

COLLEGE OF AGRICULTURE & LIFE SCIENCES

# Cooperative Extension



## Yavapai County Report 2015



THE UNIVERSITY  
OF ARIZONA

## Table of Contents

| Subject  | Page |
|--|------|
| Letter from the County Director  | 3    |
| 2015 Program Highlights  | 4    |
| 2015 Educational Programs and Participation Data                                       | 5    |
| 4-H Youth Development  | 6-8  |
| New Programmatic Staff for Yavapai County Cooperative Extension                        | 8    |
| Family Consumer Health Sciences—Food Safety/ Local Foods                               | 9-10 |
| Master Gardeners/Horticulture Programs   | 11   |
| Horticulture Programs (cont.)  | 12   |
| Livestock and Range Programs   | 13   |
| Visiting Faculty/County Faculty and Staff/Extension Advisory Board/Contact Information | 14   |



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 2015. 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 31,259 Yavapai County residents. In addition, 248 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 17,535 hours of service with an estimated value of \$404,532. In 2015, Yavapai County Cooperative Extension added one new faculty and three new staff members to our team.

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 Schalaus  
County Extension Director  
Agent, Agriculture and Natural Resources

Yavapai County Cooperative Extension  
840 Rodeo Dr # C  
Prescott, AZ 86305  
928-445-6590 ext. 224  
jschalau@cals.arizona.edu



Woman standing in front of a field of Papago sweet corn growing at the University of Arizona's Prescott Dry Farm. This experimental farm was located near the Granite Dells and in operation between 1912 and 1927.



### Because of Yavapai County Cooperative Extension, in 2015...

- **Yavapai County Cooperative Extension volunteers contributed 17,535 hours of service valued at \$404,532** (Independent Sector, 2014 value of volunteer of \$23.07/hr.) serving as Master Gardeners, 4-H Leaders, Food safety Industry Council, and Extension Advisory Board members.
- **178 active Yavapai County Master Gardener volunteers contributed 14,861 hours of service** to their communities reaching 4,561 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.
- **186 youth were enrolled in Yavapai County 4-H Club Programs.** These youth were supported by 36 volunteer leaders and enrolled in projects which included horse, sheep, swine, steer, rabbit, poultry, photography, leather craft, and Clover Kids.
- **272 school outreach visits were conducted across Yavapai County to promote STEM** (science, technology, engineering and mathematics) education. Activities reached **6,453 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.
- **968 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.
- **256 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 2015 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 received a three-year Supplemental Nutrition Assistant Program Education (SNAP-Ed) grant** through the 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 families in Yavapai County .
- Yavapai County Cooperative Extension continued to build its capacity for **Small Acreage Education** programs which included a Well Owner Workshop (Dewey-Humboldt, 10/24/15) where 43 participants learned about the components of a residential well, its maintenance, water testing and treatment options in this half-day workshop. Another Small Acreage Education program was the **Beginning Farmer's Course** (Prescott/Paulden, October-November 2015). 24 attendees learned about business planning, irrigation, plant nutrition, marketing, and hoop house construction over four half-day sessions.
- 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/yavapaipplants/](http://cals.arizona.edu/yavapaipplants/)) which contains descriptions and multiple photos of 665 local plant species (20% increase from 2014). This site is used by government agencies, schools, universities, non-profits, and other plant enthusiasts and had over 12,887 users and 101,807 pageviews in 2015.

## 2015 Educational Programs and Participation Data

*In 2015, 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, assistance with Farm to School efforts, Good Agricultural Practices/Good Handling Practices (GHP/GAP) training, Well Owner Workshops and educational resources. |

### Yavapai County Citizens Served in 2015

| Program Area  | Educational Outreach | Office Contacts* | Totals        |
|---|----------------------|------------------|---------------|
| <b>4-H Youth Development</b>  | 439                  | 5,290            | 5,729         |
| <b>4-H Science, Technology, Engineering, and Mathematics (STEM)</b> | 6,453                | 105              | 6,558         |
| <b>Family, Consumer and Health Sciences</b>                         | 4,006                | 2,046            | 6,052         |
| <b>James 4-H Camp</b>   | 968                  | 56               | 1,024         |
| <b>Horticulture</b>   | 5,911                | 4,693            | 10,604        |
| <b>Natural Resources</b>  | 410                  | 982              | 1,392         |
| <b>Totals</b>   | <b>18187</b>         | <b>13,172</b>    | <b>31,359</b> |

\*Includes email, phone and face to face.

