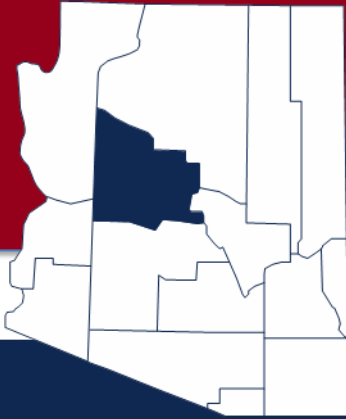


COLLEGE OF AGRICULTURE & LIFE SCIENCES

# Cooperative Extension



## Yavapai County Report 2016



THE UNIVERSITY  
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Old Main, constructed in 1891, was the original University of Arizona Building. Designed in a style often referred to as 'territorial hybrid', the building was sunk six feet below the surface so the ground would help minimize the effects of the warm Tucson summers.



**From the County Director**

The University of Arizona Cooperative Extension was busy conducting educational programs and providing direct assistance to Yavapai County residents in 2016. Our program areas included 4-H youth development, animal science, agriculture, horticulture, natural resources, and family consumer health sciences. These programs provided grassroots education to 32,042 Yavapai County residents. In addition, 233 citizens served as Cooperative Extension volunteers. These valuable volunteers enhanced Extension programming by helping Cooperative Extension educators deliver relevant educational programs and information to the citizens and communities of Yavapai County. The contribution of these trained volunteers totaled 16,600 hours of service with an estimated value of \$391,096.

Cooperative Extension greatly appreciates the financial support, office space, and services provided by the Yavapai County Board of Supervisors. Yavapai County Cooperative Extension continues to leverage county contributions through collaborations with local partners and securing grant funding. With Yavapai County’s continued support, Cooperative Extension is confident we can continue to offer high-quality educational programs making a brighter future for Yavapai County residents.

Sincerely,

Jeff Schalau  
County Extension Director  
Agent, Agriculture and Natural Resources



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Filling the silo at the U of A Prescott Dry Farm which was in operation between 1912 and 1927.



### Because of Yavapai County Cooperative Extension, in 2016...

- **Yavapai County Cooperative Extension volunteers contributed 16,600 hours of service valued at \$391,096** (*Independent Sector*, 2015 value of volunteer of \$23.56/hr.) serving as Master Gardeners, 4-H Leaders, Food Safety Industry Council, and Extension Advisory Board members.
- **166 active Yavapai County Master Gardener volunteers** contributed 13,892 hours of service to their communities reaching 4,837 consumers with science-based gardening information. In doing so, they promoted sustainable pest management solutions, water conservation, use of appropriate landscape plants, and small-scale food production through backyard/community gardening.
- **172 youth were enrolled in Yavapai County 4-H Club Programs.** These youth were supported by 46 volunteer leaders and enrolled in projects which included horse, sheep, swine, goat, steer, rabbit, poultry, photography, leather craft, leadership, dog, robotics, shooting sports and Cloverbuds.
- **305 school outreach visits** were conducted across Yavapai County to conduct STEM (science, technology, engineering and mathematics) education. Activities reached 8,339 students and averaged 1 1/2 hours in length. Activities included exploring properties of matter, the hydrologic cycle, magnetic fields, engineering design process, lunar phases, seasons, the solar system and agriculture literacy.
- **1,150 youth had outdoor science education experiences** at the James 4-H Camp at Mingus Springs. Located in Yavapai County at 6,500 feet elevation, the James 4-H Camp was acquired in 2011 by the University of Arizona with help from generous donors and serves as the statewide 4-H camp for Arizona.
- **264 food establishment managers completed the 6-hour Professional Food Manager Class** in both Prescott and Cottonwood. In doing so they increased their knowledge of food safety principles and how to make informed decisions to reduce risk factors and the incidence of foodborne illness in Yavapai County.
- **The 13 member Food Safety Industry Council (FSIC) met 6 times during 2016** to identify and address food safety issues in Yavapai County. The FSIC is the result of a partnership between Cooperative Extension and Yavapai County Community Health Services and provides guidance and feedback to the Yavapai County Board of Supervisors.
- Cooperative Extension **completed its first year of a new Supplemental Nutrition Assistant Program Education (SNAP-Ed) grant through the Arizona Department of Health Services.** In 2016, Cooperative Extension reached **843 contacts** in Yavapai County with nutrition education programming, focusing on low-income families with young children and older adults.
- Cooperative Extension continues to partner with **Yavapai County Community Health Services** on numerous food safety and nutrition education programs including Yavapai Seasonal Harvest, Supplemental Nutrition Assistant Program Education (SNAP-Ed), and the Food Safety Industry Council.
- Yavapai County Cooperative Extension continued to build its capacity for **Small Acreage Education** programs which included two **Well Owner Workshops** (Prescott, April and October) where 134 participants learned about the components of a residential well, its maintenance, water testing and treatment options during these half-day workshops.
- Another **Small Acreage Education** program was the **Mushroom Production Workshop** (August) where 20 attendees learned how to propagate and grow oyster mushrooms. Other Small Acreage topics include invasive species, wildfire defensible space, pasture management, beginning farmer courses, and more.
- A team of Yavapai County Master Gardener volunteers created and maintained the **Yavapai County Native and Naturalized Plant Database**, an on-line database ([cals.arizona.edu/yavapaiplants/](http://cals.arizona.edu/yavapaiplants/)) which contains descriptions and multiple photos of 719 native plant species (8% increase from 2015). This site is used by government agencies, schools, universities, non-profits, and other plant enthusiasts and had over 13,575 users and 103,905 pageviews in 2016.

