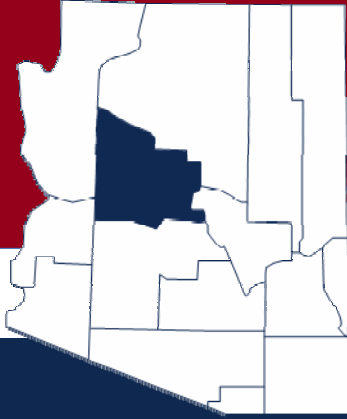
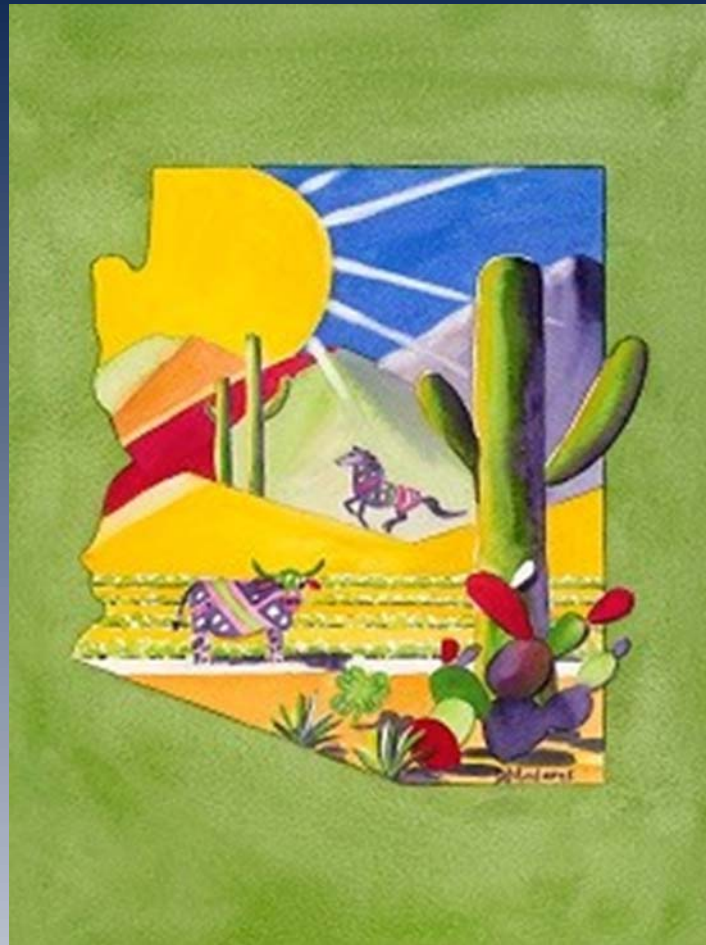


COLLEGE OF AGRICULTURE & LIFE SCIENCES

# Cooperative Extension



## Yavapai County Report 2014



THE UNIVERSITY  
OF ARIZONA

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

## From the County Director

2014 was another great year for Yavapai County Cooperative Extension! 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 28,907 Yavapai County residents. In addition, 240 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 17,278 hours of service with an estimated value of \$389,619. In addition, Yavapai County Cooperative Extension was pleased to add two new faculty members: Ms. Hope Wilson, Area Family, Consumer, and Health Sciences (FCHS) Agent; and Ms. MaryJo Moncheski, 4-H Youth Development Agent (see page 8 for more information).

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.



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County Extension Director  
Agent, Agriculture and Natural Resources



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University of Arizona, Forbes Building (built in 1915) which is home to the College of Agriculture and Life Sciences in Tucson.

