



School bus turned into mobile garden teaches youth about growing fruits and vegetables at Spitalny Elementary.

IMPROVING THE LIVES, COMMUNITIES, AND ECONOMY IN MARICOPA COUNTY

U of A SNAP-Ed Teams Promote Wellness Through Gardening

By Paula Barr Skillicorn

What do a school bus, grain grinder, and milk jugs have in common?

Each had a role in vegetable gardens that residents of Maricopa County started with support from the University of Arizona Nutrition Network (UANN). Under the leadership of Traci Armstrong Florian, the UANN food system team’s mission is to help people eat more fresh fruit and vegetables and includes working with schools, communities and individuals to start and maintain vegetable gardens.

As part of Cooperative Extension, all UANN staff provide classes, resources, workshops, materials, hands-on training and other support for school wellness, nutrition, and gardens. Vegetable gardens help people eat healthier for less and make it easier for families in food deserts to get fresh herbs and produce.



Among recent projects aided by UANN teams:

- **Family Gardens** - Coral Canyon housing complex families started two vegetable gardens after taking gardening classes. In addition to planting native seeds, they planted seedlings they had grown in mini-greenhouses made from plastic milk jugs. This was the first gardening experience for many, and they look forward to reaping a healthy harvest this fall.
- **Gus the Garden Bus** - Last spring, Justine Spitalny School staff, students, and parents started a salsa garden in a Cartwright School District school bus. Gus is a mobile educational display that generates excitement about gardening, and already has led to the creation of three new school gardens. This year, United Way funds will go toward improvements to the bus.
- **Kneel Down Bread** – Five girls from Salt River Youth Services harvested corn from the Salt River High School garden to make a traditional native dish. They ground the corn, wrapped the flour in a cornhusk, and baked it for 30 minutes to create Kneel Down Bread.

For more information about UANN’s food access, wellness, or direct education teams, contact Traci Armstrong Florian at 602-827-8237.

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COLLEGE OF AGRICULTURE & LIFE SCIENCES
Cooperative Extension
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MCCE Summer Interns

By Ed Martin

On Thursday, July 20, we concluded our summer intern program with dinner, certificates of completion, and presentations at the Maricopa Agricultural Center for the interns and their families. The interns are part of Project Puento, a USDA grant funded program that encourages youth to participate in summer internships in agricultural fields to learn more about the opportunities in the science and engineering of agriculture, natural resources, and family health sciences. This year, there were 35 interns spread across Central Arizona including USDA Arid Lands Agricultural Research Center, Bridgestone, Rio Salado Habitat Restoration Area, Global Water, Arizona Game and Fish, Audubon Arizona, and the UA Maricopa Agricultural Center and Maricopa County Cooperative Extension. Our interns here at the office worked on Kurapia growth performance (Forrest Hunter); spider mites in silage corn (Juan Paredes); lygus bug monitoring (Amy Fan); Project CENTRL (Nitya Aggarwal); and Cognitive Skill Development in Early Childhood (Alison Fahy). The program, coordinated by Central Arizona College, is a unique opportunity for high school students to earn college credit while



MCCE faculty & staff members Kai Umeda, Monica Pastor, Kyle Harrington, and Dr. Ayman Mostafa with their summer interns from Project Puento.

learning new skills and having the opportunity to work on research and Extension education programs. For many, this was their first “real job” and they were proud that they were able to get up every morning, go to work, and be part of a team. We are all very proud of our intern class this year; their performance was outstanding! This is the fourth year MCCE has been involved in the intern program and we will be participating again next year.

Volunteer Spotlight: Arizona Project WET - A Priceless Commodity

The long term availability and quality of water in Arizona is dependent upon educating the next generation. Arizona Project WET (APW) is a water education program that reaches thousands of students across the state through the coordination of community volunteers.

Two APW student outreach programs, Arizona Water Festivals and the Aqua STEM Program, require volunteers to successfully deliver learning events. We need your help, so please check out the opportunities below!

Water Festivals

The 22 water festivals that APW delivers each year would not be possible without community volunteers. These volunteers take time to learn to facilitate APW lessons prior to the festival. At the event, they are the ones that engage students in learning about water. Last year, in Maricopa County alone, 358 volunteers were essential to the delivery of 8 festivals reaching over 6,500 students.

This year we are expecting even higher numbers of student participation! Come out and get involved in your community by volunteering. Help set-up, facilitate a lesson, or come to support facilitators! If you would like to volunteer, please contact us at: azwaterfestival@email.arizona.edu.



Volunteers help students understand how water moves in the Earth system at a water festival.



Aqua STEM

The new Aqua STEM Program supports teachers in implementing STEM units. Teachers choose from three different units that have students designing rainwater harvesting systems, exploring Arizona’s amazing riparian areas, or installing high efficiency aerators on their school’s faucets.

In the Riparian Habitat Exploration unit, students take on the role of scientists in the field as they assess the health of a riparian ecosystem. Last year, in Maricopa County, over 700 students were able to visit and learn about a riparian area with help from over 60 volunteers. Students, in a different unit, conduct a School Water Audit, where they audit bathroom faucets, replace low efficiency aerators with high efficiency aerators, and calculate the water savings that result from their efforts.