## 2016 Educational Programs and Participation Data



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*In 2016, our educational programs focused on:*

<b>4-H Youth Development</b>	4-H youth development programs, 4-H volunteer training/support, youth leadership, and Science, Technology, Engineering, and Math (STEM) and water resource education and outreach.
<b>Family, Consumer and Health Sciences</b>	Food safety manager certification, consumer education, food preservation, early care education, early brain development, nutrition education, and community leadership.
<b>Horticulture</b>	Master Gardener training and volunteer support, insect and disease management, backyard food production, and consumer help desks in Camp Verde and Prescott offices.
<b>James 4-H Camp</b>	Educational programs offered at the statewide 4-H camp located in Yavapai County, the James 4-H Camp at Mingus Springs.
<b>Noxious/Invasive Weed Management</b>	Support to cooperating agencies/institutions/organizations, Arizona Pesticide Applicator Training and Certification, and public education.
<b>Livestock/V Bar V Ranch</b>	Sustainability of grazed rangelands for ranchers and agency personnel, rangeland monitoring education, and access to technical and educational resources.
<b>Small Acreage</b>	Beginning farmer training and support, well owner education, invasive species management, orchard education, specialty crops, and educational resources.

### Yavapai County Citizens Served in 2016

Program Area	Educational Outreach	Office Contacts*	Totals
4-H Youth Development	218	3,371	3,589
4-H Science, Technology, Engineering, and Mathematics (STEM)	8,339	550	8,889
Family, Consumer and Health Sciences	2,152	4,653	6,805
James 4-H Camp	1,150	45	1,195
Horticulture	4,185	5,644	9,829
Natural Resources	608	1,127	1,735
<b>Totals</b>	<b>16,652</b>	<b>15,390</b>	<b>32,042</b>

\*Includes email, phone and face to face.

## 4-H Youth Development - Clubs and Fairs



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### Youth-Adult Partnerships

Youth-adult partnerships are the heart of the 4-H mission, and a guiding principle for how 4-H leaders, staff, and volunteers work with young people. All members of a community have a role in creating a strong and healthy society. Sustained positive relationships between young people and adults support the healthy development and well-being of youth, while also benefiting adults, organizations, and communities. Youth-adult partnerships occur when:

- Young people are seen as assets to their communities as much as adults.
- Adults create ongoing opportunities for young people to share leadership with them in community settings.
- Youth contribute what they uniquely bring to the group and to the community.
- Youth and adults engage as equals in planning, implementing, and evaluating programs that shape the development of youth, as well as their communities.