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## Executive Summary

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### *Because of Yavapai County Cooperative Extension, in 2014...*

- **176 active Yavapai County Master Gardener volunteers** contributed 14,718 hours of service to their communities reaching 4,855 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 47 volunteer leaders and enrolled in projects which included horse, sheep, swine, steer, rabbit, poultry, photography, leather craft, and Clover Buds.
- **172 school outreach visits** were conducted across Yavapai County to promote Science, Technology, Engineering and Mathematics (STEM) education. Activities reached 5,840 students and averaged 1 1/2 hours in length. Activities included exploring properties of matter, 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.
- **Wild Over Water (WOW) educational program reached 3,510 students** in Prescott, Prescott Valley, and Chino Valley schools. Eighteen volunteer docents brought these water-focused, experiential learning activities to school classrooms.
- **The Verde Valley Water Festival reached 470 students.** Seventy community volunteers assisted in delivering four different water education activities at Dead Horse Ranch State Park.
- **235 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 thirteen member Food Safety Industry Council (FSIC) met 6 times during 2014** 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.
- **27 participants attended the Beginning Farmer's Program** offered in the Prescott area. Principles taught were 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/yavapaiplants/](http://cals.arizona.edu/yavapaiplants/)) which contains descriptions and multiple photos of 556 local plant species. This site is used by government agencies, schools, universities, and non-profits and had over 9,100 visitors and 74,960 pageviews in 2014.
- **Ranchers, agency personnel, and volunteers increased their skills** in evaluating ecological processes and managing adaptively through monitoring and evaluation programs.



## 2014 Educational Programs and Participation Data



*In 2014, our educational programs focus 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) Education.                                |
| <b>Animal Science</b>                       | V Bar V Ranch Experiment Station, livestock nutrition and supplementation, breeding and genetics, grazing behavior, and quality assurance.  |
| <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>                       | Support and 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 Agricultural Pesticide Certification, and public education.   |
| <b>Range Management</b>                     | Sustainability of grazed rangelands for ranchers and agency personnel, rangeland monitoring education, and access to technical and educational resources.                         |
| <b>Small Farms</b>                          | Beginning farmer training and support, assistance with Farm to School efforts, Good Agricultural Practices/Good Handling Practices (GHP/GAP) training, and educational resources. |
| <b>Water Resources</b>                      | Wild Over Water school docent program, well owner education, and Project WET (Water Education for Teachers).  |

### Yavapai County Citizens Served in 2014

| Program Area   | Educational Outreach | Office Contacts* | Totals        |
|--|----------------------|------------------|---------------|
| <b>4-H Youth Development</b>   | 6,069                | 2,067            | <b>8,136</b>  |
| <b>Animal Science</b>  | 245                  | 25               | <b>270</b>    |
| <b>Family, Consumer and Health Sciences</b>                          | 919                  | 2,507            | <b>3,426</b>  |
| <b>James 4-H Camp</b>  | 968                  | -                | <b>968</b>    |
| <b>Horticulture</b>  | 2,433                | 6,684            | <b>9,117</b>  |
| <b>Natural Resources (noxious weeds, forestry, range, and water)</b> | 4,849                | 2,141            | <b>6,990</b>  |
| <b>Totals</b>  | <b>15,483</b>        | <b>13,424</b>    | <b>28,907</b> |

\*Includes email, phone and face to face.

## 4-H Youth Development—Clubs, Fairs, and Camps



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Markanna Moore, Shamrock Hustlers 4-H member, showing her calf at the 2014 4-H/FFA EXPO.

### Yavapai County 4-H Clubs

Yavapai County 4-H community and project clubs were led by 43 adult volunteers. These clubs had 186 youth members actively enrolled in the 2013-2014 4-H year. The majority of members enrolled in traditional 4-H project areas with 51 members enrolled in swine, 24 in Cloverbuds (youth between 7-9 years of age), 23 in horse, 22 in poultry, 20 in

rabbit, and 25 in dog. Other project areas with high enrollments included meat goats, market sheep, dairy goats, market beef, and leadership.

The Yavapai County Leaders Council hosted a Skill-A-Thon series held on February 21<sup>st</sup>, March 22<sup>nd</sup>, and April 26<sup>th</sup>, 2014. Leaders Council prepared and conducted a workshop open to all Yavapai County 4-H members based on the Kentucky 4-H Livestock Skill-A-Thon program.