To facilitate deeper learning, both Aqua STEM units require adult mentors for student groups of 4 to 5. We need your help in bringing effective STEM learning to Maricopa County students! If you are interested in volunteering for the AquaSTEM program contact us at: shurlbut@email.arizona.edu.



Students learn about riparian habitats with help from volunteer mentor scientists.

Becoming a 4-H Adventures on Mingus Mountain



Archery coaches teaching the campers the proper way to hold the bow.



Campers focusing on building their team.



Camp Counselor leads campers in goofy songs.

For more information on the Maricopa County 4-H Program visit <http://extension.arizona.edu/4h/maricopa> or call us at 602-827-8228, and make sure to like us on Facebook <https://www.facebook.com/MaricopaCounty4HYouthDevelopment>.

Program Spotlight: 4-H Adventures on Mingus Mountain



By Haydee Pardee, Robin Etnyre, and Kim Christman

“Oh say can you see...” is how campers started each day at 4-H Camp G.R.I.T. (Growing, Reaching, Impacting, Tomorrow) as they raised the American flag and the 4-H flag.

Plaster masks, tie dye, buggy hands, orienteering, and archery are just some of the many activities that our campers at 4-H Camp G.R.I.T. enjoyed! From July 13th to July 16th, 2017, campers got to explore different hobbies and possible future fields of work! Previous 4-H’ers and new 4-H’ers were able to disconnect from the day to day media driven world, and instead connect with nature and the outdoors. We had workshops put on by guests from around the state, from clowning to environmental microbiology! The rain did not stop us from participating in numerous hands-on activities.

Early Bird Campactivities started our days and campers were excited to start the day with a fun activity at 6:15 a.m.! Early bird catches the worm and that worm was used for our fishing activity at the lake on the first morning at Camp. Another day campers took part in yoga, exercising and meditating first thing in the morning. Last but not least, for the last Early Bird Campactivity we played Gaga, a gentler version of dodge ball. For our competitive campers, this was the perfect way to start the morning and get energized!

You can bet we were all looking forward to our 3 meals a day! We had burgers, lasagna, biscuits and gravy, and so much more. A local caterer was able to accommodate the campers, counselors, guests, and staff’s pallets. We followed up every camp meal with some great renditions of our favorite camp songs, “Singing in the Rain,” “Little Bunny Fufu,” and more! And who doesn’t enjoy an ice-cream sandwich while watching the rain fall from the dining hall?

We concluded our nights with programing organized by our beloved 16 teen camp counselors. The counselors worked hard not only on their forty plus hours of training to become a camp counselor, but they also worked in teams to organize each night’s evening programming. One night the campers were running around collecting information in a Clue-inspired relay race and the next they were showing their talent at the “4-H Camp G.R.I.T Has Talent” talent show! The evening programming was also accompanied by the opening and closing campfires. Campers were able to form memories to last a lifetime!

Tent Talks in Central Arizona

By Dr. Ayman Mostafa

One very important attribute of Cooperative Extension is the timely delivery of non-biased educational materials based upon current research results and other relevant information to our clientele. The Field Crops IPM Program (The Program) have gone through an evolutionary process in how messages are delivered to their respective clientele. Beginning with traditional farm visits and handing out hard-copy publications, the distribution of information is now mostly done via mail, email, internet, and direct face-to-face contacts with our clientele. The Program serves about 1,125 growers, 204 registered Pest Control Advisors (PSAs), 866 certified private and commercial applicators, as well as many representative of industry, government, and interested members of the community. Our clientele are managing nearly 700,000 acres of field or row crops. In 2011, the value of Arizona's agricultural production for field crops, vegetables, and melons was nearly \$2.5 billion. Our efforts also contribute to related industries like dairies, beef, and fiber production.

Various needs assessment surveys conducted since 2011 in central Arizona showed increasing clientele interest in education about many aspects of plant health topics like pest sampling, biology and identification, economic treatment thresholds, pest resistance, nutrition management, crop rotation, water use management, equipment, and new technologies. During the last few years, these communities in Arizona have faced many opportunities and challenges. Some challenges include volatility in some commodity prices, higher demands on food and fiber products, issues of water, soil, and climate change, and the dilemma of dealing with pest management and resistance. The Program responded by developing and delivering relevant resources. Many clientele, across these groups, are managing different operations with diverse commodities and dealing with similar challenges.

Recent budget constraints and reduced ag Extension personnel create greater demand to expand our reach beyond the



Dr. Peter Ellsworth, Specialist / Professor, IPM Coordinator & Director, Arizona Pest Management Center helps illustrate to local growers how the Integrated Pest Management program has been able to reduce pesticide use and save millions of dollars over the years.



University of Arizona Maricopa County Cooperative Extension's Dr. Ayman Mostafa, Associate Area Agent, teaches at a recent 'Tent Talk.'