### Yavapai County 4-H Office

The Yavapai County Extension Office experienced a change in staff during 2016. Mary Jo Moncheski, Assistant Agent accepted a position with Purdue University. Shirley Vasovski took on additional responsibilities as the Program Coordinator.

15 newly certified volunteers were given training including review of the AZ Policies and Procedure Handbook, the 4-H Volunteer Handbook, and the Code of Conduct.

### Yavapai County 4-H Clubs

Yavapai County 4-H community and project clubs were led by 46 adult volunteers. Yavapai County 4-H clubs reached over 172 youth participating in projects ranging from sewing/textiles, leadership, livestock and small stock, to horse and outdoor adventures.



The 4-H Horse Project teaches youth how to care for and show horses.

### Record Books

The 4-H program has a long history of recordkeeping which reflects the importance in our daily lives. In 4-H, young people keep records of their activities, events, profits and losses, skill development, learning experiences, and much more using the 4-H Record Book. In 2016, 100 of the 129 eligible 4-H members turned in their 4-H Record Books for judging.

### Yavapai County 4-H/FFA EXPO

The 2016 4-H/FFA EXPO Show and Sale was held on September 7-11 at the Yavapai County Fairgrounds. Fifty-nine items were sold at the auction. Net income including receipts from BBQ and tent setup came to a total of \$164,025. Members who raised an animal or completed a project were able to sell their projects at auction. 4-H youth use their profits from the sale to help fund their education and future livestock purchases.

The Verde Valley Fair is held each May and is also open to 4-H youth participation. 4-H members from the Verde Valley and nearby areas exhibited their projects at the Verde Valley Fair and many sold them at the Verde Valley Junior Livestock Auction.



Yavapai County 4-H Members presenting their award certificate at the 2016 4-H/FFA EXPO.

### Yavapai County 4-H Horse Committee

The Yavapai County 4-H Horse Committee sponsored three educational clinics for 4-H youth on: horseshoeing & hoof care; horse first aid, vision & pulse; and goat tying. The Committee also sponsored two Yavapai County horse shows that allowed members to qualify for the State 4-H Horse Show which was held in November in the Phoenix area.



### The James 4-H Camp

The James 4-H Outdoor Learning Center provides 4-H members/agents, university clubs and organizations, local schools, and non-profits a safe, *American Camp Association* accredited outdoor learning facility. 4-H Programs across the state have access to natural resources and environmental education curriculum along with other critical 4-H curricula, communication and expressive arts, health and wellness. We also engage youth in finding their leadership style, while learning citizenship and life skills. The James 4-H Outdoor Learning Center vividly demonstrates the 4-H motto, "To Make the Best Better", creating the context for all that awaits for Arizona 4-H Camping.

### James 4-H Camp Program Impacts

- 306 4-H participants, 562 community partners and 282 school students gained life skills such as responsibility, teamwork, and citizenship.
- Participants gained a greater appreciation for the natural world.
- Participants formed lasting relationships with other campers and mentors.
- Participants learned to trust and increased their willingness to try new things.
- Participants gained a better understanding of natural resources and water/watershed issues.

### Testimonials

"The solar and other improvement projects have really changed the feeling and safety of camp for the better."—4-H Agent

"Thank you for going the extra mile to make our program special."—Group Leader

"Camp really helped me realize I'm a natural leader."—4-H Teen

### MoYava 4-H Camp

A team of 54 campers and 17 adults worked together in a Youth/Adult Partnership to design a successful camping program for Mohave and Yavapai County 4-H youth.



