

# Cooperative Extension

Yavapai County

## Yavapai County Report 2018



THE UNIVERSITY  
OF ARIZONA



Subject	Page
Letter from the County Director	3
2018 Program Highlights	4
2018 Educational Programs and Participation Data	5
4-H Youth Development	6-9
Family Consumer Health Sciences—Food Safety/Local Foods	10-11
Horticulture/Natural Resource Programs	12-13
Visiting Faculty/County Faculty and Staff/Extension Advisory Board/Contact Information	14
University of Arizona Faculty and Staff Photo	15



Sharlot Hall harvesting grapes at the Bianconi Farm. This historic farm was just north of the Granite Dells in Prescott and, for a time, was the location of Arizona's largest commercial peach orchard (Source: Sharlot Hall Museum Archives).



**From the County Director**

The University of Arizona Cooperative Extension was busy conducting educational programs and providing direct assistance to Yavapai County residents in 2018. 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 34,479 Yavapai County residents. In addition, 480 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 30,511 hours of service with an estimated value of \$753,317.

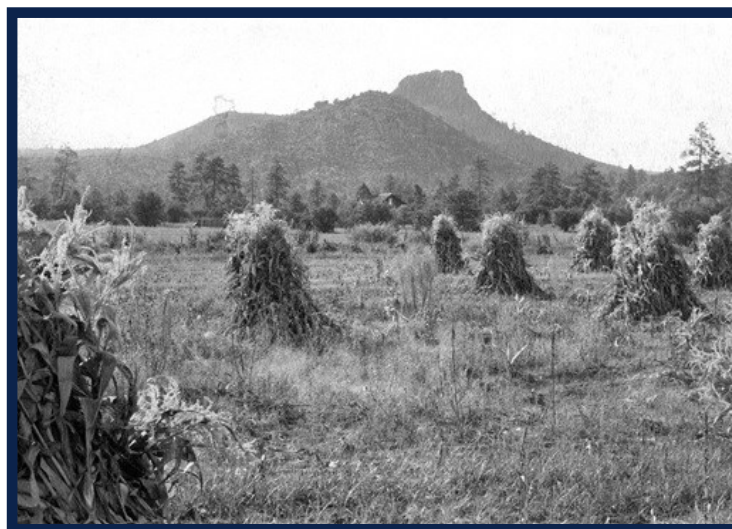
Cooperative Extension greatly appreciates the financial support, office space, and services provided by the Yavapai County Board of Supervisors. Yavapai County Cooperative Extension continues to leverage county contributions through collaborations with local partners and securing grant funding. With 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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A harvested corn field in Prescott showing Thumb Butte in the background (Sharlot Hall Museum Archives).



### Because of Yavapai County Cooperative Extension, in 2018...

- Yavapai County Cooperative Extension **served 34,479 residents** with direct education in 2018.
- Yavapai County Cooperative Extension volunteers contributed **30,511 hours of service valued at \$753,317** (per Independent Sector, 2017 value of volunteer of \$24.69/hr.) serving as Master Gardeners, 4-H Leaders, Food Safety Industry Council and Extension Advisory Board members.
- **181 active Yavapai County Master Gardener volunteers** contributed 14,887 hours of service to their communities reaching 8,959 consumers with science-based gardening information. In doing so, they promoted safe pest management solutions, water conservation, use of appropriate landscape plants, small-scale food production through backyard/community gardening, and other science-based horticultural practices.
- **221 youth were enrolled in Yavapai County 4-H Club Programs.** These youths were supported by 59 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.
- **335 school outreach visits were conducted across Yavapai County to conduct STEM** (science, technology, engineering and mathematics) education. Activities reached 8,845 students and averaged 1 hour 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.
- **1,515 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 Arizona's statewide 4-H camp.
- **232 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 2018** 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 3-year grant cycle for the **Supplemental Nutrition Assistant Program Education (SNAP-Ed)** grant through the Arizona Department of Health Services.
- **Cooperative Extension Family Consumer and Health Sciences Programs reached 1,422 people** in Yavapai County with nutrition education programming, focusing on low-income families with young children and older adults.
- Cooperative Extension began offering the **Diabetes Prevention Program** in October (a 12-month, 26-lesson lifestyle change program supported by the Centers for Disease Control and Prevention) to reduce the risk for developing type 2 diabetes.
- 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 836 native plant species (16% increase from 2017). This site is used by government agencies, schools, universities, non-profits, and other plant enthusiasts and had 93,340 pageviews in 2018.
- The University of Arizona Cooperative Extension, Yavapai County is in the process of searching for a **Commercial Horticulture/Small Acreage Agent**. This agent will work with small scale farmers to research and develop appropriate technologies to manage pests and grow specialty crops on small acreages. There will also be demonstration areas at the DK Cracchiolo Ranch near Cornville.



