



Maricopa County Report 2021



From the Director



The Maricopa County Cooperative Extension (MCCE) endured a second year of a challenging COVID chaos and still exhibited the versatility to successfully deliver meaningful and impacting Extension programs in the communities where we work. In year 1 of the pandemic, Extension Agents and their supporting personnel learned to deliver education opportunities and conducted business virtually. During year 2, everyone continued to work to refine virtual offerings and then maintained safety and ensured healthy delivery with hybrid in-person and virtual meetings, classes, seminars, and field days. These displays of adaptability will mean that the future

of Extension outreach will continue to demonstrate new ways of reaching and engaging our stakeholders by using all available means of dissemination. The traditional classroom offerings consumed an attendee's valuable travel time across our vast Maricopa County to be able to participate on site at a specific class time. Hybrid offerings of asynchronous classroom presentations combined with experiential hands-on or observable activities are becoming flexible to allow participants to efficiently manage and balance their time at work or at home.

Our Master Gardener, Field Crops/IPM, Turfgrass Science, Pesticide Safety Education Program (PSEP), Smartscape, Project WET (Water Education for Teachers), Agricultural Literacy, and Project CENTRL (Center for Rural Leadership) Extension programs adapted, modified, and nearly perfected creative outreach opportunities. The same adaptability and versatility were exhibited by our Extension programs for nutrition and health through SNAP-Ed (Supplemental Nutrition Assistance Program Education), EFNEP (Expanded Food Nutrition Education Program), and Diabetes Prevention Program (DPP). These programs offered classes online, supplied learning kits for classrooms, and even assembled 4,000 planting kits for Phoenix Food Day. The Family Resource Center (FRC) engaged families by focusing on parenting and child development activities that improved relationships during this challenging time. "Ready! For Kindergarten" parent-child classes were virtual while car seat safety education and distribution workshops were provided to families with young children. FRC staff also worked hard to provide access to much-needed food for families in need and conducted a holiday gift collection and distribution. Our 4-H program coordinators and AmeriCorps team transitioned to hybrid programming for youth development activities. All the 4-H families, youth members, parents and volunteers continued to build and solidify our 4-H programs.

MCCE cannot express enough gratitude to all who make us function and deliver as we do for the residents of Maricopa County. We are especially grateful for contributions from volunteers supporting 4-H and Master Gardeners. The volunteerism displayed by individuals makes possible the existence of these two critical Extension programs that are highly recognizable by the public. We are also thankful to state agencies like the Department of Agriculture for PSEP support and Department of Health Services for supporting the Teen Outreach Program under 4-H. Our Smartscape programming is grateful for support from the Arizona Municipal Water Users Association and the Department of Water Resources. Public and private partnerships have been influential in guiding and supporting our Project CENTRL, Agricultural Literacy, and Project WET programs. Many other grants and gifts have funded our successful research and outreach programs.

MCCE is most appreciative of the Maricopa County Board of Supervisors that provides annual funding in support of our facilities and physical operations. In 2019, we received a one-time expenditure from the County to initiate a new urban agriculture/beginning farmer program. This in turn resulted in another federal agency, USDA-Natural Resources Conservation Service tripling the funding to help develop the infrastructure to expand upon the program to support the economic development of small urban farms and community and school gardens.

In late 2022, a new venture in concert with the UArizona College of Medicine in Phoenix, will be a culinary medicine class for medical school students. The students will be able to grow nutritious crops in our backyard, harvest and prepare meals with medical benefits in our soon-to-be renovated certified kitchen and serve the high value meals to people requiring special diets.

The highlights of 2021 were that MCCE improved its meaningful and impacting Extension program deliveries to stakeholders with innovative virtual and hybrid education opportunities; strengthened and solidified foundational financial support for programs; and new ventures will be expanding the breadth of our more cohesive agriculture, nutrition and health, families, and 4-H youth development programs for the future. MCCE is thankful to be able to remain committed and dedicated to delivering research-based, quality education to improve the lives of the youth and adults in Maricopa County.

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WE ♥ OUR VOLUNTEERS



Over **1340** volunteers gave more than **29,295** hours of their time, equaling more than **\$803,000** in donated time.

Over **6,555** adults and **11,840** youth participated in Extension activities.