## 4-H Youth Development - Clubs and Fairs

### 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 community. 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 Clubs

Yavapai County 4-H community and project clubs were led by 36 adult volunteers. Yavapai County 4H clubs reached over 186 youth participating in projects ranging from sewing/textiles, leadership, livestock and small stock, to horse and outdoor adventures. Two new community clubs were added in the Verde Valley (Sedona and Cottonwood), an area that has seen a decrease in club membership over the last several years.

### Record Books

The 4-H program has a long history of recordkeeping which reflects the importance of recordkeeping in our daily lives. In 4-H, young people have tracked their activities, events,



Yavapai County 4-H Members getting up close and personal with their small stock projects at the 2015 4-H/FFA EXPO.

profits and losses, skill development and learning experiences, and much more using the 4-H Record Book. In 2015, 120 4-H members turned in their 4-H Record Books for inspection and judging. This was a 25% increase over 2014.

One Yavapai County 4-H member, Markanna Moore of the Shamrock Hustlers, turned in a record book at the state level to be judged for National 4-H Congress. This member's record book helped her get selected as one of eight delegates to represent Arizona at the 2015 National 4-H Congress in Atlanta, GA. Yavapai County 4-H Youth Development Assistant Agent, MaryJo Moncheski also chaperoned/attended the National 4-H Congress

### Yavapai County 4-H/FFA EXPO

The 2015 4-H/FFA EXPO Committee held a successful event during the Yavapai County Fair for the first time in over 50 years. 134 4-H and FFA youth exhibited and competed in the 2015 4-H/FFA EXPO. Members that 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 and FFA 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 Horse Committee

The Yavapai County 4-H Horse Committee has been revitalized with new volunteers and program offerings. The committee sponsored two educational clinics for 4-H youth on gymkhana and goat tying. The Committee also sponsored three Yavapai County horse shows which allowed members to qualify for the State 4-H Horse Show which was held in November in the Phoenix area. Cooperative Extension is very pleased the 4-H Horse Project has strong leadership and created new opportunities for Yavapai County youth.



The Arizona Delegation that attended the National 4-H Congress held in Atlanta, GA Nov. 27-Dec. 1, 2015.

## 4-H Youth Development - Camping Programs

### The James 4-H Camp

The James 4-H Camp at Mingus Springs provides 4-H members/agents, university clubs and organizations, local schools and other non-profits a safe, American Camping Association accredited, outdoor learning facility. 4-H Programs across Arizona 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. Yavapai County Cooperative Extension faculty and staff are active in providing educational experiences for campers. Camp Director, Adam Yarnes, has been instrumental in directing and improving the James 4-H Camp.

### James 4-H Camp Program Impacts

- Taught leadership and life skills such as responsibility, teamwork, and citizenship to 294 4-H participants and 631 other community partners.
- Participants gained a greater appreciation for the natural world.
- Participants form lasting relationships with other campers and mentors.
- 100% of group leaders were satisfied with our facility and programming options and have self-selected to return in 2016.

### James 4-H Camp Testimonials

- “You inspired me to respect and learn more about nature”  
- Student
- “I learned about trust, teamwork, communication and leadership”  
- Student
- “Was a once in a lifetime experience”  
- Student
- “It is so nice to see someone who cares again, the place was falling down and now looks great”  
- Group Leader
- “With regards to camp especially, we have been very quick to complain about things that haven’t been ready, working or issues that we saw as roadblocks. I just wanted to say that we had probably our best year yet!”  
- 4-H Agent



MoYava Camp participants conducting a service project at the James 4-H Camp at Mingus Springs.