*In 2018, our educational programs focused on:*

<b>4-H Youth Development</b>	4-H youth development programs, 4-H volunteer training/support, youth leadership, 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 the Camp Verde and Prescott offices.
<b>James 4-H Camp</b>	Educational programs offered at the statewide James 4-H Camp at Mingus Springs located in Yavapai County.
<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 2018

Program Area	Educational Outreach	Office Contacts*	Totals
<b>4-H Youth Development</b>	370	3,456	3,826
<b>4-H Science, Technology, Engineering, and Mathematics (STEM)</b>	8,845	399	9,244
<b>Family, Consumer and Health Sciences</b>	2,271	3,254	5,525
<b>James 4-H Camp</b>	1,515	40	1,555
<b>Horticulture</b>	5,115	8,294	13,409
<b>Natural Resources</b>	383	537	920
<b>Totals</b>	<b>18,499</b>	<b>15,980</b>	<b>34,479</b>

\*Includes email, phone and face to face.



## 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

While serving as the Program Coordinator, Shirley Vasovski certified sixteen new volunteers that were given training including review of the AZ Policies and Procedures Handbook, the 4-H Volunteer Handbook, and the Code of Conduct. Community and project clubs were led by 59 adult volunteers and reached over 221 youth participating in projects ranging from sewing/textiles, leadership, livestock and small stock to horse and outdoor adventures.

## Leaders' Council

Yavapai County had an inactive Leaders' Council for some time, however, by-laws were drafted and officers appointed in 2018. The intent of the Leaders' Council is to provide oversight of all Yavapai County 4-H clubs, programs, and events.



Youth from the Lonesome Valley Wranglers 4-H Club, FCHS Cooperative Extension staff, an AmeriCorps service member, Whipstone Farm, and Prescott Farmers Market collaborated to host a seasonal produce class.



Cloverbud proudly showing her participation ribbon at the Yavapai County 4-H/FFA EXPO Show and Sale.

## Record Books

The 4-H program has a long history of recordkeeping. 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 2018, 113 4-H members turned in 4-H Record Books for judging by eleven adult members of the community.

## Horse Committee

The Yavapai County 4-H Horse Committee sponsored one county horse show and a gymkhana that allowed six members to qualify for the State 4-H Horse Show held November 2<sup>nd</sup>-4<sup>th</sup> in Queen Creek.

## Show and Sale within Yavapai County

The 2018 4-H/FFA EXPO Show and Sale was held August 22<sup>nd</sup>-25<sup>th</sup> at the Prescott Frontier Rodeo Grounds and was open to County-wide participation, including Verde Valley youth. Fifty-three items were sold at the auction. Revenue from the BBQ and tent setup came to a total of \$117,128. 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 2018 Verde Valley Fair was held May 2<sup>nd</sup>-6<sup>th</sup>. 4-H members from the Verde Valley area exhibited their projects and sold them at the Junior Livestock Auction. In addition, several 4-H members participated in the Yavapai County Fair Youth Livestock Show and Sale held September 6<sup>th</sup>-8<sup>th</sup>.

## Colorado River Small Stock Show (CRSSS)

Ninety-seven youth with small stock attended the Colorado River Small Stock Show from January 13<sup>th</sup>-14<sup>th</sup>. Cooperative Extension staff provided knowledge testing for each small stock species.



