to reflect a shift in emphasis from homemaking skills to science-based education. In 1969, the United States Department of Agriculture (USDA) funded the Expanded Food and Nutrition Education Program (EFNEP) in many states including California, in response to increasing recognition of poverty in America and the link between poverty and malnutrition.

The EFNEP's charge was "to help families living in or near poverty – especially those with young children—to acquire knowledge, skills and changes in behavior to achieve adequate diets providing normal nutrition." Subsequently, the UCCE Riverside County launched an EFNEP program, hired and trained paraprofessionals to work with low-income homemakers one-on-one to improve their family's diet and help them save money on food. Advisor Eunice Williamson headed the program until 1993 followed by Nester Martinez and then Chutima Ganthavorn from 1999 to current.

The Nutrition, Family and Consumer Sciences program under Ganthavorn has 9 program staff. The EFNEP has expanded its outreach to limited-resource families using a group approach through series based, behaviorally focused nutrition education. We partner with community organizations and schools in delivering our programs. In fiscal year 2013/14, the program partnered with 11 schools, 2 preschools, 2 libraries, 7 Head Start, 1 training school, and 1 transitional housing unit. The program is hands-on, learn-by-doing approach allows participants to gain the practical skills necessary to make positive behavioral changes. Participants learn to eat healthier meals and snacks, stretch their food dollars, improve food safety habits, and to be physically active. EFNEP also contributes to participants' personal development and the improvement of their family's diet.

The program impacted thousands of family members. For example, in fiscal year 2012/13, the 8-lesson Eating Smart Being Active (ESBA) curriculum showed positive adult eating behaviors (*refer to graph*).



EFNEP Youth Program

UC recently unveiled four new nutrition education curriculums for youth in grades K-3rd. Each grade level curriculum meets the following California State Department of Education grade-based standards: Common Core Standards for English Language Arts; Health Framework & Context Standards; and Nutrition Competencies. Students learn to make healthy food and exercise choices. Research shows that healthy children also perform better academically and socially. Everybody wins when we teach our youth how to live healthy lives. We partnered with elementary schools, after-school care sites, libraries, and summer school programs. In the last year, our new Youth Educator has partnered with 4 elementary schools, 2 after-school programs, 1 library, and 1 parks and community service center.

Nutrition educator Eva Parrill in front of the "My Amazing Body" poster.
Photo Credit: UCCE Riverside, NFCS Program.

Feel free to ask questions about our new curriculum:

- Happy Healthy Me – kindergarten
- My Amazing Body – 1st grade
- Good for Me and You – 2nd grade
- It's My Choice – 3rd grade

UNIVERSITY of CALIFORNIA
calfresh Nutrition Education

Brief Program Overview: Past and Present

Food dehydration and canning demonstration, Community Canning and Nutrition Center, 1976. Photo Credit: UCCE Riverside, NFCS Program.

In 1995, UC CalFresh Nutrition Education Program was added to the Nutrition, Family and Consumer Sciences (NFCS) program in Riverside County. Originally, the program was known as Food Stamp Nutrition Education Program (FSNEP). It started as part of a statewide effort to implement an agreement between the University of California Cooperative Extension (UCCE) and the California Department of Social Services Food Stamp Program to provide nutrition education to Food Stamp recipients. When the Food Stamp Program changed its name to the Supplemental Nutrition Assistance Program (SNAP), or CalFresh in California, FSNEP also changed accordingly and became known as UC CalFresh in 2012. The goal of UC CalFresh is to provide nutrition focused educational programs that increase the likelihood of SNAP recipients achieving nutrition and physical activity goals consistent with the dietary guidelines for Americans and MyPlate.

In the beginning, the UC CalFresh program had one part-time educator to teach the "Eating Right Is Basic" curriculum for adult participants in parts of Riverside County: mainly Corona-Norco, Temecula Valley, Rancho California, and Murrieta. Today, UC CalFresh delivers programs to SNAP eligible adults and youth countywide and coordinates with 3 other SNAP-Ed funded agencies: Department of Public Health-Nutrition Education Obesity Prevention Branch (NEOPB), Office on Aging, and Catholic Charities of Riverside and San Bernardino counties, to ensure that SNAP federal dollars are addressing the county needs.

Nutrition Educator at Demonstration Center. Photo Credit: UCCE Riverside NFCS Program.

UC Cal Fresh program in 2013 impacted participants behavioral changes in the following: using "Nutritional Facts" on food labels to make choices; planning meals and think about healthy food choices; and comparing prices and shop with a list. It delivered 189 workshops and 26 poster sessions.

