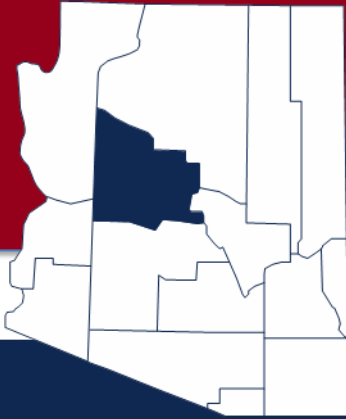
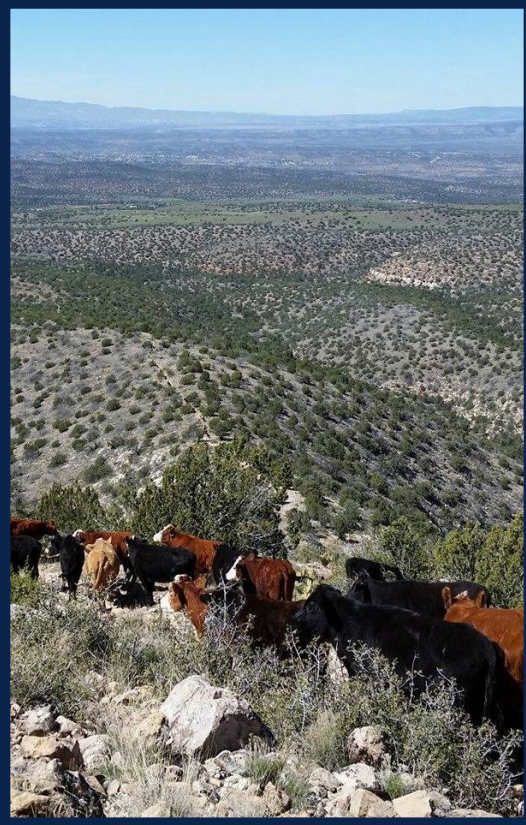


COLLEGE OF AGRICULTURE & LIFE SCIENCES

Cooperative Extension



Yavapai County Report 2017



THE UNIVERSITY
OF ARIZONA

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View of Dry-Farm and Dobby plowing

A view of the Prescott Dry Farm which was located along Granite Creek north of the Granite Dells. The farm was a University of Arizona Experiment Station that researched crops appropriate for dry land farming and was in operation between 1912 and 1927. (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 2017. 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 29,304 Yavapai County residents. In addition, 279 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 27,574 hours of service with an estimated value of \$665,336.

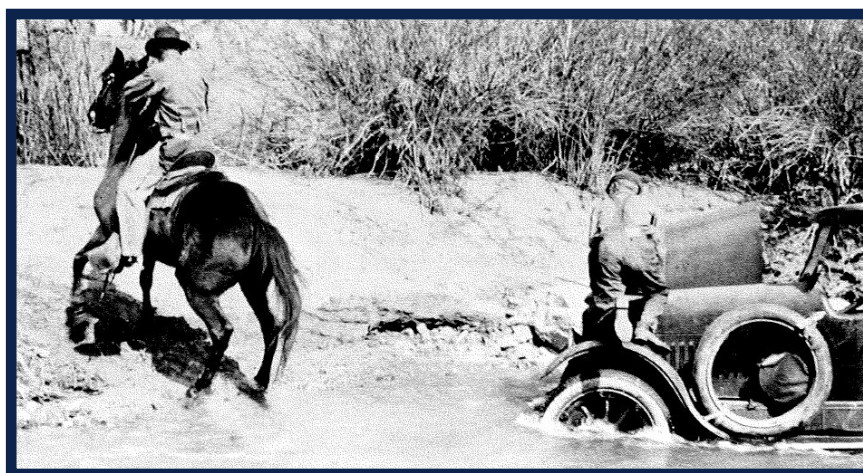
Cooperative Extension greatly appreciates the financial support, office space, and services provided by the Yavapai County Board of Supervisors. Yavapai County Cooperative Extension continues to leverage county contributions through collaborations with local partners and securing grant funding. With 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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Yavapai County Extension Agent John Pickerell being assisted by a local cowboy crossing a northern Arizona stream in 1922.
(Source: Sharlot Hall Museum Archives)



Because of Yavapai County Cooperative Extension, in 2017...