### MoYava 4-H Camp

A team of twelve consisting of camp counselors and volunteers worked together in a youth-adult partnership to design a successful camping program for Mohave and Yavapai County 4-H youth. At MoYava 4-H Camp, 82 youth campers 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. Yavapai County provided volunteers to teach archery, rifle, and bird migration.

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

The 2018 J.O.L.T was held in Heber at Camp Shadow Pines on June 11<sup>th</sup>-15<sup>th</sup>. During J.O.L.T., teens learned and practiced teamwork, communication, and leadership skills. J.O.L.T had a total of fifteen youth from Yavapai County participate. Three Yavapai County youth were on the youth staff and worked all year to plan and run the camp with adult support staff.

### LEGO Robotics

4-H Robotics provides hands on experience for youth in robot design, programming, and building using LEGO Robotics Kits and software. The 4-H staff provided a LEGO Robotics session on October 3<sup>rd</sup> at the Lonesome Valley Wrangler Clubhouse in Dewey.

### Public Speaking Workshop

Yavapai County staff and volunteers provided a Public Speaking Workshop on February 10<sup>th</sup>. Fifteen youth and nine adults participated in the event. The workshop covered professional appearance, demonstration preparation, powerful words, impromptu speaking, and visual aids.



4-H youth learning knife skills from Aimee Novak, FCHS Food Safety Program Coordinator

### Knife Skills Class Collaboration

The 4-H program collaborated with the Family, Consumer, and Health Sciences (FCHS) program to teach adults knife skills. 4-H members were used as assistants while also learning knife and cooking skills.

### County Wide Shooting Sports

Yavapai County has several county-wide shooting sports programs for 4-H youth. In 2018, five members participated in the county-wide shotgun program; fourteen youth participated in archery; and eight were a part of the rifle program with four members participating in small bore rifle.



4-H members participating in the shotgun project taught by Auben Winters and Tom Vasovski.



18 USC 707

## The James 4-H Camp

**Vision:** A high quality, residential, outdoor experiential education program for youth and adults to discover, learn and grow.

**Mission:** Using the network and resources within the land-grant university system, the James 4-H Outdoor Learning Center, managed by Adam Yarnes, assists youth and adults in expanding their knowledge and experiences through connecting with nature, subject matter education, and life skill development.

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, expressive arts, health and wellness; and 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

- 516 4-H participants and 999 community partners received positive youth development programming. These students gained life skills such as responsibility, teamwork, and citizenship along with STEM education and Natural Systems Sciences education.
- 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.

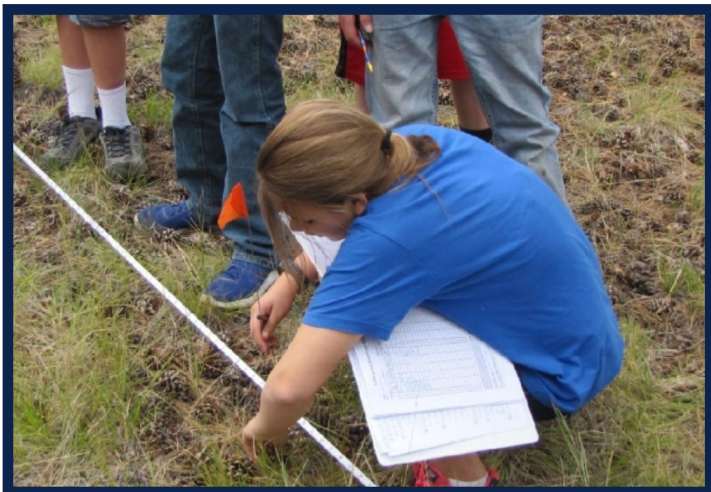


Campers describing the flora and fauna near Ash Creek at the James 4-H Camp at Mingus Springs.

- The James 4-H Camp is honored to have a community of support. In 2018 The James 4-H Camp benefited from over 220 volunteers who served more 10,000 volunteer hours. Volunteers helped with maintains, teaching programs, medical, cooking, cleaning and so much more.
- The work of running a camp is a hard business that we could not achieve without the hard work of our volunteer's, their work has also brought camp up to a higher level of functionality from fixing trails, maintaining facilities, and adding new programming which will in turn produce dividends for the camp and the campers that come every summer.

