From the Director

To engage with people through applied research and education to improve lives, families, communities, environment, and economies in Arizona and beyond – That’s the mission of Arizona Cooperative Extension and in 2014, Maricopa County Cooperative Extension (MCCE) faculty and staff took that message to heart. With over 200,000 people participating in Extension programs in 2014, MCCE helped save water, taught students about agriculture, reduced chemical sprays in agriculture crops and turfgrasses, enabled children to be ready for school, taught young adults about leadership and responsibility, educated kids and adults to make healthy decisions about nutrition and physical activity, and instructed homeowners and landscape professionals about plant selection and irrigation, just to name a few.

During the year, our office kept quite busy with over 12,000 people walking through our front doors to attend and participate in meetings, seminars, and life-long learning opportunities available at MCCE. Many people venturing through our doors were volunteers – those who generously give their time and effort to help increase the capacity and the extent of our Extension programs. Our 4-H volunteers are vital to the success of 4-H youth development programs by serving as club leaders, helping to organize club activities, and assuring that the youth are engaged while learning valuable life skills. Our Master Gardener volunteers, over 500 strong, answer home gardening questions, give presentations and seminars, and maintain our demonstration gardens here at the office so people can learn about the unique landscape we call the Sonoran Desert. Family Consumer Health and Nutrition and agriculture programs also benefited from volunteer participation and in total for 2014, over 5,500 volunteers contributed over 88,000 hours that has an equivalent value of $2.0 million (Independentsector.org). My thanks and gratitude to everyone who gave of their time and expertise. Your generous dedication is greatly appreciated by all of us at MCCE.

We had the opportunity to celebrate our Cooperative Extension Centennial in 2014. Cooperative Extension was the result of the Congressional Smith-Lever act of 1914. It formed a unique partnership among the federal, state, and county governments. Together, these three entities help fund Cooperative Extension and help make a positive difference in people’s lives. Our celebration was on October 4, 2014 at the Phoenix Zoo. The celebration included entertainment from the Maricopa 4-H Clogger Club, who put on a fantastic show; our 4-H Zoo Crew, who helped guests find their way through the Zoo; University of Arizona President Ann Weaver Hart was our keynote speaker; and local celebrity and former 4-H’er Sean McLaughlin was our master of ceremonies. The evening was a time for us to reflect on the past and honor those who have contributed so much to Cooperative Extension in Arizona. Plaques were given to honorees as a gesture of our thanks for their contributions. However, Dr. Jeffrey Silvertooth, Associate Dean and Director, Extension & Economic Development, put it best by stating, “…there are others that haven’t been named here due to our limited memories and the many years that have passed. But they are no less valued than those we honor today. We also thank them for their contributions.” The evening went off without a hitch, except for a few “calls of the wild” from our hosts, which no one seemed to really mind.

In the pages that follow, you’ll read a brief description of the many programs offered by MCCE. These programs have real, positive impacts, strengthening our communities and improving the lives of the people of Maricopa County. These programs are delivered by MCCE faculty and staff working weekends and evenings, and giving demonstrations in the home, the classroom and in the field. MCCE takes the University of Arizona to the people of Maricopa County, using the latest in science and technology to improve people’s lives. All of this is made possible by the support of the University of Arizona, College of Agriculture and Life Sciences, the Maricopa County Board of Supervisors and the volunteers, staff and faculty of MCCE. Thanks to all – A job well done!

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EXECUTIVE SUMMARY

Because of Maricopa County Cooperative Extension . . .

Agricultural producers and turfgrass managers learn better ways to control pests through new Integrated Pest Management techniques that reduce spraying and increase natural enemy populations to help control damaging insects.

Nearly 80,000 school aged kids in Maricopa County, learned life skills and information about the world they live in through our 4-H and other youth oriented programs.

Over $5 million in savings due to reduced need for reading remediation or special education, reduced crime and imprisonment and a more qualified workforce with higher educational attainment levels through work done in our Early Childhood Development programs.

Over 50,000 children and 22,800 adults in 2014 receive nutrition and health information through our Supplemental Nutrition Assistant Program – Education program (SNAP-Ed) and Expanded Food and Nutrition Educational Program (EFNEP).

Maricopa County Cooperative Extension employs 80 people, 71% of them supported through grant and/or contract funding, providing over $1.8 million in salary to Maricopa County residents.