Agriculture and Natural Resources Agent, Jeff Schalau, presenting forest measurement activities to youth at the MoYava 4-H Camp on July 7, 2016.

At MoYava 4-H Camp, youth learned about forestry, wildlife, and fisheries. Campers also participated in community service projects that improved facilities and safety at the camp. Evaluations indicated that MoYava campers gained many new skills, became more independent, increased their knowledge of natural resource management, and made lifelong friends.

### Natural Resources Conservation Workshop for Arizona Youth (NRCWAY) and Mo-Yava 4-H Camp

NRCWAY is a five day residential camp experience for youth ages 13 to 19 sponsored by the Arizona Section, Society for Range Management (SRM). NRCWAY 2016 was planned and delivered by Agents Kim McReynolds, Andrew Brischke and Jeff Schalau. This team planned and delivered NRCWAY's educational program, invited multiple guest speakers, and hired cooks, a nurse, and a lifeguard. In 2016, NRCWAY was held at the James 4-H Camp at Mingus Springs July 25-29, 2016. Twenty-three youth attended and several natural resource professionals volunteered their time. Participating youth came from diverse backgrounds and locations across Arizona

### Journey: Opportunity for Leaders of Tomorrow (J.O.L.T)

The 2016 J.O.L.T was held in Heber, AZ at Camp Shadow Pines on June 6-10th. During J.O.L.T., teens learned and practiced teamwork, communication, and leadership skills. J.O.L.T had a total of 112 youth participants from across the state. Six workshops relating to public speaking, career pathways, leadership styles, communication and teamwork were delivered to participants. Youth worked in teams, called challenge groups, to get through various stations that tested verbal and non-verbal communication and leadership skills. Depending on the station, challenge groups had rotating leadership, which gave others a chance to step up and have their voices be heard.



Cooperative Extension STEM Educator, Stacy DeVeau, teaches a science lesson to campers at the James 4-H Camp.

## 4-H Youth Development—Science, Technology, Engineering and Mathematics (STEM)



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### Yavapai County STEM Programs

4-H is inspiring the next generation of inventors, entrepreneurs and problem-solvers by giving youth plenty of opportunities to try their hands at real world science. 4-H Science, Technology, Engineering and Mathematics (STEM) projects provide science enrichment opportunities connecting kids to the University of Arizona through science outreach programs.

### STEM Outreach

The Yavapai County 4-H Program Coordinator Sr., Stacy DeVeau, conducted 305 STEM outreach visits, in formal school settings and informal settings, such as in libraries, after school and camp programs. A variety of STEM topics, including the nature of science, properties of matter, magnetic fields, the engineering design process, lunar phases, seasons, the solar system, Arizona agriculture and water resources were provided to 8,339 students. The program's reach continues to increase to serve more students in a greater number of schools. Stacy brought the Arizona Agriculture Literacy Days program to 40 classes this year. The program, which includes a reading of the book, "Arizona Agriculture: Bee's Amazing Adventure" runs mid-October to mid-December. Participating classes received a copy of the book for their class library.

This year, the STEM program once again received funding from the City of Prescott to support the Wild Over Water (WOW) program. WOW consists of four lessons aimed at improving students' understanding of how water moves and is used in the Earth-system: the water cycle, watersheds, groundwater, and the evolution of water-related technology and conservation. The WOW program was delivered in 27 classrooms this year.

Stacy provided a Drone Discovery program to Yavapai County Youth during the 4-H National Youth Science Day Experiment. This year, The Spot: A Child's Museum closed,



Stacy DeVeau assists with a solar workshop on June 17, 2016 at the Yavapai County Cooperative Extension office in Prescott, AZ.

allowing Stacy to devote more time to direct outreach efforts. Stacy also participated in the Prescott Regional SciTech Fest sharing information about 4-H and other Cooperative Extension services with an estimated 750 members of the community at large attending.