- Yavapai County Cooperative Extension **served 29,304 residents** with direct education in 2017.
- Yavapai County Cooperative Extension **volunteers contributed 27,574 hours of service valued at \$665,636** (per *Independent Sector*, 2016 value of volunteer of \$24.14/hr.) serving as Master Gardeners, 4-H Leaders, Food Safety Industry Council and Extension Advisory Board members.
- **180 active Yavapai County Master Gardener volunteers** contributed 14,450 hours of service to their communities reaching 3,998 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.
- **215 youth were enrolled in Yavapai County 4-H Club Programs.** These youth 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.
- **304 school outreach visits** were conducted across Yavapai County through STEM (science, technology, engineering, and mathematics) education. Activities reached 8,059 students and averaged 1.5 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.
- **1,498 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.
- **236 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 2017** 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 to provide guidance and feedback to the Yavapai County Board of Supervisors.
- Cooperative Extension completed its third year educating the public through a **Supplemental Nutrition Assistance Program Education (SNAP-Ed)** grant through the Arizona Department of Health Services. **In 2017, Cooperative Extension reached 3,727 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 the **Yavapai County Community Health Services** on numerous food safety and nutrition education programs including Yavapai Seasonal Harvest, Supplemental Nutrition Assistance Program Education (SNAP-Ed), and the Food Safety Industry Council.
- 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/) which contains descriptions and multiple photos of 719 native plant species (8% increase from 2016). This site is used by government agencies, schools, universities, non-profits, and other plant enthusiasts and had 112,350 page views in 2017.
- Yavapai County Cooperative Extension collaborated with the **DK Cracchiolo Ranch to develop small acreage programs.** The DK Cracchiolo Ranch is a 40 acre irrigated farm/ranch in Oak Creek Valley that was donated to the University of Arizona College of Agriculture and Life Sciences in 2015. The University of Arizona is working in partnership with Yavapai College and other local entities to develop a small farm education site. Currently, we are evaluating the possibility of creating a public/private partnership where farmers would use the DK Cracchiolo Ranch to produce crops and Cooperative Extension would utilize these facilities to teach others small farming practices.

2017 Educational Programs and Participation Data



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In 2017, our educational programs focused on:

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

Yavapai County Citizens Served in 2017

Program Area	Educational Outreach	Office Contacts*	Totals
4-H Youth Development	439	3,406	3,845
4-H Science, Technology, Engineering, and Mathematics (STEM)	8,059	130	8,189
Family, Consumer and Health Sciences	2,283	2,858	5,141
James 4-H Camp	1,498	35	1,533
Horticulture	2,534	6,772	9,306
Natural Resources	398	892	1,290
Totals	15,211	14,093	29,304

*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

While serving as the Program Coordinator, Shirley Vasovski certified fifteen 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 215 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 plans created to elect officers in 2018. The intent of the Leaders' Council is to provide oversight of all Yavapai County 4-H clubs, programs, and events.



The Do-All Canning Club in 1934, Cornville, AZ. This historic photo came from old Yavapai County annual reports.
(Source: Sharlot Hall Museum Archives)



Yavapai County 4-H members representing their market animals at 4-H/FFA EXPO

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 2017, 126 4-H members turned in 4-H Record Books for judging by 12 adult members of the community.

Horse Committee

The Yavapai County 4-H Horse Committee sponsored three county horse shows that allowed seven members to qualify for the State 4-H Horse Show held November 3rd-5th in Queen Creek, AZ.

4-H/FFA EXPO

The 2017 4-H/FFA EXPO Show and Sale was held September 7th-10th at the Yavapai County Fairgrounds. Eighty six items were sold at the auction. Net income including receipts from the BBQ and tent setup came to a total of \$151,841. 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 2017 Verde Valley Fair was held May 3rd-7th and was open to limited 4-H youth participation. 4-H members from the Verde Valley area exhibited their projects and sold them at the Verde Valley Junior Livestock Auction.

Colorado River Small Stock Show (CRSSS)

Thirteen Yavapai County youth with small stock attended the Colorado River Small Stock Show from January 14th-15th. Cooperative Extension staff provided knowledge testing for each small stock species.