More than 26,000 school aged children received education on water conservation though our Arizona Project WET (Water Education for Teachers) education program.

2014 - By the Numbers:

- 137,616 youth participated in Extension activities
- 87,014 adults participated in Extension activities
- 5,500 volunteers gave over 88,000 hours of their own time to support Extension programs
- Volunteer support is estimated at $2.0 million
- Faculty obtained $4.91 million in grants and contacts

https://www.facebook.com/MaricopaCountyCooperativeExtension

http://extension.arizona.edu/maricopa
Although our Early Childhood Development programs focus on kids 0-5 years of age, we work with the entire family, which includes moms and dads, as well as brothers, sisters, even some grandparents. Our goal is to get kids ready for school – for their first day in kindergarten. To do this we teach parents about childhood development and help identify opportunities where family members can all help in assuring these children are ready for school. We also teach childcare providers new skills that help them learn about brain development and ways to stimulate and engage children. This year, we completed the initial phase of our Preschool Outdoor Classroom, located at 24th St. and Broadway just a few miles west of the Extension Office. The Outdoor Classroom is a partnership between the MLK Jr. Preschool in the Roosevelt School District, Roosevelt Head Start, and the Maricopa County Cooperative Extension.

Programs such as these, have shown that participants have:

- **Reduced need for reading remediation or special education**
- **Reduced incarceration rates**
- **Produced a more qualified workforce with higher educational attainment levels**

**2014 - By the Numbers:**

More than $800,000 in grant funds were obtained to support these programs

Over 2,500 families were strengthened through our Early Childhood Development programs such as the Roosevelt Early Childhood Family Resource Center, Parents as Teachers and Brain Builder programs

Contact: Patty Merk, Ph.D.
pmerk@cals.arizona.edu
4-H Youth Development in Maricopa County has begun its second hundred years. At first glance, it’s a far cry from the old days of boys & girls patching handed-down britches & dresses, taking their prize cow or pig to the fair, planting cotton seed or canning tomatoes. Now they are involved in new skills - robotics, GPS, raising Guide Dogs or Canine Companions for Independence, entrepreneurship, building and engineering rockets, and hosting Japanese 4-H’ers. But on further examination, the program has simply built on its’ roots and expanded the same concepts of “Learning by Doing” and “Making the Best Better.” And while this all may sound like nothing but work, it’s not all just work – there is a lot of fun and fellowship. 4-H members make friends locally, county-wide and for those who pursue the myriad of opportunities available by 4-H participation – throughout the state, nation and world. We also continue to work with youth, discussing abstinence and how they can make better life decisions and avoid risky behaviors.

Participants in 4-H programs:

- Give more back to their communities
- Get better grades
- Have significantly lower drug, cigarette, and alcohol use.

2014 - By the Numbers:

Over 93,000 youth participated in 4-H and other extension youth development and educational programs

Over 1,500 volunteers donated over 11,300 hours of support for Maricopa County 4-H youth programs, estimated to be worth $255,000

4-H faculty were successful in obtaining $219,000 in grants and gifts

Contact: Bryan Chadd
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Helping kids understand the value of Agriculture is not an easy task. Our Agricultural Literacy programs work with youth, teachers, and parents to help them all understand and appreciate the importance of agriculture. This year a new book is spreading the word in homes and classrooms across Arizona. Culminating months of research and careful concept development, *Arizona Agriculture: Bee’s Amazing Adventure* was created to introduce children in grades K-4 to the Grand Canyon State’s diverse agricultural industry. Published in cooperation with The University of Arizona College of Agriculture and Life Sciences Cooperative Extension (CALS-CE) and Maricopa County Farm Bureau (MCFB), *Arizona Agriculture: Bee’s Amazing Adventure* is filled with interesting facts and captivating photography — complete with a glossary and curriculum guide. *Arizona Agriculture: Bee’s Amazing Adventure* is sure to help students develop a deeper understanding of and appreciation for Arizona’s farmers and ranchers and the many diverse products they bring to the market. This program also provides food safety guidelines for schools that want to use school-grown produce in the cafeterias. Once the guidelines are implemented, schools may be certified by the Arizona Department of Health Services, allowing school grown produce to be served in the school cafeteria.