### MoYava 4-H Camp

A team of 16 youth and adults worked together in a Youth-Adult Partnership to design a successful camping program for Mohave and Yavapai County 4-H youth. The planning committee met several times in preparation for the five-day, residential MoYava 4-H Summer Camp at the James 4-H Camp at Mingus Springs. Two Yavapai 4-H youth served as camp counselors and 10 Yavapai County 4-H members attended the MoYava 4-H Camp. Here, youth learned about forestry, wildlife, and fisheries. Campers also participated in community service projects that improved facilities and safety at the camp. A total of 83 youth attended the MoYava 4-H Camp. Evaluations indicated that MoYava campers gained many new skills, became more independent, increased their knowledge of natural resource management, and made lifelong friends.

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

The 2015 J.O.L.T was held in Heber, AZ at Camp Shadow Pines on June 8th–12th. During J.O.L.T., teens learned and practiced teamwork, communication, and leadership skills. Chaperones attending J.O.L.T., participated in camp activities in partnership with 4-H youth. J.O.L.T had a total of 108 youth participants. These participants represented 12 out of 15 counties in Arizona and a delegation from New Mexico. 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. Challenges were opportunities for the challenge groups to really see and understand. Participating youth also learned that sometimes, effective leaders must also learn to be willing followers. Yavapai County 4-H Agent, MaryJo Moncheski, provided leadership and guidance for MoYava and J.O.L.T.



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)

### 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 Math (STEM) projects provide science enrichment opportunities connecting kids to the University of Arizona through science outreach programs.

### STEM Outreach

Yavapai County 4-H Program Coordinator, Stacy DeVeau, conducted 272 STEM outreach visits, in formal school classroom settings and informal settings, such as libraries, after school programs, and camps. 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 experiences were provided to 6,453 students. STEM education program outreach serves increasing numbers of students each year. This year, the STEM program received funding from the City of Prescott to continue the *Wild Over Water (WOW)* program, previously being administered by a staff member who has since retired. WOW consists of four lessons aimed at improving students' understanding of how water interacts with the environment: the water cycle, watersheds, groundwater, and water technology and conservation. Additionally, Yavapai County Cooperative Extension supports the Spot: a Child's Museum, located in the Prescott Gateway Mall, which Stacy assists through special education events as well as during some of their operating hours.



Cooperative Extension STEM Educator, Stacy DeVeau, emphasizes the importance of agriculture to attendees of the 2015 Arizona SciTech Festival at Prescott Gateway Mall on April 18, 2015.

### Professional Development

Stacy was selected to attend the 25th Annual Summer Agriculture Institute (SAI). SAI took place June 8-12 and was an agricultural tour of Arizona. Stacy was also the recipient of a White-Reinhardt Scholarship through the American Farm Bureau's Foundation for Agriculture. This scholarship covered all expenses related to attending the National Agriculture in the Classroom Conference in Louisville, Kentucky.

## New Educators at Yavapai County Cooperative Extension



**Food Safety and Health Education Program Coordinator:** *Nicole Lund* began working with Yavapai County Cooperative Extension in March 2015 as the new part-time Program Coordinator. Nicole has a background in Environmental Health and Biology Education.



**SNAP-Ed Program Coordinator:** *Rebecca Serratos* began working with Yavapai County Cooperative Extension in December 2015 as the new SNAP-Ed Program Coordinator. Rebecca is responsible for the day-to-day activities of the SNAP-Ed grant and teaching nutrition education classes.



**4-H Extension Program Assistant:** *Shirley Vasovski* began working with Yavapai County Cooperative Extension in December 2015. Shirley will be assisting with 4-H operations and developing volunteer recruitment and training programs.

## Family Consumer Health Sciences Food Safety/ Local Foods



COLLEGE OF AGRICULTURE & LIFE SCIENCES

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. 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

#### **Certified Professional Food Safety Management Training:**

During 2015, 256 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 and is offered monthly in Prescott and bimonthly in Cottonwood. 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 2015 "pass rate" for the exam was 94.5%. Many updates were made to the certification course, including an updated PowerPoint presentation, use of the NEHA Professional Food Manager manual, additional reviews and pre- and post-tests to establish learning of priority information. These new updates will be implemented January, 2016.