## Notable Successes Experienced

- 100% of group leaders were satisfied with our facility and programming options and have selected to return in 2019.
- Delivered programs to 22 groups for a total of 25 weeks of programming for 1,515 participants at the James 4-H Camp at Mingus Springs.
- Zero major medical or risk management issues or reports.
- Added two new 4-H county programs and three new community partners.
- Maintained our *American Camp Association* accreditation.
- Increased the water storage capacity by over 100%.
- Expanded relationships with current and new partners.
- Completed replacing all old utilities lines (gas main, water main and septic line).
- Repainted exterior of 4 cabins.
- Plumbed rain harvesting system for fire suppression.
- Completed an 9-month grant in partnership with forest service and Dahlberg foundation for over 63K in road and watershed improvement.



The James 4-H Camp at Mingus Springs provides campers with hands-on field and data collection experiences.





Arizona 4-H staff attending the My Preparedness Initiative (MyPI) training in Tucson, AZ.

### 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. Science, Technology, Engineering and Mathematics (STEM) projects provide science enrichment opportunities connecting kids to the University of Arizona and 4-H through science outreach programs.

### Program Goals

- Serve Yavapai County youth through STEM outreach opportunities.
- Collaborate with STEM stakeholders to strengthen STEM literacy across Yavapai County.

### STEM Outreach

Yavapai County 4-H Program Coordinator Sr., Stacy DeVeau, conducted 335 STEM outreach visits, in formal school settings as well as informal settings such as libraries, after school and camp programs. A variety of STEM topics included the nature of science, properties of matter, magnetic fields, the engineering design process, lunar phases, seasons, the solar system, Arizona agriculture and water science were provided for 8,845 students. The program reach continues to increase to serve more students in a greater number of schools across Yavapai County. Stacy brought the Arizona Agriculture Literacy Days program to thirty-seven classes this year. The state-wide program, which includes a reading of the book, “Arizona Agriculture: Bee’s Amazing Adventure” runs mid-October to mid-December. During this period the program was presented to twenty-



Stacy DeVeau teaching campers about symbiotic relationships between Arizona organisms.

seven classes. Newly participating classes received a copy of the book for their class library. This year, the STEM program received continued 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 thirty-one classrooms. Stacy participated in the Prescott Regional SciTech Festival sharing information about 4-H and other Cooperative Extension services along with information about the Earth’s water and agricultural land with an estimated 700 community members attending. Stacy also participated in the Verde Valley SciTech Festival in the Verde Valley, teaching 500 youth about the Earth’s water cycle.

### Collaboration

Stacy worked with the City of Prescott’s WaterSmart Program to deliver “Drop by Drop”, a monthly education series presented to community members at the Prescott Public Library.

### Professional Development

In August, both Stacy and Program Coordinator Shirley Vasovski attended a 3-day certification training to deliver a new program in Yavapai County. My Preparedness Initiative (MyPI) is a national teen program modeled after the adult Community Emergency Response Team (CERT) program. The program consists of learning modules and includes a service-learning component which will prepare community members for emergency situations through individual and family preparedness. Stacy is the team-lead for Yavapai County and is preparing to offer the program to 15 youth in March of 2019. MyPI Arizona is a component of the National Youth Preparedness Initiative funded by the National Institute for Food and Agriculture.

## Family Consumer Health Sciences Food Safety/ Local Foods



Cooperative Extension  
Yavapai County

### 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. These programs are planned and directed by FCHS Agent, Hope Wilson, and presented by University of Arizona Cooperative Extension faculty and staff. In Yavapai County, the FCHS programs include food safety, food preparation, local food systems, early childhood education, Supplemental Nutrition Assistance Program Education (SNAP-Ed), and the Diabetes Prevention Program (DPP).