4-H Youth Development - Events and Classes



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Mo-Yava 4-H Camp

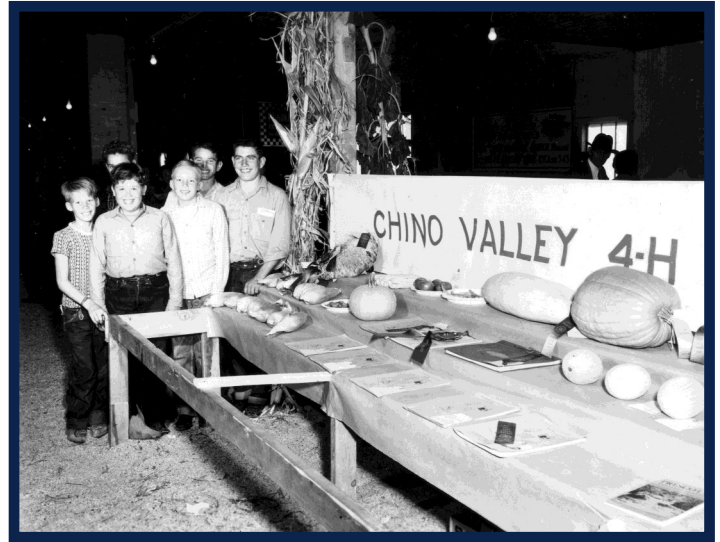
A team of eighty seven campers and eleven adults worked together in a youth-adult partnership to design a successful camping program for Mohave and Yavapai County 4-H youth. At MoYava 4-H Camp, youth learned about forestry, wildlife, and fisheries. Campers also participated in community service projects 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. Yavapai County provided volunteers to teach archery, rifle, and bird migration.

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

The 2017 J.O.L.T was held in Heber, AZ at Camp Shadow Pines on June 5th-9th. During J.O.L.T., teens learned and practiced teamwork, communication, and leadership skills. J.O.L.T had a total of nine youth from Yavapai County participate.

Public Speaking Workshop

Yavapai County staff and volunteers provided a Public Speaking Workshop on February 11th. Thirty-nine youth and six adults participated in the event. The workshop covered professional appearance, demonstration preparation, powerful words, impromptu speaking, and visual aids. Ten members, and six adults participated in the Public Speaking Contest held on April 8th.



The Chino Valley 4-H Gardening Club in 1948. Vegetable gardening clubs have not been popular in recent years, but the project is experiencing renewed interest in Yavapai County's 4-H Program.

Photography

The 4-H photography curriculum teaches youth about photography as art and science while developing and applying skills in film-based and digital photography. On January 25th, 4-H staff provided a photography session at the Prescott Library. Twenty youth and four adults attended the session.

Gardening

The 4-H gardening project teaches youth interested in selecting, planting, growing, and sometimes harvesting plants for home food production. Growing your own food is a skill that lasts a lifetime and provides outdoor activity and exercise. 4-H staff provided an educational opportunity to three members on January 21st in Cottonwood. Two adults assisted with the program. In addition, on May 25th, a Gardening 101 class was provided to three members with four adults, including a Master Gardener, assisting with the class.



4-H Member, Lena May Haight, presenting for the judges at the Public Speaking Contest.

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 January 18th at the Prescott Public Library. Twenty five participants and four adults attended.



The James 4-H Camp at Mingus Springs

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

- 538 4-H participants, 601 community partners, and 335 school students received an uncountable amount of 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.

Notable Successes Experienced

- 2017 brought another year of growth with an increase of 54% from 2016 and 114% from 2015.
- 100% of group leaders were satisfied with our facility and programming options and have selected to return in 2018.
- Delivered programs to twenty groups for a total of twenty five weeks of programming and 1,498 youth who had outdoor science education experiences at the James 4-H Camp at Mingus Springs.
- Zero major medical or risk management issues or reports.
- Added two new 4-H country programs and three new community partners.
- Hosted an AmeriCorp National Civilian Community Corps (NCCC) team of ten members in early spring who worked for twelve weeks (April 12th–July 9th) cleaning, painting, fixing cabins, and getting the James 4-H Outdoor Learning Center ready for the season. They also assisted with installing new energy efficient heater, burning slash piles and much more.
- Maintained our *American Camp Association* accreditation.
- Surveyed property with the University of Arizona real estate office.
- Expanded relationships with current and new partners.
- Completed replacing all old utilities lines (gas main, water main and septic line).
- Remodeled the nurses' cabin to install a new staff bathroom (improving camper and staff safety).
- Increased the average price per group from \$64.40 (2016) to \$76.45 per person in 2017.