This program helps:

- **Give youth a better appreciation of where our food comes from and what it takes to grow food**
- **Assists schools to become certified, which helps keep our food system safe**
- **Educate youth and adults alike on the importance of Arizona’s $17.1 Billion agricultural industry**

### 2014 - By the Numbers

- Nearly 40,000 school aged children have the ability to understand and communicate the source and value of agriculture.
- 466 volunteers gave 8,600 hours to help with programs like Arizona Agricultural Literacy Days
- Over $195,000 was obtained in grants and gifts to support these programs

Contact: Monica Pastor
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Horticulture programs continued to grow and expand at the MCCE. Our urban farming program helps established and curious urban agriculturalists learn how best to farm our urban/suburban environments, covering topics including soils, irrigation, fertilization, and, just as important, budget and financing. Our Master Gardener programs, supported by some of the best volunteer horticultural experts in the County, continue to serve the people of Maricopa County with seminars, presentations, and their plant hotline. Answering questions about weeds, plant selection, watering, and fertilization, these volunteers helped over 1,000 Maricopa County residents via our telephone hotline. Our agroecology programs use a holistic approach, taking into account the environment we live in and the challenges of growing plants in the Sonoran Desert.

Our Horticulture and Agroecology programs:

- *Work with urban agricultural businesses, helping improve the local food system, keeping Maricopa County dollars in the County*
- *Reduce residential water use through proper plant selection and locating trees so the landscape can take advantage of the shade they offer*
- *Improve the environment by promoting low impact tillage and spraying*

**2014 - By the Numbers:**

9,655 people had direct contact with the horticulture and agroecology programs

509 active volunteers registered their volunteer hours

25,795 hours were recorded by those 509 volunteers, valued at over $315,000

Contact: Kelly Young

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Agriculture in Maricopa County continues to be a significant economic engine and enterprise. Although many think of Maricopa County as an urban county, the fact is Maricopa County still ranks very high among US counties for agricultural sales. Our 2014 agricultural programs at MCCE have focused on minimizing the environmental footprint of agriculture while helping growers maintain a viable economic yield. This past year, much of our work has been in alfalfa, looking at controlling pests as well as new research into alfalfa fertilization protocols. Our Turfgrass Program contributes to the improved performance, aesthetics, and safety of sports and recreational turf fields on school campuses, municipal parks, and residential or commercial landscapes. University of Arizona researchers continually provide professional improvement education opportunities for professional turf managers to obtain and maintain certifications and licenses. Research findings are transferred through seminars, field days, short courses, the website (http://turf.arizona.edu), and Annual Desert Turf School. Ultimately, golf course superintendents and professional turf managers of sports stadiums obtain knowledge and skills to provide the highest quality turfgrasses for the $3.5 billion golf industry, Super Bowl, Fiesta Bowl, $600 million Cactus League,

Our Agriculture and Turfgrass programs

- Developed targeted pesticide spraying strategies applying pesticides only when needed at the appropriate time and targeting only the pest that’s doing damage, leaving the natural enemies in the field to maintain natural biological controls

- Improved water use efficiency by enabling irrigation with only the needed amount of water at the right time by using weather-based technology – Arizona Meteorological Network (AZMET)

- Continue to find new opportunities to help keep Maricopa County agriculture competitive

2014 - By the Numbers:

Over 1,000 people participated in turf related programs

$300,000 was obtained in grants and gifts to support Maricopa County agricultural Extension programs

Contact: Ayman Mostafa (Agriculture) ayman@cals.arizona.edu Kai Umeda (Turfgrass) kumeda@cals.arizona.edu
Eating right and staying healthy takes time, dedication and knowing the difference between what’s proven scientifically and what the new fad is on the Internet. Our nutrition, health, and physical activity faculty and staff are here to help people wind their way through the maze of misinformation and cold hard facts so they can make informed and insightful decisions about their diet and their lifestyle through our Supplemental Nutrition Assistance Program – Education (SNAP-Ed) and Expended Food and Nutrition Educational Program (EFNEP). As part of the University of Arizona Nutrition Network (UANN), which is active in 11 Cooperative Extension offices across the state, our SNAP-Ed faculty and staff not only coordinate efforts in obesity prevention which includes education on nutrition and physical activity like the EFNEP program, SNAP-Ed also works with policy, systems, and environmental changes in schools, school districts, and other entities in Maricopa County.