### Food Safety

During 2018, 332 Yavapai County food establishment managers were trained through the Prometric Certified Professional Food Managers' Program (CPFM). This nationally recognized, six-hour certification course is aligned with the 2017 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 2018 "pass rate" for the exam was 95%. One-hundred percent of CPFM post-exam survey respondents evaluated the quality of the training as "good" to "excellent" and 97% CPFM post-exam survey respondents felt that the training materials and presentation prepared them adequately for the exam. According to the CPFM pre- post



Checking the interior temperature of chicken during a food safety demonstration.

evaluation, participants had a 36% average increase in knowledge about food safety practices.

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

The FSIC is made up of thirteen appointed members, ten of whom are industry representatives (two from each of the Board of Supervisors Districts) and three community representatives at large, as well as ex-officio members from Yavapai County Community Health Services and the University of Arizona Cooperative Extension. In 2018, the FSIC:

- Reviewed guidelines for food establishments to participate in a county food recovery program.
- Updated an educational brochure and posters for food establishments that clarifies the Americans with Disabilities Act (ADA) regulations for food establishments to include the new Arizona statute regarding misrepresenting pets as service animals.
- Approved three new issues of the Food Safety Scoop education newsletter written by the FCHS team and mailed to all licensed food establishments in Yavapai County (over 1,200 establishments).
- The FSIC and the Yavapai County Board of Supervisors recognized 241 eligible licensed food establishments with the Golden Plate Award indicating they had no critical violations during inspections. This is an increase from 215 in 2017.

### Food Safety Community Presentations:

- Presented a handwashing lesson to a total of 81 students at Lincoln, Taylor Hicks, and Abia Judd Elementary Schools.
- Conducted a food safety activity at the Arizona SciTech/Prescott Regional SciTech Festival at Embry-Riddle Aeronautical University - Prescott Campus reaching fifty adults and one hundred youth.
- Presented two "Introduction to Home Canning" classes at community sites reaching thirty-one participants with information about how to safely preserve food at home.

Food Safety Program Coordinator Aimee Novak and Master Gardener Volunteer Bob Gessner discuss wild mushrooms and the role of fungi in everyday cuisine through an interactive workshop at the Highlands Center for Natural History.



# Family Consumer Health Sciences

## Nutrition Education and Physical Activity



Cooperative Extension  
Yavapai County

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

The goal of the SNAP-Ed 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 SNAP-Ed focuses on providing nutrition education to young children, their parents, and older adults through classroom and community education, food demonstrations, gardens, farmers' markets and Farm-to-Fork initiatives. In 2018, Yavapai County Cooperative Extension SNAP-Ed completed its first SNAP-Ed grant cycle and reached a total of 3,989 contacts over three years.

SNAP-Ed nutrition education classes and activities for FY18:

- Taught two "Eat Healthy, Be Active" adult nutrition education series.
- Taught one "Eat Smart, Live Strong" adult nutrition series at Yarnell Community Center.
- Partnered with Prescott Farmers' Market, Whipstone Farm, UA AmeriCorps, UA Externs in Sustainability, and Yavapai County 4-H in hosting a "How to Prepare Seasonal Produce" class in Prescott and Cottonwood.
- Partnered with Prescott Farmers Market to teach a "Family Cooking Class" in Prescott.

In addition to nutrition education classes and activities, SNAP-Ed focuses on supporting policy, systems, and environments that encourage healthy choices. In 2018, the Yavapai County Cooperative Extension SNAP-Ed program:

- Conducted a "Train the Trainer" course for the Northern Arizona Council of Governments Head Start program in the Color Me Healthy Curriculum. We partnered with other SNAP-Ed programs from the Northern Region to deliver a quad-county training that saw 38 Head Start teachers, directors, and lunch aide staff representing 1,549 children in Northern Arizona.
- Presented at the Buena Vista Early Childhood Conference in Clarkdale, the Early Learning Institute Conference at Yavapai College in Prescott, and the UA Cooperative Extension Annual SNAP-Ed In-Service in Phoenix.



SNAP-Ed participating at the Earth Day/Wildfire Expo on the Prescott Courthouse Square.



Aimee Novak, Katrina Dotzler, and Rebecca Serratos hosting SNAP-Ed education booth at the Prescott Farmer's Market.