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

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



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Youth learning about Earth's water resources at the Prescott Regional SciTech Fest.

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.

Program Goals

- Serve Yavapai County youth through STEM outreach opportunities.
- Increase STEM opportunities through to broaden base knowledge and skillsets.
- Collaborate with STEM stakeholders to strengthen STEM literacy across Yavapai County.

STEM Outreach

4-H Program Coordinator, Senior Stacy DeVeau conducted 304 STEM outreach visits in formal school settings and informal settings: libraries, after school and camp programs, and the local 2017 Solar Eclipse event. A variety of STEM topics such as 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 8,059 students. The program reach continues to increase to serve more students in a greater number of schools. Stacy brought the Arizona Agriculture Literacy Days program to 52 classes this year.



Stacy DeVeau teaching a lesson at Sacred Heart Christian School about Arizona agriculture. This lesson teaches youth that Arizona produces a range of agricultural products which can be used to create a pizza.

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 21 classes. 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 28 classrooms this year. Stacy once again participated in the Prescott Regional SciTech Fest sharing information about 4-H and other Cooperative Extension services, along with information about earth's water and agricultural land with an estimated 750 community members attending.

Professional Development

Stacy received funding from the American Farm Bureau Foundation for Agriculture to support her participation in an "On the Farm" STEM event in Orlando, Florida. The program took educators to a variety of locations related to agriculture, from farm to table: cattle ranch, meat lab, livestock research facility, and food distributor.

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. 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). Programs were delivered/directed by FCHS Assistant Agent Hope Wilson in conjunction with Food Safety Program Coordinator Aimee Novak and SNAP-Ed Program Coordinator Rebecca Serratos.

Food Safety

During 2017, 236 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 2017 "pass rate" for the exam was 96%. According to 100% of CPFM post-exam survey respondents evaluated the quality of the training as "good" to

"excellent" and 96% of CPFM post-exam survey respondents felt that the training materials and presentation prepared them adequately for the exam. According to the CPFM post-quiz, participants had a 22% average increase in knowledge about food safety practices.

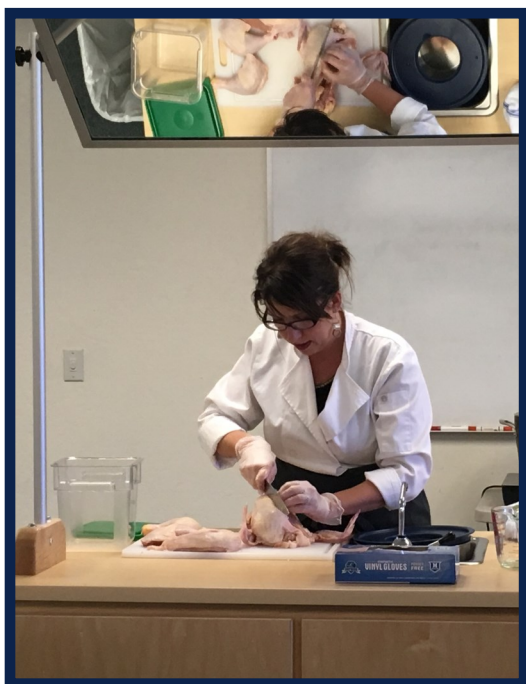
Yavapai County Food Safety Industry Council (FSIC)

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 2017, the FSIC:

- Established a workgroup to develop guidelines for restaurants to safely donate food to emergency food providers.
- Developed an education brochure for food establishments to clarify Americans with Disabilities Act (ADA) regulations for food establishments regarding service animals.
- Approved three new issues of the Food Safety Scoop (quarterly) education newsletter written by Yavapai County Cooperative Extension and mailed to all licensed food establishments in Yavapai County.