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



Cooperative Extension Food Safety Educator, Nichol Lund, teaches proper handwashing at the Prescott Farmer's Market, fall of 2015



Fresh, "Yavapai Grown" produce for sale at the Prescott Farmer's Market. Cooperative Extension has an educational presence at five Farmer's Markets across the county.

The Yavapai County FSIC met 6 times during 2015 to identify and address food safety issues in Yavapai County. At the end of 2015, the FSIC had full membership. The FSIC is made up of 13 appointed members, of 10 industry representative (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. The FSIC addressed the following issues: approved source and GHP/GAP and Golden Plate Award Criteria. Education priorities included the first edition of the new quarterly Food Safety Education Newsletter, "Food Safety Scoop". The first edition covered the topic of Norovirus and the importance of no bare hand contact with ready to eat foods; Creation of a two-sided Service Dog awareness Poster; and a presentation by Jeff Schalau was given to the council about the science behind consuming genetically modified (GM) foods.

#### **Food Safety Community Presentations:**

FCHS Assistant Agent Hope Wilson was invited to present "Introduction to High Altitude Cooking," hosted by Prescott Women of the Moose, open to all community members. Approximately 25 community members attended the hour-long presentation on October 24, 2015.

FCHS Assistant Agent Hope Wilson was invited to be a guest lecturer at Prescott College for the Summer Session course: Art and Science of Food Preservation. The agent presented a 90 minute lecture followed by a 4-hour lab entitled "Home Canning" on September 15, 2015.

FCHS Assistant Agent Hope Wilson and Program Coordinator Nicole Lund hosted the Education Booth at the Prescott Farmers Market. Approximately 60 youth and adults participated in the "Handwashing Challenge" and played "Produce Safety, True or False" at the booth on August 22, 2015.

## Family Consumer Health Sciences Nutrition Education and Physical Activity

### 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 2015, YSH developed community and educator newsletters featuring spinach. Community newsletters included information about how to select and prepare featured local produce as well as nutrition information. Newsletters for educators also included information about integrating information about the featured produce into existing curriculum such as botanical facts, historical and cultural uses and literature. YSH disseminated 2000 fall newsletters featuring spinach to parents of students participating in taste tests and at community sites such as Yavapai County Regional Medical Center, YMCA, WIC Clinics, and community health clinics.

YSH partners conducted taste tests at 8 different schools in Yavapai County elementary and middle schools. The YSH taste test at Coyote Springs Elementary in Humboldt Unified was the featured story on the front page of *The Prescott Courier* on October 23, 2015. During the taste tests, 3639 Elementary and Middle School students tried spinach during taste tests and 1398 voted:

53% of students voted "Love It"

26% of students voted "Like It"

21% voted "No Thank You"

Some quotes from students:

"So yummy... I just couldn't get enough!"

"I like trying new things!";

"Please put it in the salad bar!"



Yavapai Seasonal Harvest (YSH) partners during the spinach taste test at Coyote Springs Elementary School in Prescott Valley.



Rebecca Serratos offers carrot taste tests on a chilly winter day at the Prescott Farmers Market.

**Farm to School:** The FCHS staff and faculty 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 received a three-year SNAP-Ed grant through the 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 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 will focus 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. Cooperative Extension's SNAP-Ed grant started October 1, 2015. Over 100 youth and adults participated in a taste test of multicolor carrots and radishes at the Prescott Farmers' Market Education Booth. Participants received nutrition information, preparation tips and recipes for carrots.

### 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 2015, Yavapai County Cooperative Extension conducted a pilot to determine feasibility for rolling it out county-wide. Ten individuals participated in the pilot and walked a total of 1,217 miles during the 8-week program. Ninety percent of participants completed the program and all participants that completed the program improved their Physical Activity Status by at least one level from pre-survey to post-survey.