Studies show kids involved in Nutrition and Physical Activities Programs …

- 25.8% ate vegetables more often
- 21.5% ate fruits more often
- 25.1% were physically active more often

2014 - By the Numbers:

Over 22,800 adults and 55,000 youth participated in SNAP-Ed and EFNEP programs

2,200 volunteers donated 27,000 hours of their time, valued at an estimated $653,000

$3.1 million in grants were obtained for SNAP-Ed and EFNEP programs for Maricopa County

Contact: Traci Armstrong Florian
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Using water efficiently in our desert environment is essential for the people of Maricopa County and the desert southwest. The Urban Water Resources programs help teach kids and adults about the water in our environment, and what can be done to help preserve the water quality and quantity for future water users of our County. Our Smartscape program celebrated 20 years of service to landscape professionals, offering courses on irrigation management, proper plant selection, and landscape design. Supported by the Arizona Municipal Water Users Association and the Arizona Department of Water Resources, these courses have the goal of reducing water consumption in residential and commercial landscapes within our urban environment. Our Arizona Project WET (Water Education for Teachers) program continues to expand, not only providing workshops for teachers, but doing direct education to youth through in-school programs and water festivals.

- **Smartscape provides a basic course as well as an advanced course on Irrigation.**
- **Arizona Project WET teaches future generations about the importance of conserving water in our desert communities.**

2014 - By the Numbers:

- **Over $60,000 was obtained for support of our Smartscape program**
- **Arizona Project WET reached over 26,000 (K-12) students**
- **650 volunteers donated 4,000 hours to support our urban water programs, an estimated value of $90,000**

Contacts: Kaitlin Poe-Orsburn
Smartscape
kpoe@email.arizona.edu

Pamela Justice
Arizona Project WET
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Our Mission: To engage with people through applied research and education to improve lives, families, communities, environment, and economies in Arizona and beyond.

Our Vision: We envision strongly connected communities invested in the betterment of every individual.

As the University of Arizona in Maricopa County:

- We empower people to expand their capabilities to improve their lives;
- We are a well-known, effective, and accessible educational resource for all communities;
- We are a trusted partner in communities for leadership education;
- We develop strong, capable leaders in all communities;
- We are recognized experts for developing and disseminating research-based information.

Our 2014 Advisory Board

Cheryl Goar, Board Chair - Executive Director, Arizona Nursery Association (District 1)

Al Harris, Jr. - Faith & Community Coordinator, Tanner Community Development Corp (District 1)

Carol Ward-Morris – Acting Director, Water Conservation, AZ Municipal Water Users Association (District 2)

Michael Hills - Regional Sales Manager and Technical Agronomist, Seed Research of Oregon (District 3)

Tracy Johnson - Mill Manager, Lakin Cattle Company (District 4)

Tamara Ridge - Office Manager, Paul Rovey Dairy (District 4)

Maricopa County Board of Supervisors

Steve Chucri, Chairman - District 2

Denny Barney - District 1

Andy Kunasek - District 3

Clint Hickman - District 4

Steve Gallardo - District 5
Below is a listing of the faculty and staff at the Maricopa County Cooperative Extension. These women and men are the ones who deliver the programs to the residents of Maricopa County. Their hard work and dedication have made positive differences in people’s lives, communities, the environment, and the economy in Maricopa County.

KEY: ANR – Agriculture and Natural Resources; EFNEP – Expanded Food and Nutrition Education Program; FCHS – Family and Consumer Health Sciences; FRC –Family Resource Center; IPM – Integrated Pest Management; PAT – Parents As Teachers; SNAP-Ed – Supplemental Nutrition Assistance Program-Education; T3 – Train The Trainer; TOP – Teen Outreach Program; WET – Water Education for Teachers; YD – Youth Development.

Maricopa County Faculty and Staff 2015

Edward Martin, Maricopa County Director, Professor & Extension Specialist
Traci Armstrong Florian, Extension Agent: FCHS/EFNEP, SNAP-Ed
Bryan Chadd, Extension Agent: 4-H Youth Development
Ruth Jackson, Assoc. in Extension: FCHS
Patty Merk, Area Agent: FCHS/Family & Youth
Ayman Mostafa, Area Agent, ANR/Field Crops IPM
Monica Pastor, Area Agent, ANR/Family & Youth
Rebecca Senior, Assistant in Extension, Ornamental Horticulture
Kai Umeda, Area Agent: ANR/Turfgrass
Kelly Young, Agent: ANR/Horticulture