Food Safety Community Presentations:

- Handwashing lesson to 23 students at Lincoln Elementary School.
- Presented a lesson entitled "Microbes and Our Food" to 132 students at Mile High Middle School.
- Aimee Novak partnered with the STEM Program Coordinator to offer a food safety, nutrition, and agricultural literacy workshop for Girl Scouts to earn their Kitchen Badge.
- Assisted a local produce grower to develop a HACCP plan for bottling and selling hot sauce at the farmers market.
- Partnered with SNAP-Ed to conduct an in-service training for 32 food service staff members from the Humboldt Unified School District about food safety and promoting healthy foods in their cafeterias.
- Partnered with SNAP-Ed to conduct an in-service training for 35 food service staff members at Northern Arizona Council of Governments-Head Start about food safety and nutrition education.
- Presented "Introduction to Home Canning" at the Cottonwood Public Library.



Food Safety Program Coordinator Aimee Novak demonstrates knife safety in a culinary class held at the Yavapai County Cooperative Extension office.

Family Consumer Health Sciences Nutrition Education and Physical Activity



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Supplemental Nutrition Assistance Program Education (SNAP-Ed)

Yavapai County Cooperative Extension completed the second full year of a three year grant from Arizona Department of Health Services. This is the first time Yavapai County Cooperative Extension has received this grant to deliver nutrition education programming to low-income Yavapai County families. The goal of the 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 2017, the SNAP-Ed program:

- Conducted two in-service trainings for child care providers and food service staff members from Head Starts in Yavapai County and Humboldt Unified School District cafeterias about safely serving healthy foods to the children in their care and how to promote fruits and vegetables.
- Conducted thirty one food demos for Yavapai County community members.
- Hosted educational booths at eight Head Start family resource fairs.
- Hosted the Prescott Farmers Market Education Booth fifteen times.
- Helped Discovery Garden Preschool certify their garden as an approved source through the Arizona Department of Health Services.



Rebecca Serratos, SNAP-Ed Program Coordinator, at Prescott Farmers Market Education Booth sampling turnip salsa.



Mackenzie Lemon, AmeriCorp Service Member, and Jeff Schalaus, County Director, plant fruit trees at the Prescott Community Garden.

- Partnered with Master Gardeners to:
 - Offer a "Gardening 101" class for SNAP recipients.
 - Plant seven fruit trees at Chino Valley Head Start and eleven fruit trees at Prescott Community Garden with a grant from the Fruit Tree Planting Foundation.
 - Organize a Fall Planting Day at Good Samaritan Village Towers and installed automated irrigation.
 - Install a fence around the early childhood garden at Discovery Gardens Preschool.
 - Bring together partners and adopted a mission and vision for Old Town Mission Community Garden.

Food Preparation / Culinary Classes

In 2017, FCHS faculty and staff offered its first series of hands-on culinary classes for community members. The Spring Culinary Series was offered in May and the Fall series was offered in September. Classes included Culinary Basics; Menu Planning and Seasonality; Knife Skills and Kitchen Safety; Cooking with Spices; Culinary Techniques; Food Preservation; and High-Altitude Baking. The classes were attended by 213 community members. Following each of the classes, attendees completed a survey: 99% of attendees surveyed rated the classes as "Good" to "Excellent" and 85% increased their level of knowledge about the class topic. Following the cooking demonstration classes, 93% of participants said that the demonstration taught them the skills they need to make the recipe at home, and 90% said that they learned new ways to help their family eat healthier.

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 2017 Master Gardener training course in Prescott 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, 38 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 2017, 180 Master Gardeners contributed 14,450 hour of volunteer service to citizens and institutions of Yavapai County. This was accomplished through direct outreach at public events, Speakers' Bureau classes, and the Master Gardener Help Desks in our Camp Verde and Prescott offices. Educational contacts included 2,936 face-to-face, 777 phone, and 285 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 44 presentations, and two Osher Lifelong Learning Institute (OLLI) classes that reached 1,289 residents. Master Gardeners partnered with the SNAP-Ed program efforts to plant fruit trees, install irrigation systems, and design the Old Town Mission Community Garden. 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 low-water-use plants. The coordinating/



Master Gardener propagating plants for Monsoon Madness

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. Visit the website at: <http://cals.arizona.edu/yavapai/anr/hort/byg/>. The Backyard Gardener web site contains over 1,013 columns and had 256,472 page views during 2017. 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 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 786 plants (an 8% increase from 2016) on the site. The YCNNDP website had 112,350 page views in 2017. 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 2017, 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.