## 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 2015 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, class members become Associate Master Gardeners. The Training Course is offered to 40 residents 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 2015, 178 Master Gardeners contributed 14,861 hours of volunteer service to citizens and institutions of Yavapai County. This included 4,561 face-to-face, 1,988 phone, and 208 email contacts. Mary Barnes maintained records, facilitated communication, assisted in program planning, and tracked volunteer activities. She also designed and continues to update the Yavapai County Master Gardener web site. Master Gardener, Nora Graf, edited and managed the bi-monthly newsletter *Yavapai Gardens*. Master Gardeners also provided on-site assistance and education to one school garden, four community gardens, two museums, a hospital, and a zoo. Yavapai County Master Gardeners also staffed educational displays at public events (26), coordinated Master Gardener Association meetings/activities (10), and organized the Yavapai County Master Gardener recognition picnic. The Master Gardener Speaker's Bureau also gave 30 presentations to community groups and two Osher Lifelong Learning Institute classes which reached 775 people. Yavapai County Cooperative Extension continues to have one of the most ambitious and successful Master Gardener Programs in Arizona.



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

## Master Gardener Help Desk Survey Results

A follow-up survey of Master Gardener Help Desk clients was conducted in 2015. Fifty-nine clients were randomly selected and surveyed by phone regarding their satisfaction with the information received from the Master Gardener help desks in Prescott and Camp Verde. The results indicated clients that consulted Yavapai County Master Gardener volunteers applied the recommended actions, found them effective, and were satisfied with the services they received. Specifically, clients were asked if they "applied the knowledge gained through action(s)" and "was the action taken effective in addressing their situation". In both cases, 94% of the clients said they took the recommended action and the action was effective in addressing their issues. 89% of the respondents indicated they took actions recommended by the Yavapai County Master Gardener Help Desks. 75% said the recommended action was effective and 92% were satisfied with services/advice provided. These results indicate the Yavapai County Master Gardener Help Desks are meeting their goal of providing science-based garden/landscape information and the clients are applying the information and having successful results.

## 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 257,249 page views during 2015. This is a major marketing tool for Yavapai County Cooperative Extension horticulture programs/events and the web site is used extensively to answer client e-mail questions. Jeff Schalau also submits timely horticulture articles to the Prescott Courier and other publications.



Yavapai County Master Gardeners learning plant division and propagation techniques in preparation for the Monsoon Madness Plant Sale.

## More Horticulture and Agriculture Programs



COLLEGE OF AGRICULTURE & LIFE SCIENCES

Cooperative  
Extension

Yavapai County

### Using Social Media in Horticulture Education

Agent Schalau also used Twitter and Facebook to promote the Backyard Gardener on-line columns by "tweeting" and posting each new column to the Yavapai County Master Gardener Facebook page as it became available. A Yavapai County Master Gardener assists in posting interesting and relevant information to the Facebook page. Jeff Schalau's Twitter feed had 312 followers in 2015. This was a 29% increase over 2014. The Twitter feed is also used to inform program participants with up to date program information such as workshop cancellations due to weather. The Yavapai County Master Gardener Facebook page currently has 363 "Likes" in 2015. This was a 28% increase over 2014.

### Deciduous Fruit Tree Pruning Demonstrations

Jeff Schalau conducted five Deciduous Fruit Tree Pruning Workshops in 2015. These were presented in Camp Verde (1), Chino Valley (2), and Prescott Valley (2), during February and March. 144 participants attended the workshops. Three of the five workshops were held at collaborator's orchards where we have been conducting fruit tree pruning education for multiple years. Home pruning techniques used on apples, pears, peaches, nectarines, apricots, plums and cherries were presented. Fertilization, irrigation, pest management were also covered during the workshops. These successive workshops provide attendees with current education in addition to seeing the results of pruning done during prior years. A team of Master Gardener volunteers also assisted Agent Schalau in creating a set of deciduous fruit tree pruning video mini-courses that are posted to YouTube and available for public viewing (at <http://cals.arizona.edu/yavapai/pruning/video.html>).