Marina Acosta Ortiz, Program Coordinator, SNAP-Ed/Gardening
Brittany Allen, Associate Accountant, SNAP-Ed
Paula Barr Skillcorn, Instructional Specialist, SNAP-Ed
Cindy Bazua, Program Coordinator, FRC
Worku Burayu, Research Specialist, Field Crops/Turfgrass
Sally Cassady, Health Educator, Sr. SNAP-Ed
Anne Cimarelli-Stears, Health Educator, Sr. SNAP-Ed
Maria Elena Cisneros, Program Aide, FRC
Mary Conner, Administrative Associate
Jonneen Cook, Program Coordinator, Urban Horticulture
Yvonne Cooper, Administrative Secretary, Master Gardener
Stephanie Copeland, Program Coordinator, Sr. Brain Builders/PAT
Evelyn Coronado, Instructional Specialist, EFNEP
Debbie Cross, Technical Expert, T3 (on-call)
Jesse Davenport, Program Coordinator, SNAP-Ed/Food Access
Juliana Davies, Program Coordinator, SNAP-Ed
Ed Debiec, Instructional Specialist, SNAP-Ed
Sharon Dewey, Instructional Specialist, ANR/Horticulture
Carol Diemer, Instructional Specialist, SNAP-Ed
Ashley Dillard, Program Aide, SNAP-Ed
Ashley Dominguez, Program Aide, FRC
Veronica Duron, Administrative Secretary, 4-H YD
Tamara Floyd, Program Coordinator, Sr. FRC
Raissa Forlemu, Instructional Specialist, SNAP-Ed
Georgia Fritz, Instructional Specialist, Sr. FCHS/PAT
Ahmed Gadelhak, Program Aide, ANR/Field Crops
Jose Gamiz, Instructional Specialist, EFNEP/SNAP-Ed
Lori Garcia, Program Coordinator, Sr. FRC
Maricela Garcia, Instructional Specialist, SNAP-Ed
Eunice Gonzales, Business Manager, Sr.
Dori Guest, Program Coordinator, 4-H YD/TOP
Cristina Guterman, Health Educator, Sr. SNAP-Ed
Nate Holsome, General Maintenance Mechanic
Diana Inzunza, Instructional Specialist, SNAP-Ed
Virginia James, Program Coordinator, Sr. FRC
Amber Jones, Administrative Secretary
Nikki Julien, Instructional Specialist Coordinator, FRC
Pamela Justice, Program Coordinator, Sr. AZ Project WET
Heidi Keeling, Instructional Specialist, EFNEP
Celeste Kimble, Administrative Secretary, FCHS
Sarah Lane, Instructional Specialist, SNAP-Ed
C.J. Meek, Instructional Specialist, Sr. SNAP-Ed
Carey Miller, Program Coordinator, Water Resources
Brandon Moak, Program Coordinator, Sr. ANR / Ag Literacy
Elizabeth Moody, Instructional Specialist, Sr. PAT
Cathy Munger, Systems Administrator, Principal
Sarah M. Nagaratam, Instructional Specialist, SNAP-Ed
Delmi Ortega, Program Coordinator, Sr. EFNEP
Vanessa Parra, Accounting Assistant, Sr.
Cindy Paul, Instructional Specialist, SNAP-Ed
Kaitlin Poe-Orsburn, Program Coordinator, Smartscape
Norma Rodriguez, Instructional Specialist, Sr. SNAP-Ed
Janel Rogers, Instructional Specialist, EFNEP
Gina Rosenfeld, Program Coordinator, FRC
John Rupp, Office Specialist, SNAP-Ed
Carlo Saldana, Program Coordinator, FRC
Karen Salem, Program Aide, SNAP-Ed Garden/Food Access
Sean Sederstrom, Program Coordinator, AZ Project WET
Sheri Semones, Administrative Secretary, Ag. Literacy/ Horticulture
Elizabeth Schnoll, Health Educator, Sr. SNAP-Ed
Dotty Spears, Program Coordinator, Sr. SNAP-Ed
Jordan Steele, Program Coordinator, 4-H YD/TOP
Betty Thompson, Health Educator, Sr. SNAP-Ed
Detza VanBogaert, Program Coordinator, Sr. Brain Builders
Dan Warren, Systems Administrator, Principal
Jeanette Weivoda, Instructional Specialist, EFNEP
Elisabeth Williams, Program Coordinator, Sr. FRC
Jennifer Wolf, Administrative Secretary, 4-HYD