The 2014 4-H/FFA EXPO took place September 10-14<sup>th</sup>, at the Prescott Frontier Days Rodeo Grounds. This marked the first year of EXPO moving from the Spring (April) to Fall (September). Overall, the 4-H/FFA EXPO had 225 entries, which included swine, market and breeding sheep, market and breeding goats, market and breeding beef, dairy cattle, dairy goats, rabbits, poultry, waterfowl, and indoor exhibits. Around 88 lots were sold at the auction, which occurred on Saturday of EXPO. The 4-H/FFA EXPO also hosted a dog show which had 8 participants in showmanship, rally, and obedience.

4-H members from the Verde Valley exhibited their projects at the Verde Valley Fair. Yavapai County was well represented at the Arizona State Fair, the Arizona National Livestock Show, and in SAILA (Southern Arizona Livestock Association).

### The James 4-H Camp at Mingus Springs

The James 4-H Camp is the University of Arizona's only camp devoted to statewide 4-H youth. The James 4-H Camp is located on a secluded 55 acre wooded site at an elevation of 6,500 feet on Mingus Mountain in the Prescott National Forest. 4-H camping programs have the unique opportunity to reach a variety of audiences, bringing together those from limited income, underserved families as well as those with access to a variety of services; youth living in both urban and rural areas; and those who participate in other aspects of 4-H in a club or school enrichment activity.

The James 4-H Camp hosted 19 groups with a total of 968 campers in 2014. Six groups consisting of 289 campers were 4-H youth. The other groups came from a variety of schools, colleges, churches, agencies, and organizations. Yavapai County Cooperative Extension faculty and staff regularly provided educational programs to the various camping groups.

Since acquiring the James 4-H Camp in 2010, many facilities improvements have been accomplished including new, water conserving bathroom fixtures, solar energy for LED lighting, with plans for recapture of shower water for toilets and the addition of composting toilets. These upgrades were made possible through a \$30,000 University of Arizona Green Fund Grant.



4-H Program Coordinator, MaryJo Moncheski, teaches campers about Leave No Trace in the Leave What You Find activity at the 2014 Statewide 4-H Camp. Campers had to pretend they were from the year 2172 coming back to Earth by spaceship to study artifacts left behind by a civilization from 2014.

## 4-H Youth Development—Camping Programs



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Arizona 4-H youth sampling aquatic invertebrates in Ash Creek at the James 4-H Camp at Mingus Springs.

### MoYava 4-H Camp and Statewide 4-H Camp

Yavapai County 4-H members attended the MoYava 4-H Camp at James 4-H Camp in July 2014. The camp is comprised of 4-Hers from Mohave and Yavapai Counties. Youth participated in various activities including rocketry, swimming, arts and crafts, boating, stream life, gun safety, and archery, explored states of matter, fishing, forest health, Leave No Trace - Outdoor Ethics, ecology, first aid/CPR, and fire safety. Of the 67 total participants, 56% said they were more able to accept responsibility after attending MoYava camp and 56% felt they were more willing to try new things. Overall, 97% of the participants liked having a joint Mohave and Yavapai County camp, with 89% planning to come back next year.

The Statewide 4-H Camp was also held at the James 4-H Camp in July 2014. This five-day overnight camp for youth ages 9-19 was designed to help youth learn natural resource education and life skills. Objectives of the camp were to help youth develop decision-making skills, enhance communication skills, and learn how to use a variety of

resources in their environment. Other life skills youth learned included healthy lifestyle choices, self-responsibility, and marketable skills.

### Journey: Opportunity for Leaders of Tomorrow (JOLT)

What is leadership? What does it mean to be a leader? What makes a successful and efficient leader? These are some of the questions Arizona 4-H teens tried to answer at the 2014 JOLT camp at Camp Shadow Pines near Heber, AZ on June 9th-June 13<sup>th</sup>. During JOLT, teens learn and develop teamwork, communication, and leadership skills. Chaperones who attend the camp, participate in the activities as well, which helps create a partnership with youth called a youth and adult partnership (YAP). During the five days, youth and adults participated in workshops that taught etiquette (interviews and meals), taking initiative, and communication and leadership skills. Youth also listened to speakers and discussed issues such as bullying, difficulties leaders face, and overcoming obstacles.

Below are comments from Yavapai County 4-Hers about their JOLT experience:

“I learned to be a leader and step up more. During the challenges last year, I kind of sat back and did whatever I was told. This year, I helped lead the team and pitched ideas.”