### Professional Development

Stacy received funding from the Arizona Farm Bureau Women's Leadership Committee to support her attending the National Agriculture in the Classroom Conference, held in Litchfield Park, where she delivered a "Pizza Comes from Farms?" workshop. She also attended the University of Arizona's Water In-Service Training, held August 11-12 in Tempe. The In-service included sessions on water resources, management and conservation in the Southwest as well as engaging the public through educational activities and demonstrations. Additionally, Stacy attended the Yavapai County Well Owners' Workshop which covered a variety of material related to water quality and well system maintenance.



A fourth grade student at Seligman Elementary School creates a watershed map to learn about the impacts of human activity on water quality.



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## Family Consumer Health Sciences

### Food Safety/ Local Foods



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### Family Consumer Health Sciences (FCHS)

Cooperative Extension works to strengthen families, promote healthy lifestyles and wise financial decisions, and develop community leaders by taking our programs to community centers, schools, churches and other venues to reach different audiences. It takes teamwork. These programs are conducted by University of Arizona College of Agriculture and Life Sciences (CALs) county-based extension agents and campus-based extension specialists from the Norton School of Family and Consumer Sciences and the Department of Nutritional Sciences. In Yavapai County, Cooperative Extension FCHS programs include food safety, local food systems, early childhood education, and Supplemental Nutrition Assistance Program Education (SNAP-Ed).

### Food Safety

During 2016, 264 Yavapai County food establishment managers were trained through the Prometric Certified Professional Food Managers' Program. This nationally recognized, six-hour certification course is aligned with the 2013 FDA Food Code. The Food Safety Manager Certification is required by the Yavapai County Environmental Health Department. Cooperative Extension's training helps restaurant managers and employees increase their knowledge of food safety principles and make informed decisions to reduce risk factors and the incidence of foodborne illness. The 2016 "pass rate" for the exam was 94.3%. In 2016 many positive changes were implemented including an updated PowerPoint presentation, use of the NEHA Professional Food Manager manual, and additional reviews. According to 100% of CPFM post-exam survey respondents evaluated the quality of the training as "good" to "excellent" and 99% CPFM post-exam survey respondents felt that the training materials and presentation prepared them adequately for the exam. The new pre- post quiz implemented in 2016 indicated that CPFM participants had a 27% average increase in knowledge about food safety practices.



Students at Granite Mountain Middle School learned how to make jam using food preservation methods taught by Hope Wilson, FCHS Area Assistant Agent.

### Yavapai County Food Safety Industry Council (FSIC)

The FSIC is made up of 13 appointed members, 10 of whom are industry representatives (2 from each of the Board of Supervisors Districts) and 3 community representatives at large, as well as ex-officio members from Yavapai County Community Health Services and the University of Arizona Cooperative Extension. In 2016, the FSIC:

- Established a workgroup to develop guidance to safely reduce food waste in Yavapai County.
- Hosted an educational booth at the US Foods Camp Show in Prescott and disseminated educational materials to attendees.
- Developed educational stickers for food establishments to post in food preparation areas based on most common violations. Stickers were disseminated to food establishments at CPFM classes and at YCCHS inspections.

### Food Safety Community Presentations:

- Nicole presented a food safety class to 122 middle-school students at Prescott Mile High Middle School in February.
- Nicole hosted an educational booth about foodborne pathogens at the Sci-Tech Festival at the Prescott Gateway Mall in February.
- Hope presented "Introduction to Home Canning" at the Cottonwood Public Library, which was open to all community members. Thirty-three community members attended the 90 minute presentation in August.
- Hope was invited by FoodCorps Arizona to present at the Granite Mountain Elementary School's Cooking Club to teach "Making and Canning Jam". Seventeen 5th and 6th grade students participated in this hands-on class held in February.



U of A Green Fund Extern, Taylor Satterlee, shares a bell pepper during the harvest at the YMCA community garden in Prescott, AZ.