- Hosted educational booths at seven Head Start family resource fairs.
- Hosted the Prescott Farmers' Market Education Booth fourteen times.
- Saw a combined 480 community members at the "Celebrate Life Wellness Expo" in Prescott Valley and the Earth Day Event in Prescott.
- Partnered with Master Gardeners to:
  - \* Offer two "Gardening 101" classes for SNAP recipients in Prescott and Cottonwood.
  - \* Plant 12 fruit trees at Camp Verde Head Start with a grant from the Fruit Tree Planting Foundation.
  - \* Assist with the YMCA Community Garden infrastructure update and clean up.
  - \* Glean apples and plums from Sharlot Hall Museum and the Dexter neighborhood in Prescott to donate to Prescott Farmers Market and Old Town Mission Produce Market.

### University of Arizona Cooperative Extension – National Diabetes Prevention Program

The Family, Consumer, and Health Sciences program launched a diabetes education and prevention program called the National Diabetes Prevention Program (NDPP). The NDPP is a twelve month, twenty-six lessons lifestyle change program supported by the Centers for Disease Control and Prevention (CDC). With overwhelming evidence to support its effectiveness, this program reduces the risk for developing type 2 diabetes by 58% (Knowler et al, 2002), for those at high risk. Among seniors over age 60, the risk reduction is reported to be 71%. The NDPP focuses on healthy eating, increasing physical activity, and reducing stress. The specific goals of the program are for participants to lose 5% of their initial body weight, and reach 150 weekly minutes of physical activity by the end of twelve months.

Eleven participants began this program at our Prescott office. After nearly three months of the year-long program, the NDPP participants as a group have lost a total of 42 lbs. and an average of 2.8% of their initial weight. Twenty-two percent of DPP participants have met their weight-loss goals. NDPP participants reported an average of 338 minutes of weekly physical activity per participant.



### 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 2018 Master Gardener training course in Camp Verde 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, 26 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 2018, 181 Master Gardeners contributed 14,887 hours of volunteer service to citizens and institutions of Yavapai County. This was accomplished through direct outreach at public events, Speakers' Bureau presentations, and the Master Gardener Help Desks in our Camp Verde and Prescott offices. Educational contacts included 4,082 face-to-face, 797 phone, and 387 e-mail contacts. Master Gardeners also provided on-site assistance and education to three community gardens, four school gardens, two museums, a hospital, and a zoo. Master Gardeners also staffed ten educational displays at public events, gave 58 presentations, and two Osher Lifelong Learning Institute (OLLI) classes that reached 1,168 residents. Master Gardeners partnered with the SNAP-Ed program efforts to create raised beds, install irrigation systems, and design outdoor learning spaces at schools and Head Start Centers. They also installed landscape/irrigation at the Camp Verde Extension Office and partnered with the Highlands Center for Natural History to provide instructional assistance in school habitats. The annual July Monsoon Madness Plant and Yard Sale provided an opportunity for Yavapai County residents to purchase and learn about using



Master Gardeners attending a Grower's Workshop to learn how to propagate plants from seedling and cuttings.

low-water-use plants. The coordinating/tracking of Master Gardener activities was done by ANR Program Coordinator Mary Barnes in partnership with the Master Gardener Association. 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 e-mail questions/comments/interactions each year. The Backyard Gardener web site contains over 1,065 columns and had 235,556 page views during 2018. 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. Visit the website at: <http://cals.arizona.edu/yavapai/anr/hort/byg/>.

### Yavapai County Native and Naturalized Plant Database

Yavapai County Master Gardener Sue Smith continued 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 835 plants (an 6% increase from 2017) on the site. The YCNNDP website had 93,340 page views in 2018. 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 2018, 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 assist visitors in identifying the Park's plant species.



Master Gardeners attending a Rose Pruning Workshop in Chino Valley, AZ

### Spring Into Gardening Conference

One hundred twenty five Coconino and Yavapai County Master Gardeners organized and presented a one-day conference on October 20 at the Trinity Heights Church in Flagstaff. It was planned and designed by Master Gardeners to provide continuing education in the areas of pollinator protection, plant identification, attracting birds to the garden, emerging plant diseases, seed saving, and garden cooking. David Salman of High Country Gardens in Santa Fe, NM was the keynote speaker with other sessions being taught by local experts. Evaluations indicated a high level of knowledge gained and overall satisfaction.