<https://www.facebook.com/MaricopaCountyCooperativeExtension>

<http://extension.arizona.edu/maricopa>



Field Crops, Integrated Pest Management and Urban Agriculture

Our Field Crops Integrated Pest Management (IPM) and Urban Agriculture Programs continue to serve the diverse agricultural systems we have in Maricopa County and the state of Arizona. The Programs continued to respond to the challenges of the COVID-19 pandemic with hybrid Program deliveries of in-person and virtual formats. Our applied research continued to cover a wide range of opportunities for our clientele, which focused on reducing the environmental footprint for our agricultural production, emphasised practices to enhance soil health, and provide solutions to the many challenges of our commercial, small-scale, beginning and urban farmers. Our Program helps bring new selective chemistries and biological control approaches, and new nutrient recommendations that optimize crop yields, and protect the environment, animals, and humans. One of the major issues the Program addresses, is the management of alfalfa and forage crops. The Program established an economic threshold level for alfalfa weevil. Seventy-seven percent of surveyed PCA's and growers adopted the new recommendations based on the research for the threshold of alfalfa weevil. A new smartphone app was developed to help PCA's and growers for making informed decisions about alfalfa weevil at: https://u.arizona.co1.qualtrics.com/jfe/form/SV_24zPN7nu96LDs0Z. There is a detailed publication in the Journal of Economic Entomology that describes our multi-year study of this subject at: <https://academic.oup.com/jee/article/114/3/1173/6253710>. The results from 2014-2021 phosphorous and potassium fertilizer application trials conducted under controlled conditions and in experimental plots at MAC helped establish new recommendations regarding fertilization timing, rate, and formula.



The Urban Ag, Small-scale and Beginning Farmer Program started in 2021, and established an active listserv used for monthly newsletters and updates, currently with over 400 subscribers; created an interactive map for our Urban Ag/Beginner Farmer website (current focus is Maricopa County); held our first Urban Ag/Beginner Farmer seminar for two days in October 2021, with over 200 registered; planning and developing a demonstration farm site at the Maricopa County Cooperative Extension Office; applied for a competitive grant, and conducting applied research focuses on cover crops, soil health, pest and weed management, and water conservation.

Our Programs' educational activities increased in 2021 to deliver more educational training to our diverse and increasing clientele than any other year. Our collaborators from the community, growers and agriculture professionals showed tremendous support to the program, which reflect the value they see in this program. Our program is leading national, state, and county grant projects to study better practices to manage resources on different scales or ag production that can significantly increase crop yields, with sustaining the whole system. Our Field Crops/IPM program aims to:

- *Develop more environment-friendly, and socio-economic options for different agriculture production scales for the region, resulting in sustainable practices of Arizona agriculture.*
- *Reduce impacts of agriculture in the environment and improving yield, quality, and economic returns for growers and tribal farms in the region.*

2021 - By the Numbers

- **Over 6000 growers and agricultural professionals were contacted or attended the Program's events in-state and neighboring regions, which provided more than 120 Continuing Education Units.**
- **The Program secured and received grants, contracts, and gift funding totaling approximately \$600,000 in 2021.**

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4-H Youth Development

2021 was the second year for 4-H during COVID and we continued to deliver programming following the University of Arizona's Phased Operational Plan for virtual and in-person events. To recognize the challenges our families are facing, program fees were waived for the 4-H Year!

While we were not able to gather for the County Fair at the State Fairgrounds, 4-H youth participated in General Projects Day at MCCE with youth participating in the



interview process along with showing their exhibits. The awards ceremony was virtual with prizes and ribbons being

mailed. We were grateful to the Maricopa County Fair Board for working to provide an animal show and auction within county COVID guidelines. Another highlight from the year was being back at summer camps at the Harold and Mitzie James 4-H Camp & Outdoor Learning Center. We welcomed our 8–14-year-old 4-H youth at Camp G.R.I.T. and chaperoned Maricopa County 4-H youth to the teen (14-18-year-old) Camp J.O.L.T. Maricopa County 4-H youth also participated in the

AZ 4-H Summit in Tucson where they experienced a campus life, career exploration and community engagement.

Three of our county youth were selected for the premier leadership Arizona 4-H State Ambassador Program. The 4-H 2021-2022 year began in October with strong re-enrollment from both our 4-H clubs and family and youth members. Our Teen Outreach Program (TOP) worked with their sponsor and other agencies to successfully secure another round funding curriculum. The TOP team is working with their partners to schedule programming.