Agriculture and Natural Resources Agent, Jeff Schalau, discusses safety and sanitation during a deciduous fruit tree pruning workshop.



Beginning Farmers attended a tour at Whipstone Farms in Paulden to learn about season extension techniques and other important farm practices.

### Beginning Farmer Education

For the third year, Yavapai County Cooperative Extension has offered a series of Beginning Farmer Workshops and farm tours in collaboration with campus-based specialists. 24 participants attended the four session series during the fall of 2015. Three half-day classroom sessions were held in Prescott. Topics covered were business/crop planning, hoop house construction/siting, plant nutrition, irrigation, soils, composting, and marketing. Local growers and a farmer's market manager presented to the group and Whipstone Farms in Paulden hosted a tour for the participants.

### Turfgrass Management

Turfgrass is an important contributor to Arizona's economy. From golf courses to sports fields, people come to Arizona to utilize these facilities. Kai Umeda, University of Arizona Cooperative Extension Area Agent for Turfgrass Science is housed in Phoenix and works with golf course managers and sports fields in Yavapai County. In 2015, Kai conducted herbicide evaluation field trials in Prescott and Sedona. Multiple applications during spring and/or fall of newly introduced herbicides or experimental products were evaluated for control of annual bluegrass (*Poa annua*), control on golf greens. His studies help determine rates and timings of herbicide applications which provide the best control while still preserving high-quality turf.

### Invasive Species Management

Invasive and noxious weeds are spreading across open spaces and water bodies throughout North America. In Yavapai County, there are significant populations of: yellow star thistle, Malta star thistle, Russian knapweed, spotted knapweed, diffuse knapweed, Scotch thistle, Canada thistle, annual brome grasses, and many others. Extension Agent, Jeff Schalau, collaborated with the Verde River Watershed Restoration Coalition to provide pesticide applicator training where practitioners obtained required continuing education. Jeff Schalau also provides invasive species information to Yavapai County residents through invited presentations and site visits.

## Livestock and Range Programs



COLLEGE OF AGRICULTURE & LIFE SCIENCES

Cooperative  
Extension

Yavapai County

### The V Bar V Ranch Agricultural Center

The V Bar V Ranch Agricultural Center, part of the University of Arizona College of Agriculture and Life Sciences, is a 71,000-acre public lands ranch located in central Arizona along the Mogollon Rim east of Camp Verde. The ranch ranges from 3,500 to 7,000 feet in elevation encompassing vegetation zones of high desert chaparral, pinon-juniper woodland and pine forest.

As a fully operating cattle ranch, the V Bar V affords University of Arizona faculty and students the opportunity to approach research in an applied, problem solving manner in combination with basic laboratory studies done on campus. Current research projects are focused on breed characterization from conception to consumption, range management/monitoring, range beef cow efficiency, heifer development, and estrous synchronization studies. Additionally, a Ranch Explorers Day is held every August as well as a variety of other training/information workshops for ranchers as the needs arise. Dr. David Schafer is the Resident Director of the V Bar V Ranch Agricultural Center.

### Rangeland Education

Cooperative Extension Range Management Specialist, Dr. Doug Tolleson, educates diverse audiences about rangelands and conducts research related to livestock and wildlife use of rangeland resources. Doug covers the northern portion of Arizona and is housed in Cooperative Extension's Camp Verde Office. He has a team which includes a Research Specialist, Educational Specialist, and several Research Technicians that conduct rangeland monitoring. Doug and his team bring rangeland and livestock nutrition information to students, producers, agency employees and concerned citizens.

### Rangeland Monitoring

UA Cooperative Extension agents and specialists provide hands-on training to ranchers and agency personnel. They teach workshops, write publications, and provide technical assistance. Participants learn how to measure and record changes in vegetation, soil, and other natural resource



Chris Bernau (right), V Bar V Rangeland Research Specialist leads a field discussion during a rangeland monitoring training session.

attributes over time. This helps ranchers and agencies develop good management and stewardship practices on the land. Several Yavapai County ranches have ongoing rangeland monitoring programs. Dr. Tolleson and Extension Agent, Jeff Schalau assist producers with rangeland monitoring.