## Family Consumer Health Sciences Nutrition Education and Physical Activity



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### Nutrition Education

Yavapai Seasonal Harvest (YSH) is a collaborative partnership with Yavapai County Cooperative Extension and Yavapai County Community Health Services, Prescott Farmers Market, FoodCorps Arizona and AmeriCorps VISTA. YSH is designed to increase fruit and vegetable consumption, promote food literacy and support local agriculture in Yavapai County. In 2016, YSH developed three community and educator newsletters featuring radishes, tomatoes and turnips. Community newsletters included information about how to select and prepare featured local produce as well as nutrition information. The newsletters were made available to schools and Head Starts to give to parents and are posted on the Yavapai Seasonal Harvest website.

YSH partners conducted taste tests at 7 different schools in Yavapai County. During the taste tests, 1,256 students tried either radishes (860) in February or turnips (396) in October. Half of the of students voted that that they “loved” the featured vegetable.

### Farm to School

The FCHS faculty and staff participated in the Quad-Cities Farm to School Steering Committee to determine next steps for the area following the USDA Farm to School Planning Grant. FCHS Agent, Hope Wilson, partnered with Prescott Farmers Market and FoodCorps Arizona and submitted a grant application for the USDA Farm to School Service Grants.

### Supplemental Nutrition Assistance Program Education (SNAP-Ed)

Yavapai County Cooperative Extension completed the first full year of a three year grant from Arizona Department of Health Services. This is the first time Cooperative Extension in Yavapai County has received this grant to deliver nutrition education programming to low-income Yavapai County families. The goal of the



Haley Pizzo, UofA Wildcat Americorp Member, building a school garden bed at Discovery Gardens Preschool in Prescott, AZ.

program is to improve the likelihood that persons eligible for SNAP will make healthy choices within a limited budget and choose active lifestyles. Yavapai County Cooperative Extension is partnering with Yavapai County Community Health Services to deliver the program county wide. Cooperative Extension focuses on providing nutrition education to young children and their parents and seniors through classroom education, food demonstrations, gardens, farmers’ markets and farm to fork initiatives.

In addition to nutrition education classes and activities, SNAP-Ed focuses on supporting systems and environments that encourage healthy choices. In 2016, Yavapai County Cooperative Extension:

- Built/planted two new preschool gardens.
- Completed an assessment of the number and type of early childhood and community gardens in Yavapai County.
- Developed a survey that asks SNAP and WIC receipts about the barriers that keep them from redeeming their benefits at farmers’ markets to be conducted in the spring of 2017.
- Received Fruit Tree Planting Foundation Grant for Chino Valley Head Start to begin an early childhood education site orchard.
- Participated in a workgroup that helped create a new farmers market that accepts WIC and SNAP benefits.
- SNAP-Ed Program Coordinator, Rebecca Serratos, co-presented “Collective Impact: Partnering across ECE in Yavapai County” with YCCHS staff at the Educating the Young Learner Conference in Prescott, AZ (Arizona Department of Education, May 2016).

### Physical Activity

Walk across Arizona is a University of Arizona program designed to encourage individuals and families to increase their participation in activities that promote a healthy lifestyle. In 2016, the FCHS partnered with 4-H Youth Development to reach 4-H youth and support Healthy Lifestyles. Fifty-three individuals participated in the Walk across Arizona program (30 adults and 23 youth). 87% of participants who completed the program and 98% of participants that completed the program improved their Physical Activity Status by at least one level from pre-survey to post-survey.



Taylor Satterlee, UofA Green Fund Extern, and Rebecca Serratos, SNAP-Ed Program Coordinator, at Prescott Farmers Market Education Booth sampling turnip salsa.

## Master Gardeners/Horticulture Programs



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### Yavapai County Master Gardener Volunteer Program

The Yavapai County Master Gardener Volunteer program teaches interested citizens to become valuable horticultural volunteers in their communities. Cooperative Extension Agent, Jeff Schalau, taught and coordinated the 2016 Master Gardener training course in Clarkdale and managed the program in conjunction with Mary Barnes, Master Gardener Volunteer and Agriculture and Natural Resources Program Coordinator.