“This year, I learned that leaders sometimes have to step back and let others lead. I had to sit back in several activities and watch others grow and take the leadership role. It was nice to see others grow.”

“I learned the value of a good leader. By stepping back and watching some of the challenges I was able to observe the importance of a good leader in a group. Everyone has a leader in them...they just have to realize it and find out how to unleash it. JOLT helps campers realize this and provides an environment where they can discover the leader within.”



#### The 4-H Pledge

I pledge my **HEAD** to clearer thinking, my **HEART** to greater loyalty, my **HANDS** to larger service, and my **HEALTH** to better living for my club, my community, my country and my world.



2014 Yavapai County JOLT participants.

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



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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.

During 2014, 4-H STEM Educator, Stacy DeVeau, conducted 172 outreach visits across Yavapai County, primarily in public, private, and charter school classrooms. In addition to school visits, outreach was conducted supporting James 4-H camp programs, library and summer programs, Yavapai College education classes, the 3rd Annual 5th Grade Math & Science Challenge, local science nights hosted by schools, training and implementation of the 4-H National Youth Science Day Experiment: *Rockets to the Rescue*, and the Spot: a Child's Museum, located in the Prescott Gateway Mall. Visits average 1.5 hours in length. A variety of STEM topics are offered that engage students in their own learning while promoting science literacy. STEM activities offered include exploring properties of matter, magnetic fields, engineering design process, lunar phases, seasons, the solar system and agriculture literacy. A total of 5,840 Yavapai County students were served.

### STEM In Action: Rockets to the Rescue

In October 2014, 21 4-H members from the Lonesome Valley Wranglers and Chino Valley Breakaway Latigos clubs participated in the 4-H National Youth Science Day, "Rockets to the Rescue". Developed by The University of Arizona, *Rockets to the Rescue* explores the field of aerospace engineering.

Youth were tasked with the following mission: in light of the recent natural disasters such as Typhoon Haiyan, National 4-H Council has asked youth to design and build an aerodynamic food transportation device that can deliver a payload of nutritious food to disaster victims. Youth learned



4-H youth member preparing to launch the rocket his team designed and built during *Rockets to the Rescue* activity.

engineering concepts, developed math skills, learned about nutrition and help solve a relevant, global issue.

Yavapai County 4-H members designed paper rockets with a limited number of materials and a carrier for their food cargo. Members had to work as a team to plan, design, and create their food transportation device. Members launched the rockets using 2-liter soda bottles attached to PVC pipes. Teams had to get the closest to the "island" without damaging their cargo. We were happy to report all teams were successful no matter how far away their rockets landed from the target.

## New Faculty for Yavapai County Cooperative Extension

**Ms. Hope Wilson** began work as Area Assistant Agent for Family, Consumer, and Health Sciences (FCHS) in September 2014 and is housed in our Prescott Office. Hope's Area Agent responsibilities (15%) are in Gila County. Prior to becoming Yavapai County FCHS Agent, Hope held the position of Food Safety Program Coordinator at Yavapai County Cooperative Extension. Hope has a background in nutrition, public policy, and "farm to fork" education programs and is a Registered Dietitian. She has a Masters of Public Health from the University of North Carolina, Chapel Hill and Bachelor of Arts in English from Arizona State University.



**Ms. MaryJo Moncheski** began work as Assistant Agent, 4-H Youth Development in Yavapai County on May 2015 and is housed in our Prescott Office. MaryJo has volunteered and worked in our Yavapai County office since 2013 - serving as a VISTA and later as 4-H Program Coordinator. These two years of service gave MaryJo an opportunity to learn about the Yavapai County 4-H program. She earned her B.S. in Agricultural Sciences with a concentration in Equine Science from Morehead State University (Kentucky) in 2010 and her M.S. in Agricultural Education from the University of Missouri in 2012.





## Family Consumer Health Sciences

### Food Safety/ Local Foods



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#### Food Safety

**Certified Professional Food Safety Management Training:** During 2014, 235 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 Model Food Code and is offered monthly in Prescott and bimonthly in Cottonwood. Required by the Yavapai County Environmental Health Department, this course 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.