The youth program partnered with the Coachella Valley Unified School District in 8 elementary schools and taught nutrition and literacy (Reading Across MyPyramid/MyPlate) curriculum to third graders. Also delivered EatFit and Money Talks Hunger Attack curriculums to teens of middle and high schools in the Alvord Unified School District. Youth made at least one lasting improvement in their eating choices and the teachers agreed that their students can now identify healthy food choices.

Claudia Carlos and Emma Sandoval, Nutrition educators, educating school group tour about local fruits and vegetables at the Southern California Fair, 2014. Photo Credit: UCCE Riverside, NFCS.

Liz Armijo, Nutrition educator, conducting a cooking demonstration for Plan, Shop, Save, Cook series at the Coachella Valley Adult School. Photo Credit: UCCE Riverside, NFCS.

UC CalFresh collaborating with the Master Gardener Program at Agua Caliente Elementary School, 2014. Master Gardener helping the students read the plant description. Photo Credit: UCCE Riverside, NFCS.

The UC CalFresh program also collaborated with the UCCE Riverside Master Gardener program to conduct events to promote nutrition and gardening for after school children at Torres Martinez Desert Cahuilla Indian Education Library Center and Agua Caliente Elementary School. In addition, UC CalFresh is delivering the Team with Intergenerational Support (TWIGS) curriculum to the Boys and Girls Clubs in the Coachella Valley and assisting the development of a community garden at the Community Settlement Association in eastside Riverside.
There are plans to continue these partnerships.

UCCE Riverside County Staff

Moreno Valley Office Staff
Top Row Left-Right: Ihab Sharabeen, Claudia Diaz-Carrasco, Eva Parrill, Alyssa Taylor, Vada Wright, and Claudia Carlos.
Bottom Row Left-Right: Mao Vue, Cheryl Eggleston, Emma Sandoval, Connie Costello, Eta Takele, Chutima Ganthavorn, Chung Huynh, and Myriam Acevedo.

Indio Office Staff
Left-Right: Jose L. Aguiar, Wendy Smith and Liz Armijo.

Left to Right: Elvia Rodriguez (Moreno Valley), Carmen Gispert (Indio), and Vonny Barlow (Palo Verde Valley).

University of California Cooperative Extension Riverside County Advisors - 97 Years

1917-Present

Advisors in Agriculture

R.N. Wilson,
Cattle & Dairy Advisor
R.E. Nebelung,
Assistant Advisor
Myron M. Winslow,
Field & Tree Crops Advisor
N.L. "Mac" McFarlane,
Cattle & Poultry Advisor
Mr. McDonald,
Assistant Advisor
Lloyd P. Sharp,
Poultry Advisor
J.L. Miller,
Assistant Advisor
H.B. Richardson,
Tree Crops Advisor
Otis A. Harvey,
Vegetable & Field Crops Advisor
W.B. Gardener,
Field Crops Advisor - Palo Verde Valley
Lewis J. Hutchinson,
Tree Crops Advisor
Dean Halsey,
Citrus, Grapes, Dates, Turfgrass & Wine Grapes Advisor – Coachella Valley
Larry Bruscha,
Vegetable Crops Advisor - Palo Verde Valley
Shirl E. Bishop,
Dairy, Waste Management & Water Quality Advisor
Don Addis,
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Robert.F. Kasmire,
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Win Lawson,
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Marvin Miller,
Subtropical Fruit Crops Advisor
A.F. Van Maren,
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Extension Economist
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Leonard Francis,
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Alfonso Durazo,
Small Farm Advisor - Coachella Valley
Les Ede,
Field Crops Advisor - Palo Verde Valley
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Douglas Kuney,
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Michael Rethwisch,
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Peggy Mauk,
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Carmen Gispert,
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Ornamental Horticulture Advisor & Master Gardener Program
James "Mike" Henry,
Environmental Horticulture Advisor

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Laura L.J. Mantonya,
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Chloe Beitler,
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Linda Araujo-Wilson,
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Eunice Williamson,
Home Economics & 4-H Advisor
Nestor Martinez,
Nutrition & Consumer Science Advisor
Chutima Ganthavorn,
Nutrition, Family & Consumer Science Advisor
Claudia Diaz-Carrasco
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**** This is a partial list of all the Advisors who have worked for the UCCE Riverside County.***

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University of California Cooperative Extension Riverside County

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