“traditional”, albeit still very important, Extension delivery methods described above. Furthermore, the UA CALS faculty members can join together collectively to achieve their goals and share their research findings. Since the start of The Program in 2011, we initiated many forms of communication to disseminate new information, research results, and expand discussions with clientele including field days, field crop “clinics”, specialized workshop on new technologies and forage crops, and “Tent Talks”. The latter is a field event organized by The Program and hosted at one of our grower's farms, usually in the summer. Very early in the morning of each Tent Talks, we erect a UA canopy tent at one of UA Cooperative Extension field crop trials we conduct in partnership with our grower collaborators. We dedicate the Tent Talks to the trial and eminent issues that are faced by the community we are in. Many members of the UA Extension Ag Team, as well as our growers discuss field crops and pest management issues covering topics of soil and nutrient management, crop production, climate and weather technology, beneficial and pest insects, plant disease, and weed management. These Tent Talks serve as a signature event to bring together UA Cooperative Extension faculty and our clientele to discuss important and looming issues facing the farming communities in central Arizona. Tent Talks have become annual events for the field crop communities in central Arizona. The Program had its first “Tent Talks” event on June 24, 2011 in Goodyear. Since then, The Program has organized 17 Tent Talks spanning Maricopa, Pinal, and Pima Counties and were attended by hundreds of our clientele and collaborators. Our last Tent Talks was held on July 25, 2017 in Buckeye. Others have expanded upon the success of the Tent Talks and further broaden the impact of our Extension outputs by organizing several Tent Talks of their own in central Arizona.

Tent Talks in central Arizona have proved to be appealing to clients across the state and from surrounding states, as well as increased collaboration with industry, and various plant production and management communities. Tent Talks also serve as a unique way of connecting more clientele to The Program by solidifying efforts of different Extension faculty and clientele with common interests, to achieve greater impacts serving the agriculture industry in central Arizona.

The Director's Cut

By Ed Martin



Summer is coming to end – I can always tell because the school buses start travelling their daily routes across the neighborhoods in Maricopa County and I hear the meteorologist say we are in for a cool spell with highs in the upper 90's! Our "Fall" Master Gardener class has started. This is a truly unique opportunity to learn about our Sonoran desert environment. The next class will be in January 2018 - look for an announcement on our website or Facebook page. Our summer interns have all returned to school. These interns were part of Project Puente, a program where high school students earn college credit while interning at agricultural research facilities and

Extension offices. We had five excellent interns this year. Congratulations to them all. We just concluded our most recent Smartscape class in August. With over 50 participants, the Smartscape classes are geared toward landscape professionals. The classes teach ways to save water through proper landscape management including choosing the correct plants, proper pruning, and proper irrigation installation and management. Our Turfgrass Extension program is gearing up for the Fall overseeding, or maybe just the Fall painting – using green dyes to paint turf, saves money and water. For more information go to <https://turf.arizona.edu/>. Our field crops program is planning for summer harvests while at the same time getting ready for the fall/winter vegetable and grain seasons. The Roosevelt Early Childhood Family Resource Center had its Open House and our SNAP-Ed program is renewing partnerships with local schools to start their school nutrition programs. Finally, our Agricultural Literacy program will be supporting Arizona Ag. Literacy Days in October, a free program that focuses on educating Arizona students about our connection to agriculture and the commodities produced on Arizona's lands. As always, I encourage everyone to stop by the office to see what's new with your Maricopa County Cooperative Extension.

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ABOUT TOWN

Family Resource Center - Parent-Child Interaction Classes

Where: Roosevelt Family Resource Center
More Information: <http://extension.arizona.edu/roosevelt-early-childhood-family-resource-center>

DIG: Intro to Vegetable Gardening

When: Sep. 9 6:00pm - 8:00pm
Where: Maricopa County Cooperative Extension
More Information: <https://extension.arizona.edu/desert-institute-gardening-introduction-vegetable-gardening>

Master Gardener Plant Clinic

When: Sep 13 9:00am - 10:30am
(2nd Wed Every Month)
Where: Maricopa County Cooperative Extension
More Information: <https://extension.arizona.edu/master-gardener-monthly-plant-clinic>

DIG: Fall Vegetable Gardening

When: Sep 14 6:00pm - 8:00pm
Where: Maricopa County Cooperative Extension
More Information: <https://extension.arizona.edu/desert-institute-gardening-fall-vegetable-gardening>

ACT-1: Arizona Communication Training

When: Sep 19 11:30am - 1:00pm
Where: Roosevelt Family Resource Center
More Information: <https://extension.arizona.edu/act-1-english-arizona-communication-training>

Bike Safety Night

When: Sep 27 4:00pm
Where: Maricopa County Cooperative Extension
More Information: <https://extension.arizona.edu/bicycle-safety-night>

Summer Agricultural Institute Alumni Conference

When: Oct 21 9:00am - 4:00pm
Where: Maricopa County Cooperative Extension
More Information: <https://extension.arizona.edu/summer-agricultural-institute-alumni-conference>

Fall Festival and Plant Sale

When: Oct 28 8:00am - 12:00pm
Where: Maricopa County Cooperative Extension
More Information: <https://extension.arizona.edu/fall-festival-and-plant-sale-event>

Maricopa County Cooperative Extension Monthly Event Calendar

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



Check us out at:
<https://www.facebook.com/MaricopaCountyCooperativeExtension>

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