After 16 weeks of practical training, 24 class members became Associate Master Gardeners. The Training Course is offered each spring and alternates yearly between Prescott and the Verde Valley. After volunteering 50 hours, participants become Certified Master Gardeners. Each subsequent year, Master Gardeners provide a minimum of 25 hours of volunteer service and six hours of continuing education to maintain their certification.

In 2016, 166 Master Gardeners contributed 13,892 hours of volunteer service to citizens and institutions of Yavapai County. This was accomplished through direct outreach at public events, Speaker's Bureau and Master Gardener Help Desks in our Camp Verde and Prescott offices. Educational contacts included 3,722 face-to-face, 878 phone, and 237 email contacts. Mary Barnes maintained records, facilitated communication, assisted in program planning, and tracked volunteer activities. In addition, she designed and continues to update the Yavapai County Master Gardener website. Master Gardener, Nora Graf, edited and managed the bi-monthly newsletter *Yavapai Gardens*. Master Gardeners also provided on-site assistance and education to three community gardens, four school gardens, two museums, a hospital, and a zoo. Yavapai County Master Gardeners also staffed educational displays at public events (10), coordinated Master Gardener Association meetings/activities (10), and organized the Yavapai County Master Gardener recognition picnic. The Master Gardener Speaker's Bureau also gave 20 presentations to community groups and two Osher Lifelong Learning Institute classes.



The Master Gardener information table at the Prescott Farmer's Market provides science-based gardening information to the public.

Yavapai County Cooperative Extension continues to have one of the most ambitious and successful Master Gardener Programs in Arizona.

### Backyard Gardener Newspaper Column

Agriculture and Natural Resources Agent, Jeff Schalau, has authored the *Backyard Gardener* since 1998. The *Backyard Gardener* is a weekly gardening column, that appears in four Verde Valley newspapers (19,500 combined circulation). He also maintained the *Backyard Gardener* web site (blog) which contains all columns written from April 1998 to the present. The site is searchable, has a chronological archive, and contains a clientele feedback form which generates many email questions/comments/interactions each year. Visit the website at: <http://cals.arizona.edu/yavapai/anr/hort/byg/>. The *Backyard Gardener* web site contains over 907 columns and had 268,749 page views during 2016. This is a major marketing tool for Yavapai County Cooperative Extension horticulture programs/events and the website is used extensively to answer client e-mail questions. Jeff Schalau also submits timely horticulture articles to *The Daily Courier* and other publications.

### Yavapai County Native and Naturalized Plant Database

Yavapai County Master Gardener, Sue Smith, continues to lead a team of Master Gardeners in creating and adding to the Yavapai County Native and Naturalized Plant Database (YCNNDP). Using her skills as a former eBay programmer, Sue and her team of Yavapai County Master Gardeners have photographed and described 719 plants (an 8% increase from 2015) on the site. The YCNNDP website had 103,905 page views in 2016. The website is located at <http://cals.arizona.edu/yavapaiplants/> and is widely used by both native plant hobbyists and professional land managers to help identify native plants. In 2016, the YCNNDP team also partnered with Arizona State Parks to develop an interactive plant identification tool/kiosk for visitors at Red Rock State Park, near Sedona, to identify plants growing there.



Yavapai County Master Gardeners pruning rose bushes in the Sharlot Hall Museum Rose Garden.

### Using Social Media in Horticulture Education

Twitter and Facebook were used to promote the Backyard Gardener website by "tweeting" and posting each new column as it became available. These social media outlets have proven to be effective tools in promoting programs and directing clientele to our Master Gardener Help Desks. Outreach contacts have steadily increased through these social media efforts. Twitter followers increased by 19% and Facebook "Likes" increased by 37% in 2016.