Agriculture and Natural Resources Agent Jeff Schalau teaches a Fruit Tree Pruning Workshop at the Marmaduke Orchard in Camp Verde.



Yavapai County Master Gardeners attending a Seed Symposium at the Extension office in Prescott.

### Fruit Tree Care

Agent Jeff Schalau also conducted three Deciduous Fruit Tree Pruning Workshops in 2018. They were held in cooperator orchards in Chino Valley and Camp Verde and had 130 total participants. Direct assistance in fruit tree care was also provided to Orme School where 100+ fruit trees were planted five years ago. Irrigation, fertilization, pest management, and other topics were also discussed at each event/location.

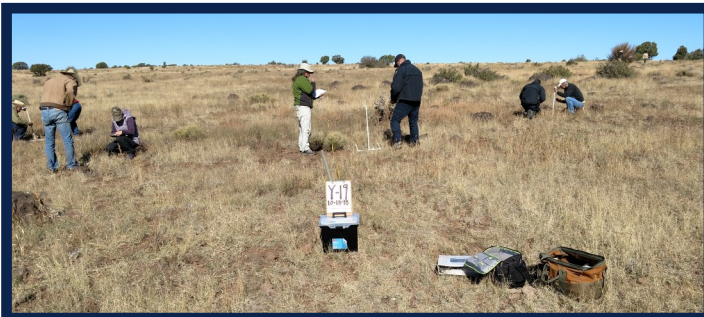
### Using Social Media in Horticulture Education

Yavapai County Master Gardeners hosted a Facebook page which marketed and distributed timely information about events and insect/disease outbreaks. Twitter and Facebook were also 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. This included 510 Twitter followers (a 38% increase over 2017) and 699 Facebook "Likes" (a 37% increase over 2017).

### Rangeland Education/Livestock Nutrition

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. These included a spring planning meeting (twelve participants) and fall rangeland monitoring (fourteen participants over two 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.

Livestock nutrition is an important consideration for Yavapai County ranchers. Forage quality decreases during the winter months and cattle are usually provided with supplemental protein and energy. This supplementation provides mother cows with the nutrition to recover from calving, feed their calf, and get rebred the following cycle. A Livestock Nutrition Workshop was presented by University of Arizona faculty and other experts in Prescott on March 7 and attended by 43 ranchers.



Coordinated Resource Management Team monitoring rangeland trend at the Yavapai Ranch.



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Monica Ramirez-Andreotta, Assistant Professor, SWES  
Hattie Braun, County Director/Horticulture, Coconino Co.  
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Shane Burgess, Vice President for Agriculture, Life & Veterinary Sciences, and Cooperative Extension  
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Mitch McClaran, Range Mgmt. Professor, SNRE  
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Mandy Shank, Program Coordinator, SNAP-Ed La Paz County  
Ursula Schuch, Commercial Horticulture Specialist, Plant Sci.  
Jeff Silvertooth, Associate Dean and Director, Extension & Economic Development  
Steve Smith, Ecology Professor, SNRE  
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## University of Arizona Cooperative Extension Advisory Board

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<b>Jeanne Briggs</b>	Board Chair, Food Safety/Nutrition
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<b>Kimberly Knight</b>	Rancher
<b>Bill Marmaduke</b>	Master Gardener
<b>Rich Peterson</b>	Agriculture

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**The University of Arizona  
Yavapai County Cooperative Extension  
Faculty and Staff Members**



**Back row left to right:** Ethan Orr, Vice President Shane Burgess, Rebecca Serratos, Pam Denney, Lydia Watts, Jeff Schalau

**Front row left to right:** Aimee Novak, Shirley Vasovski, Stacy DeVeau, Hope Wilson, Karen Pizzuto

**Not pictured:** Mary Barnes, Lisa Gerber, Adam Yarnes

**Thank you to our community collaborators and partners.  
We appreciate your support!**

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