**Yavapai County Food Safety Industry Council (FSIC)** met of 6 times during 2014 to identify and address food safety issues in Yavapai County. At the end of 2014, the FSIC was in the process of filling one vacancy for a Consumer Representative. The FSIC is made up of 13 appointed members, of 10 industry representatives (2 from each of the 5 Board of Supervisors Districts) and 3 community representatives, as well as ex-officio members from Yavapai County Community Health Services and the University of Arizona Cooperative Extension. The FSIC covered the following issues: approved source, AZ Statute changing requirements for food worker training, updates on dog-friendly patios, Golden Plate Award criteria, changes to Yavapai County Environmental Health fee schedules. Education priorities included a newsletter article written by Hope Wilson to help establishments avoid the top 5 violations recorded in Yavapai County and stickers for food establishments to post with safety reminders.

**Other Food Safety Classes and Workshops:** During 2014, the Food Safety Program Coordinator taught classes to approximately 30 attendees on the following topics: on safe home canning for a Yavapai County church group, principles of food safety and food preservation as part of series of Yavapai Regional Medical Center community classes, and food safety and school gardens to a group of Mile High Middle School students. The Food Safety Program Coordinator also assisted with a canning demonstration at the Cooperative Extension Centennial Event at V Bar V on July 24<sup>th</sup>.

**Approved Source Guidance:** Yavapai County is piloting an Approved Source Guidance for county food establishments to procure produce from small, local growers. The development of the guidance was led by Yavapai County Community Health Services in partnership with Yavapai County Cooperative Extension, local growers and food establishments to support local growers and still protect the health of consumers from foodborne illness. The Food Safety Program Coordinator and FCHS Agent attended several interagency meetings to develop guidance and participated in the release of the Guidance at Approved Source Guidance Stakeholders Meeting at Orme School, on June 11, 2014. Partners are now in the process of developing a Group GHP/GAP (Good Handling Practices, Good Agricultural Practices) Pilot in partnership with the Arizona Department of Agriculture and University of Arizona Cooperative Extension.



The Yavapai County Food Safety Industry Council meets quarterly to discuss restaurant food safety policy and issues.

#### Food and Nutrition Education

**The Yavapai Harvest workgroup** (now called Yavapai Seasonal Harvest), a partnership with Yavapai County Community Health Services, Prescott Farmers' Market and Arizona FoodCorps, developed four new educational newsletters for students, parents and educators featuring information about produce available from local growers in the county, including carrots, kale, spaghetti squash and pumpkin.

The newsletters for parents, students and other community members included information about how to select and prepare the item 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.

**National Farm to School Month:** The Yavapai Harvest work group conducted tastes at 3 Prescott schools (Miller Valley Elementary, Washington Traditional Elementary, and Mile High Middle School) in celebration of National Farm to School Month in October. 607 students tasted purple, yellow and orange carrots from local farmers in the county (Whipstone Farm, Aguiar Family Farm, and Rabbit Run Farm) and received stickers saying "I tried it" and voted on their preference for the carrots: "Loved It" = 74%; "Liked It" = 23%; "No Thank You" = 2%. In addition, 550 students and 90 parents/community members and 75 teachers received the Yavapai Harvest newsletters featuring carrots. The newsletters were distributed at Miller Valley Elementary, Washington Elementary, Prescott Mile High Middle Schools and the Prescott Farmers' Market education booth. The FCHS staff and faculty participated in the USDA Farm to School Planning Grant Committee.

## Master Gardeners/Horticulture Programs



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### Yavapai County Master Gardener Program

The Yavapai County Master Gardener program teaches interested citizens to become valuable horticultural volunteers in their communities. Cooperative Extension Agent, Jeff Schalau, taught and coordinated the 2014 Master Gardener training course in Clarkdale and managed the program in conjunction with Mary Barnes, Master Gardener Volunteer 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 2014, 176 Master Gardeners contributed 14,718 hours of volunteer service to citizens and institutions of Yavapai County. This included 1,632 face-to-face, 1,024 phone, and

137 email contacts. Master Gardener Volunteer Coordinator, Mary Barnes, maintained records, facilitated communication, conducted 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 monthly newsletter *Yavapai Gardens*. Master Gardeners also provided volunteer service to school gardens (3), community gardens (5), a museum, a hospital, public parks (4), staffed educational displays at public events (12), coordinated Master Gardener Association meetings/activities (10), and organized the Yavapai County Master Gardener recognition picnic. The Master Gardener Speaker's Bureau also gave presentations to 19 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.