Dr. Tolleson coordinated other monitoring projects that supported a graduate project at the V Bar V Ranch, prescribed burns conducted by the Prescott National Forest, and various others. Dr. Tolleson also supervises a team of collaborative range monitoring technicians that are assisting the Bureau of Land Management (BLM), Kingman and Yuma Districts, in collecting and reporting rangeland monitoring data. Dr. Tolleson's activities can be tracked by subscribing to the *Rimrock Report*: a quarterly research and extension update that he publishes (email: [doug@cals.arizona.edu](mailto:doug@cals.arizona.edu) and ask to be included).

### Range Rocks!

The goal of Range Rocks! is to get K-12 students outdoors and teach them the many societal values and ecological importance of rangelands. Educational Specialist, Lisa Page, is delivering this program to youth across Yavapai County. Oak Creek School in Cornville, Arizona has adopted an Ag/STEM focus for their campus. Lisa and Doug have worked with them to include Range Rocks! programming in their agriculture and science classes. Our goal is to introduce students to the exciting world of range science and show them what a great natural resource they have in their backyard – Arizona rangelands! We work to provide fun and interactive lessons on a variety of topics, and especially like to get working professionals to participate with us and talk with the students about the career opportunities that are available related to range science. Today's students are tomorrow's scientists. Range Rocks! provides an avenue for young scientists to explore natural resource management with hands-on activities in the outdoors.



Dr. Doug Tolleson has made several short educational videos which are designed to reach new audiences. See them at <http://cals.arizona.edu/vbarv/rangeprogram/>.

---

## Visiting University of Arizona Faculty—2015

---



Joyce Alves, FCS Agent, Apache County  
Janick Artiola, Water Quality Research Scientist, SWES  
LoriAnne Barnett, Education Coordinator, Nature's Notebook  
Paloma Beamer, College of Public Health  
Shane Burgess, Dean, College of Agriculture and Life Sciences  
Steve Campbell, Nat. Res. Agent, Navajo Co.  
Bryan Chadd, 4-H Youth Development Agent, Maricopa Co.  
Peder Cuneo, Specialist, Animal Science  
Debbie Curley, Area Assistant Agent, FCHS  
Tom DeGomez, Nat. Res. Agent, Coconino Co.  
Kitt Farrell-Poe, Water Quality Specialist  
Dan Faulkner, Beef Specialist, Animal Science  
Vic Jimenez, 4HYD Agent, Maricopa Agricultural Center  
Chris Jones, ANR Agent, Gila County  
Paula Kahn-Rivadeneira, Fresh Produce Safety Specialist  
Eric Larsen, 4-H Youth Development Agent, Pima Co.  
Kim McReynolds, Nat. Res. Area Specialist, Cochise Co.  
Patty Merk, Area Agent, FCHS/Family & Youth

Kurt Nolte, Agric. Agent, Yuma County  
Gerald Olson, 4-H Youth Development Agent, Mohave Co.  
Amy Parrott, 4-H Youth Development Agent, Yuma Co.  
Susan Pater, 4-H Agent/County Director, Cochise Co.  
Channah Rock, Water Quality Specialist, SWES  
George Ruyle, Rangeland Program Chair, SNR  
Ursula Schuch, Commercial Horticulture Specialist, Plant Sci.  
Vanessa da Silva, PhD, RD Assist. Professor and Extension Specialist Department of Nutritional Sciences  
Jeff Silvertooth, Assoc. Dean & Director, Econ. Dev. & Extension  
Jim Sprinkle, Area Agent, Animal Sciences, Gila County  
Trent Teegerstrom, Specialist, Agric. and Resource Economics  
Russ Tronstad, Specialist, Agric. and Resource Economics  
Kai Umeda, Area Turf Agent, Maricopa Co.  
Peter Warren, Horticulture Agent, Pima Co.  
Sarah Wilkinson, College of Pharmacy  
Trish Zilliox, FCHS Area Assistant Agent, (Coconino/Mohave)