Youth in 4-H programs:

- *Are four times more likely to contribute to their communities.*
- *Two times more likely to make healthier lifestyle choices.*
- *Are two times more likely to be civically active.*
- *Are two times more likely to participate in STEM programs.*



2021 - By the Numbers

- **Over 70 Adults served as volunteers for our 4-H Youth Programs.**
- **Nearly 700 4-H youth enrolled.**

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Nutrition and Physical Activity

Existing research shows that the key to lifelong health starts with making positive changes in diet and increasing physical activity. Small changes in these two areas lead to large rewards. Living healthy is not always easy, and it takes learning and practicing new, positive behaviors in a person's lifestyle to make them into lifelong habits. Our two long-standing nutrition programs, SNAP-Ed (Supplemental Nutrition Assistance Program- Education)



and EFNEP (Expanded Food and Nutrition Education Program) reach into local communities and make contacts with youth, adults, and seniors. EFNEP is active in five counties within the University of Arizona Cooperative Extension system. In Maricopa County, two part-time staff teach direct nutrition and physical activity education to adults in limited income areas (and two more to be hired this year). SNAP-Ed, as part of the University of Arizona, supported by the AZ Healthy Zone (under the umbrella of the Arizona Department of Health Services), is an active partnership of over 10 Cooperative Extension offices and county health departments across the state.

SNAP-Ed works to improve nutrition, feeding practices, and reducing hunger, as well as increasing physical activity and decreasing sedentary behaviors. Maricopa County SNAP-Ed faculty (1)

and staff (16 with six more to hire in this new grant year) coordinate efforts throughout Maricopa County, engaging schools and communities in learning healthy habits through Policy, Systems, and Environmental change approaches. This reaches realms of Active Living, Childhood Health, Direct Education, and Food Systems (e.g., community and school gardens and farmers markets), with keeping three main values and principles at the forefront, including Health Equity, Trauma Aware Approaches, and Community Engagement. Our newest addition in nutrition and healthy lifestyle programming in Maricopa County is the Diabetes Prevention Program (DPP) which started in Fall 2018. This is a year-long CDC program that teaches people diagnosed with pre-diabetes to focus on losing at least 5% of their body weight and exercising 150 minutes per week to decrease the risk of type 2 diabetes in the future.



2021- By the Numbers

- Over 3,500 adults and youth participated in SNAP-Ed and EFNEP programs with over 400 partners and collaborators across the county.
- Nearly 500 volunteers donated over 2,300 hours of their time, valued at an estimated \$130,000.
- \$1.9 million in grants were obtained for the SNAP-Ed and EFNEP programs for Maricopa County.

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Turfgrass Science

The COVID-19 chaos continued through a whole second year but unlike the previous year's drought conditions, the monsoons provided some moisture relief so that turfgrasses along with weeds and insect pests flourished and required control measures on golf courses, sports fields, parks, and landscapes. As we come out of this winter season, it's been relatively dry again and weeds such as stinknet and red brome in the deserts have not been so prolific as they were a couple of years ago. The experimental performance of preemergence herbicides in the desert landscapes have been "iffy" depending on when they were applied before or after timely rains that would have activated them. Our entomology graduate student started last fall and trekked around selected golf courses to collect masked chafer beetles in light traps to analyze them in the lab using molecular techniques to identify specific turf pests. Speaking of the drought, turf areas targeted for removal can install alternative planting materials that could use less water with fewer maintenance inputs. Kurapia is a drought and cold tolerant new groundcover that has potential to fit in desert landscapes and our field research demonstrated that it could perform well with almost half of the water that bermudagrass lawns use in the summer. For replacing turfgrasses, nativegrasses such as alkali sacaton, blue grama, plains lovegrass, alkali muhly, and big galleta could be seeded and ultimately use less water and fertilizers and require less mowing while maintaining very good year around aesthetic qualities. Outreach education was virtual and shifted to hybrid in-person sessions to provide clientele with opportunities to obtain continuing education to maintain professional licensing requirements. Reports and presentations about the activities of the Turfgrass Science Extension Program can be found at: <https://turf.arizona.edu>



Our Turfgrass Science Extension program:

- *Improves turfgrass management strategies and practices for schools, cities, and professional turf facilities by conducting research and introducing innovative technologies to optimize water use and manage pests and weeds.*
- *Provides educational opportunities for turf managers to learn how to decrease or improve inputs and improve turf quality with techniques that conserve water resources, implement integrated pest management, and reduce their environmental footprint.*

2021 - By the Numbers

- **Raised funds to support a graduate student studying the use of molecular techniques to identify a troublesome key insect of turfgrasses.**
- **Identified alternative native grasses and Kurapia.**

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Early Childhood Development

The University of Arizona-Roosevelt Early Childhood Family Resource Center is located at Martin Luther King Jr. School in South Phoenix. This program promotes family resilience and engages families with children from birth to age 5. This award-winning family support program features parenting education, child development



classes, the Ready! For Kindergarten parent program, community resource and referral services, educational workshops, Play and Learn parent-child interaction, group support, and family engagement. Educational programs teach, train, model, and promote positive experiences that help children reach their fullest potential and become ready for school and life. In 2021, the Center adapted to no or limited-contact services due to the Corona Virus Pandemic. The Family Resource Center continues to respond to incoming phone calls, texts, and emails, providing the latest information about resources for jobs, food pantries, utility assistance, and many others. In-person programs include Car Seat Safety Education and Safe and Healthy Infant Sleep. Ready! For Kindergarten, Nutrition Education and Storytime are available for participation virtually. All programs and activities are free of charge and supported by funding from First Things First. Programs are provided in English, Spanish and Arabic.

Research shows that programs such as this:

- *Strengthen families through increasing resilience factors and decreasing risk factors.*
- *Increase school readiness and literacy levels, which prepares for success in reading by the end of third grade.*
- *Help children achieve developmental milestones preventing the need for special education and developmental services.*
- *Increase positive parent and child interactions, which develops social and emotional skills.*

2021- By the Numbers

- **384 adults participated in workshops.**
- **744 families received referrals to assistance with needed resources and services such as unemployment, food, housing, and utilities. Fifty-six percent (66%) reported they received the service.**
- **402 families participated in drive-through community events that included school supplies, Thanksgiving meals and holiday gifts for children.**

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Project CENTRL

2021 was a year of FIRSTS as the Center remained committed to leadership development across the state. The flagship program, Project CENTRL, graduated two classes at the same time, for the first time since its founding in 1983. During the 2021 CENTRL Celebration, members of the graduating Classes 28 and 29 competed in the first-ever: Make a Difference Competition Live! The teams from each class proposed solutions for complex problems in rural Arizona like improving relations among the community and public safety, increased access to affordable healthcare and rural broadband internet and responsible recreation on public lands. Judges selected the top three teams and then all the attendees both in person and online were able to vote for the top team! The winning team implemented their program in Northern Arizona and sought out partners to bring the plan into reality. The final program: Alumni in Action worked across the state to help recruit applicants for future classes for the 16 spots for leaders who are looking to build their personal skills, learn about the issues facing rural Arizona and connect with leaders and experts. Online meetings happened for each county in the state and an in-person alumni event took place at Ft. Huachuca to learn about the Sentinel Landscape program.



CENTRL helps leaders:

- *Build skills in public speaking, effective interviews, advocacy, having difficult conversations, managing productive meetings, and participating in the local, state, and federal legislative processes.*
- *Learn about issues in rural Arizona, including water management, healthy forests, international trade, immigration, education, healthcare, and corrections.*

2021 - By the Numbers

- **Five – (5) alumni elected to Arizona’s 55th Legislature, including Tim Dunn, Class 12 and Sine Kerr, Class 22 representing portions of Maricopa County.**
- **Two - (2) – classes graduate in June: 28 and 29! We welcomed 16 new members of Class 30 to the twelve month, tuition free, experiential learning leadership development curriculum**
- **Fifteenth of March – 3/15 every year is the application deadline for the next class. Interviews are in April, notifications sent in May and seminars are from June – June each year.**

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Urban Horticulture

The Master Gardener (MG) Program within the Urban Horticulture Program of Maricopa County Cooperative Extension includes more than 530 Certified MG volunteers. The Program teaches efficient and productive garden practices specific to the Sonoran Desert with emphasis on the latest research-based science provided by the University of Arizona. Master Gardeners and University staff operate a Plant Help Desk which answered 1682 garden and landscape questions from the public in 2021. A web page for Arizona Citrus Resources was created to present links to all UArizona citrus-related Extension publications. It also serves as the gateway to an online Citrus Fertilizer Calculator, launched in 2021. The Calculator is an adaptation of Glenn Wright's "Citrus Fertilization Chart for Arizona az1671-2015. Using the Calculator, the amount of fertilizer and timing of application is instantly provided, though a simple menu system. This eliminates the need for calculating by hand using the original publication. The calculator was accessed 218 times in 2021 at <https://extension.arizona.edu/citrus-fertilizer-calculator>.