### Well Owner Education

Some Yavapai County residents are faced with elevated levels of arsenic in their domestic wells and are challenged with testing and treatment. Cooperative Extension offered two well owner workshops in Prescott in 2016. Topics covered included: local geology as it relates to aquifer yield and recharge, the basic parts of a domestic well, how they should be configured to avoid contamination, drinking water standards, groundwater contaminants that occur in Yavapai County, and how to best treat domestic well water for health and safety. 135 participants attended these 3 1/2 hour workshops. In addition, Prescott Area Realtors requested a speaker to discuss our well owner education program which was presented to an audience of 76 realtors in October 2016.

### Paulden Public Library Landscape Project

Yavapai County Master Gardeners were invited by District 4 County Supervisor, Craig Brown, to design and install a low maintenance, drought tolerant landscape for the new library branch in Paulden. The library was dedicated on October 5, 2016 and Master Gardeners were recognized for their efforts.



Agriculture and Natural Resources Agent, Jeff Schalau, works with volunteer Master Gardeners to plant a tree in front of the new Paulden Public Library.



Agriculture and Natural Resources Agent, Jeff Schalau, teaches a Fruit Tree Pruning Workshop at the McLandress Orchard in Chino Valley, AZ.

### Noxious and Invasive Weeds

Noxious and invasive plant species threaten the integrity of local ecosystems by altering plant communities and the people, livestock, and wildlife that depend on them. Jeff Schalau conducted a one-day Pesticide Applicator Training in collaboration with the Verde Watershed Restoration Coalition (VWRC) for 35 participants. The training session was held in November 2016 and participants received six continuing education credits for attending. It included classroom sessions at the Yavapai College Clarkdale Campus and a walking tour along the Verde River in Cottonwood. Agent Schalau also provided two presentations on Identification, Biology, and Management of Invasive Species to tribal audiences at a Yavapai Apache Nation Resource Planning Meeting (16 participants) and the Southwest Indian Agriculture Conference (98 participants).

### Rangeland Education

Range livestock is the number one agricultural product produced in Yavapai County. Healthy rangelands and effective grazing management allows ranches to be profitable, productive, and sustainable. Rangeland monitoring allows ranchers, agency personnel, and interested members of the public to objectively record rangeland conditions and document rangeland trends as it relates to plant community and grazing management. Agent Jeff Schalau led Coordinated Resource Management (CRM) activities at the Yavapai Ranch near Seligman, AZ. These included a spring planning meeting (14 participants) and fall rangeland monitoring (16 participants over 2 days). This team has been monitoring at the Yavapai Ranch since 1994 and has demonstrated exemplary collaboration between the various government and private entities involved.

### Fruit Tree Care

Jeff Schalau also conducted three Deciduous Fruit Tree Pruning Workshops in 2016. They were held in cooperated orchards in Chino Valley, Clarkdale, and Camp Verde and had 147 total participants.

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## Visiting University of Arizona Faculty—2016

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Elisabeth Alden, Assistant Agent/FRTEP, Mohave Co.  
Monica Ramirez-Andreotta, Asst. Prof., SWES  
Janick Artiola, Water Quality Research Scientist, SWES  
Hattie Braun, County Director/Horticulture, Coconino Co.  
Andrew Brischke, ANR Area Assist. Agent, (Coconino/Mohave)  
Debbie Curley, Area Assistant Agent, FCHS  
Darcy Dixon, Assoc. Director-FCHS/Co. Ext Dir., Santa Cruz Co.  
Dan Faulkner, Beef Specialist, ACBS  
Kevin Fitzsimmons, Aquaculture Specialist, SWES  
Edward Franklin, Associate Professor, Agriculture Education  
Tanya Gaxiola, Assistant VP for Community Relations, UA  
Betsy Greene, Equine Specialist, ACBS  
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Mitch McClaran, Range Mgmt. Professor, SNRE

Patty Merk, Area Agent, FCHS/Family & Youth  
Denise Moreno, Outreach Prog. Coord., UASRP  
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Kathryn Orzech, Program Evaluator, UANN  
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