---

## University of Arizona Cooperative Extension Faculty and Staff

---

|                         |   |
|-------------------------|---|
| <b>Kent Apostol</b>     | Area Associate Agent, Forest Health, kapostol@email.arizona.edu                                 |
| <b>Mary Barnes</b>      | Program Coordinator, ANR Programs, barnesm@email.arizona.edu                                    |
| <b>Pamela Denney</b>    | Administrative Assistant, pdenney@cals.arizona.edu  |
| <b>Stacy DeVeau</b>     | Program Coordinator, 4-H Youth Development STEM Programs, sdeveau@cals.arizona.edu              |
| <b>Lisa Gerber</b>      | Office Specialist Sr., lgerber@cals.arizona.edu   |
| <b>Nicole Lund</b>      | Program Coordinator, Food Safety Education, nmlund@email.arizona.edu                            |
| <b>MaryJo Moncheski</b> | Assistant Agent, 4-H Youth Development, mmoncheski@email.arizona.edu                            |
| <b>Karen Pizzuto</b>    | Regional Business Manager, kpizzuto@cals.arizona.edu  |
| <b>Jeff Schalau</b>     | County Director, Agent, Agriculture & Natural Resources, jschalau@cals.arizona.edu              |
| <b>Rebecca Serratos</b> | Program Coordinator, SNAP-ED, rebeccaserratos@email.arizona.edu                                 |
| <b>Doug Tolleson</b>    | Associate Range Management Specialist, V Bar V Ranch Experiment Station, dougt@cals.arizona.edu |
| <b>Shirley Vasovski</b> | Extension Program Assistant, 4-H Youth Development, vasovski@email.arizona.edu                  |
| <b>Lydia Watts</b>      | Secretary, Prescott Office, lydiawatts@email.arizona.edu  |
| <b>Hope Wilson</b>      | Assistant Agent, Family, Consumer, and Health Sciences, hopewilson@cals.arizona.edu             |
| <b>Adam Yarnes</b>      | Program Coordinator, James 4-H Camp at Mingus Springs, adamyarnes@email.arizona.edu             |

---

## University of Arizona Cooperative Extension Advisory Board

---

|                               |                                     |
|-------------------------------|-------------------------------------|
| <b>Nora Graf</b>              | <b>Board Chair, Master Gardener</b> |
| <b>Angela Teskey Peterson</b> | <b>Co-Chair, 4-H Leader/Rancher</b> |
| <b>Jeanne Briggs</b>          | <b>Food Safety/Nutrition</b>        |
| <b>Trudy Birkemeyer</b>       | <b>Rancher</b>                      |
| <b>Kimberly Knight</b>        | <b>Rancher</b>                      |

---

### YAVAPAI COUNTY COOPERATIVE EXTENSION OFFICES

|                              |  |
|------------------------------|--|
| <b>840 Rodeo Dr #C</b>       | <b>2830 N Commonwealth Dr, Ste 103</b> |
| <b>Prescott, AZ 86305</b>    | <b>Camp Verde, AZ 86322</b>            |
| <b>Phone: (928) 445-6590</b> | <b>Phone: (928) 554-8999</b>           |
| <b>Fax: (928) 445-6593</b>   | <b>Fax: (928) 554-5996</b>             |

**Web: [extension.arizona.edu/yavapai/](http://extension.arizona.edu/yavapai/)**

**Facebook: [yavapaicooperativeextension](https://www.facebook.com/yavapaicooperativeextension)**

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Jeffrey C. Silvertooth, Associate Dean & Director, Economic Development & Extension, College of Agriculture and Life Sciences, The University of Arizona. The University of Arizona is an equal opportunity, affirmative action institution. The University prohibits discrimination in its programs and activities on the basis of race, color, religion, sex, national origin, age, disability, veteran status, sexual orientation, gender identity, or genetic information and is committed to maintaining an environment free from sexual harassment and retaliation.