The Ask A Master Gardener service is an opportunity for the public to ask gardening questions at a live event. In 2021, Ask A Master Gardener was launched in Spanish and a Master Gardener Table has been held monthly at the Mexican Consulate in Phoenix.

The Master Gardener Training Course expanded to include a Home Horticulture track. This track presents the horticultural content offered in Master Gardener Training to the public without the expectation of certification as a Master Gardener volunteer. The asynchronous online format in use for the course has allowed us to fill thirty seats for Home Horticulture, without reducing the number of seats for Trainees preparing for Master Gardener certification. Twenty-one students have successfully completed the Home Horticulture Course.

A Facility Use Agreement between the University of Arizona and the City of Surprise was finalized which sets the terms for operating a MG Office with shared administration by the Surprise City Water Resources Management Department. The office had a soft opening for Master Gardeners to set up and organize the space. During this time, the City of Surprise began installing a Xeriscape Garden adjacent to the office and a grand opening for the MG Office and the Xeriscape Garden is anticipated in the Spring of 2022. The office will serve our outreach to District 4 in the West Valley, with its rapidly growing residential population.

The Urban Horticulture Program also supports the horticulture industry in Maricopa County through plant problem diagnosis and research-based outreach to nurseries, landscape managers, and arborists.

Our Horticulture and Master Gardener Programs:

- *Educate the residents of Maricopa County to more efficient and effective gardening practices in the Sonoran Desert.*
- *Create a network of trained volunteers to answer garden and landscape questions from residents of Maricopa County.*
- *Promote and create a community of Demonstration, Community, and School gardens.*
- *Diagnose plant problems and address issues of emerging pests and weeds.*



2021 By the Numbers

- **Over 1,682 plant and landscape questions/calls were answered through the Master Gardener Plant Help Desk.**
- **Over 4835 people had direct contact with our Horticulture and Master Gardener Programs.**
- **Over 530 active volunteers registered 24,965 volunteer hours estimated to be worth \$712,500.**

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Urban Water Education Programs

Smartscape began the year with courses online but transitioned to a limited in-person format mid-year. Even with reduced numbers, we were still able to serve a wide range of individuals associated with the landscape industry across Maricopa County in 2021. The program promotes research-based best practices for design, installation, and care of water-efficient landscapes in our desert environment.

The program offered a new course, Advanced Smartscape: Plant Materials, to complement the basic Smartscape and Advanced Smartscape: Irrigation courses. It provides in-depth information on identification, selection, and use of a wide range of plants suitable for water-efficient desert landscapes.

Due to COVID-19 shelter at home orders, Arizona Project WET's (APW) direct student programs were cut short for this school year. Despite that, APW was able to change the delivery of its programs to a virtual format immediately. Through its virtual workshops and multi-day academies for teachers, APW enabled 197 educators to deepen their knowledge of Arizona's water resources and share it with 23,752 students. The Water Festival Program held five in-person festivals serving 4,042 students, 156 teachers, and 281 parents with the assistance of 211 volunteers. The 800 students in the Water Scene Investigation (WSI) program made a tangible contribution to their communities and are now saving an estimated 769,968 gallons of water annually. Over 1,200 students in the Rainwater Harvesting program got their hands dirty and a little wet by learning how to create passive rainwater basins at their homes and schools. This video is an example of the virtual education that was delivered to students across the valley and the state! <https://bit.ly/2ZRymuB>



These programs help:

- *Thousands of students understand the complexity of water in our natural environment and how human use impacts this precious resource.*
- *Train landscape professionals proper techniques to conserve water while working with attractive and sensible landscapes for the Sonoran Desert.*

2021 - By the Numbers

- **Water Scene Investigation (WSI) program made a tangible contribution to their communities and are now saving an estimated 769,968 gallons of water annually.**
- **Over 145 landscape professionals from across Maricopa County attended Smartscape, Spanish Smartscape, and Advanced Smartscape: *Irrigation* training courses, learning techniques of wise water use in appropriate landscaping for our low desert environment.**

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Pesticide Safety Education

The Pesticide Safety Education Program (PSEP) is a statewide program designed to provide pesticide safety information and resources for people working in agricultural and structural pest control settings. PSEP staff offers programs in English and Spanish to better serve the linguistic needs of its clientele and coordinates outreach efforts with colleagues involved in state, county, and tribal pesticide programs.