Directions on rose pruning at Sharlot Hall Museum

More Horticulture Programs



Spring Into Gardening Conference

One hundred twenty three Coconino and Yavapai County Master Gardeners organized and presented a one-day conference on March 23, 2017 at the Yavapai College Clarkdale Campus. It was planned and designed by Master Gardeners to provide continuing education in the areas of viticulture/enology, plant identification, attracting birds to the garden, GMO technology, fruit tree grafting, seed saving, and a greenhouse orchard tour. Shane Smith of the Cheyenne, Wyoming Botanic Gardens was the keynote speaker with other sessions being taught by local experts. Agent Schalau provided two presentations titled “Emerging Diseases” and “Over-the-Counter Pesticides”. 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 McLandress Orchard in Chino Valley, AZ.

Fruit Tree Care

Agent Jeff Schalau also conducted three Deciduous Fruit Tree Pruning Workshops in 2017. They were held in cooperator orchards in Chino Valley and Camp Verde and had 98 total participants. Direct assistance in fruit tree care was also provided to Orme School where 100+ fruit trees were planted four 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 370 Twitter followers (a 19% increase over 2016) and 576 Facebook “Likes” (a 16% over 2016).

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 65 participants. The training session was held in December 2017 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 Greenway in Cottonwood. Agent Schalau also provided training on identification, biology, and management of invasive species to 25 Youth Conservation Corps members.



Paulden Presentation – learning about plants

DK Cracchiolo Ranch

The DK Cracchiolo Ranch was given to the University of Arizona in 2015. The ranch is located on 40 acres along Oak Creek between Cottonwood and Sedona. It is currently planted in irrigated pasture, however, the University of Arizona is exploring the idea of creating a small farm education site on a portion of the property. Agent Schalau has been collaborating with Dr. Mitch McClaran (UA CALS Experiment Station) to assess interest and identify partners for this effort. The Yavapai College Agribusiness Technology and culinary programs, along with biology and film students, have expressed interest in partnering with the University of Arizona at the DK Cracchiolo Ranch. In 2017, a “Request for Letters of Interest” process was initiated to identify partners that could grow specialty crops at the site in an educational partnership. Three open house events were held at the ranch (4/28, 5/3, and 11/2/17) with a combined total of 60 participants to gauge interest and encourage innovative crop production partnerships with the University of Arizona using the land, water, and other DK Ranch resources. A Commercial Horticulture Agent search will begin in 2018 to provide educational programs in partnership with growers.



The 40 acre DK Cracchiolo Ranch is adjacent to Oak Creek. The University of Arizona is moving forward with local partners to create a small farm demonstration site at this location.

The V Bar V Ranch

The V Bar V Ranch Experiment Station conducts research that addresses environmental, wildlife, and domestic livestock issues applicable to Arizona and the Southwest. The ranch is an integral part of the University of Arizona College of Agriculture and Life Sciences research program. Vegetation zones, including high desert chaparral, pinyon-juniper, and pine are typical of those on most of the commercial ranches in central and northern Arizona.



Ranch Superintendent, Bopper Cannon, and Research Specialist, Keith Cannon moving cattle at the V Bar V Ranch.

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.



CRM Team monitoring rangeland trend at the Yavapai Ranch. This site is an enclosure which has excluded livestock grazing since 1939. Data from this site is compared to that collected at an adjacent site which is grazed by cattle and managed for livestock production.

Visiting University of Arizona Faculty—2017



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Yavapai County

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



Back row left to right: Pam Denney, Bill Marmaduke, Jeff Schalau, Rich Peterson, Lydia Watts, Rebecca Serratos, Aimee Novak, Karen Pizzuto

Front row left to right: Mary Barnes, Hope Wilson, Trudy Birkemeyer, Angela Tesky-Peterson, Jeanne Briggs, Stacy DeVeau, Shirley Vasovski

Not pictured: Lisa Gerber, Adam Yarnes, Katrina Dotzler

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

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