Working in partnership with the Arizona Department of Agriculture, PSEP also strives to ensure certified applicators receive training and tools to help them work safely and effectively with restricted-use pesticides.

In 2021 PSEP received funding to develop a National Pesticide Applicator Core instructor packet to share with 56 land-grant university PSEPs located throughout the U.S. and territories. The materials benefit new pesticide safety educators searching for ready-to-use presentations as well as experienced trainers interested in gathering additional workshop activity ideas and PowerPoint slides to add to their current training programs.

This program helps to:

- *Provide employers, pest control professionals, and community members with information and tools they can use to protect themselves, other people and the environment when working directly with pesticides or in areas where pesticides have been applied.*
- *Prepare individuals for state-mandated pesticide applicator certification exams through training, study materials, and practice testing tools.*
- *Keep clientele up to date with current pesticide-related regulations, issues, and solutions so they can make informed decisions when using pest control products.*

2021 - By the Numbers

- 524 certified pesticide applicators, 127 landscape professionals, 45 master gardeners and arborists received information about pesticide regulations, application technologies, general pesticide safety measures, emerging pesticide-related concerns, and/or compliance issues during 13 pesticide safety sessions and continuing education events.
- 124 pest control professionals attended Pesticide Applicator Pre-Certification Training Courses presented through in-person and virtual courses.
- 2,543 certified applicators, pest control advisors, growers, pesticide safety trainers, tribal partners, and agricultural teachers received bi-monthly updates about pesticide courses and resources through the PSEP listserv.

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Agricultural Literacy & STEM Education

The Agricultural Literacy STEM (Science, Technology, Engineering, Mathematics) Education program provides educators and students with agricultural encounters to learn all about the STEM behind food and fiber production, as well as school garden curriculum support to integrate ag literacy. Lessons and 3-dimensional learning activities that are aligned to the Arizona Academic Standards are shared through professional development workshops and class presentations.

In 2021, the 31st annual Summer Agricultural Institute (SAI) provided over 60 teachers, who teach 14,000 students annually, a hybrid experience to visit research and processing facilities and see the day-to-day undertakings of a variety of ag operations, all while earning professional development hours. The goal is to immerse teachers so that they can become agriculturally literate and can communicate the importance of ag to their students through hands-on experiences and to provide scientifically accurate information about agriculture. Participants learned about a variety of topics: bees, wheat, pecans, pistachios, agritourism, growing watermelons and specialty crops, organic and conventional farming practices, genetically engineered cotton and precision agriculture, hydroponics and aquaponics, agricultural careers, and the beef, dairy, and wine grape industries. The highlight of the week was a sustainability panel discussion with representatives from the Arizona Farm Bureau, Elanco Sustainability, Roosevelt Water Conservation District, Dairy Council of Arizona, and Duncan Family Farms.



The Ag. Literacy and STEM Education program helps to:

- *Provide K-12 educators with professional development opportunities to improve students' knowledge about agriculture, which ensures an agriculturally literate society and communicates the source and value of agriculture as it affects our quality of life.*
- *Connect STEM with agricultural concepts that teachers can share with students.*
- *Educate consumers about our Arizona agriculture industry and agriculture's impact on their life.*

2021- By the Numbers

- **Over 60 teachers from 13 different counties that attended the Summer Agricultural Institute (SAI) are reaching approximately 14,000 students across Arizona with lessons and curricula aligned to state standards that engage students and increase agricultural literacy.**
- **Virtual presentations reached over 168 teachers who teach share the presentations with ~ 28,200 students. Topics included seed science of cotton, coffee, and acai; leafy greens, veggies and food safety in Yuma; school garden exchanges - microgreens and soil sampling.**
- **The UArizona School Garden Exchange provided curriculum support through virtual and in-person presentations for over 67 teachers who teach ~ 28,200 annually.**

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Maricopa County Cooperative Extension

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

Our Vision: To be a vital national leader in creating and applying knowledge to help people build thriving, sustainable lives, communities, and economies.

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 capable leaders in all communities.
- We are recognized experts for developing and disseminating research-based information.

Our 2021 Advisory Board

Cheryl Goar Koury, Arizona Nursery Association, District 1

Jon Wootten, Roots N Boots Queen Creek Pro Rodeo Committee; President, Friends of Horseshoe Park,
District 1

Sam Draper, AZ Municipal Water Users Association, District 2

John Augustine, Desert Tree Nursery, District 3

Tracy Johnson, Lakin Cattle Company, District 4

Tamara Ridge, Paul Rovey Dairy, District 4

Kevin Danzeisen, Danzeisen Dairy, District 5

Maricopa County Board of Supervisors

Jack Sellers, District 1

Thomas Galvin, District 2

Bill Gates, District 3

Clint Hickman, District 4

Steve Gallardo, District 5



Faculty and Staff - Maricopa County Cooperative Extension

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; DPP – Diabetes Prevention Program; EFNEP – Expanded Food and Nutrition Education Program; FCHS – Family, Consumer and Health Sciences; FRC – Family Resource Center; IPM – Integrated Pest Management; SNAP-Ed – Supplemental Nutrition Assistance Program-Education; TOP – Teen Outreach Program; WET – Water Education for Teachers; YD – Youth Development; CENTRL – Center for Rural Leadership.

Faculty and Staff 2021

Our Faculty

Kai Umeda, Interim Director, Area Agent: ANR/Turfgrass, Interim 4-H Agent

Traci Armstrong Florian, Agent: FCHS, EFNEP, SNAP-Ed, DPP

Michael Chamberland, Agent: ANR/Urban Horticulture

Scott Koenig, Executive Director: Project CENTRL

Patty Merk, Area Agent/Reg. Specialist: FCHS/Family & Youth

Ayman Mostafa, Area Agent/Reg. Specialist: ANR/Field Crops, IPM

Rebecca Senior, Assist. in Extension: ANR/Urban Horticulture

Gigette Webb, Agent: ANR/Ag. Literacy and STEM Education

Jennifer Weber, Assist. in Extension: Pesticide Safety Education



Our Staff

Hadeel Aborached, Program Aide, FRC

Danelle Acker, Program Coordinator, SNAP-Ed

Mary Ahern, Program Coordinator SNAP-Ed

Barbara Ashford, Administrative Assistant, SNAP-Ed

Christian Conner, Community Outreach Field Crops/
Turfgrass

Mary Conner, Accounting Assistant IV

Angel Escalante, General Maintenance Mechanic

Tamara Floyd, Program Coordinator, Sr., FRC

Marina Gallardo, Program Coordinator, SNAP-Ed

Jose Gamiz, Instructional Specialist, Sr., EFNEP/SNAP-
ED

Esther Geel, Program Coordinator, 4-HYD



Faculty and Staff - Maricopa County Cooperative Extension

Eunice Gonzales, Manager, Finance and Administration.
Kyle Harrington, Assistant in Extension, Field Crops/IPM
Khandle Hedrick, Instructional Specialist, EFNEP
Brittany Hobe, Program Coordinator SNAP-Ed
Patty Howard, Administrative Assistant, Horticulture
Amber Hughes, Program Coordinator, AZ Project WET
Sandra Hurlbut, Program Coordinator, AZ Project WET
Pamela Justice, Program Coordinator, Sr. AZ Project WET
Kirstyn Kay, Outreach Specialist II, Project WET
Niki Key, Administrative Associate, Project CENTRL
Taylor LaRavia, Program Coordinator, Urban Ag/Beg. Farmer
Lauren Marks, Instructional Specialist, Water Festivals
Kirti Mathura, Program Coordinator, Sr., Smartscape
Jenna Mennetti, Program Aide, 4-HYD
Ashely Miranda, Program Coordinator, SNAP-ED
Cathy Munger, Systems Administrator, Principal
Christina Munoz, Community Outreach, SNAP-ED
Kaley Necessary, Program Coordinator, SNAP ED
Ginamarie Nieves, Program Director, FRC
Delmi Ortega, Program Coordinator, Sr., EFNEP/SNAP-Ed
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