Yavapai County Master Gardeners touring the Prescott Valley Community Garden learning about vegetable pests and diseases.

### Beginning Farmers Course Offered

A four session Beginning Farmers course was offered during February and March 2014 in Cottonwood. The course taught participants about business planning, financial record keeping, hoop house construction, growing crops, vegetable crops, irrigation, and plant nutrition. University of Arizona Cooperative Extension Specialists Russ Tronstad, Ursula Schuch, and Trent Teegerstrom presented this program to 27 participants in four half-day sessions. Topics covered were business/crop planning, hoop house construction/siting/growing, plant nutrition, irrigation, and marketing. There was plenty of interest in this topic and the course will be taught in the Prescott during fall of 2015.

### Master Gardener Help Desk Survey Results

A follow-up survey of Master Gardener Help Desk clients was conducted in 2014. Sixty five (65) clients were surveyed by phone regarding their satisfaction with the information received. 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, 98% of the clients said they took the recommended action and the action was effective in addressing their issues. 97% of the clients surveyed said they were satisfied with services/advice received. 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.



Many varieties of kale growing at Whipstone Farm, Paulden, AZ.

## More Horticulture Programs



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### Backyard Gardener Newspaper Column and Blog at <http://ag.arizona.edu/yavapai/anr/hort/byg>

Agriculture and Natural Resources Agent, Jeff Schalau, wrote the *Backyard Gardener*, a weekly gardening column, that appeared 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 hundreds of email questions/comments each year. The Backyard Gardener web site contains over 880 columns and had 263,645 page views during 2014. 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.

### 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. Jeff Schalau's Twitter feed had 241 followers, up from 186 followers in 2013. The Twitter feed is also used to inform program participants with up to date program information such as cancellations due to weather. The Yavapai County Master Gardener Facebook page currently has 262 "Likes" and 674 people shared stories about our page in 2014.

## Animal Science & Range Management

Several ranches in Yavapai County have ongoing rangeland monitoring programs. Here, annual data collection is combined with site-specific discussions among agency resource management professionals, ranchers, and members of the public. Animal Science Area Agent, Jim Sprinkle, Agriculture and Agriculture/Natural Resources Agent, Jeff Schalau, and University of Arizona Range Specialist, Doug Tolleson, collaborated on rangeland monitoring programs and subsequent data collection. Monitoring programs at the Yavapai Ranch (Seligman) and Bar Heart Ranch (Upper Verde River) have been ongoing. We have also formed the Rim Grass Range Group which is conducting educational sessions and includes several Verde Valley ranches adjacent to the V Bar V Ranch Experiment Station. These monitoring efforts brought ranchers and land management agency professionals together and guided them in making effective management decisions that ensure livestock grazing is sustainable. Diverse groups working together ultimately helped build trust between ranchers, agency professionals, and concerned citizens groups.



### Deciduous Fruit Tree Pruning Demonstrations

Jeff Schalau conducted four *Deciduous Fruit Tree Pruning Workshops* in 2014. These were presented in Cottonwood, Camp Verde, Chino Valley, and Prescott Valley, during February and March. 151 participants attended the workshops. Two of the four workshops were held at collaborator's orchards where we have been conducting these programs for multiple years. This provides attendees with current education in addition to seeing the results of pruning the prior year. A team of Master Gardener volunteers also assisted Agent Schalau in creating a set of deciduous fruit tree pruning videos mini-courses that will be posted to YouTube in 2014 (at <http://cals.arizona.edu/yavapai/pruning/video.html>).



Deciduous fruit tree pruning in Camp Verde - Bill Marmaduke is describing his orchard to attendees

## 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. New invasive plants continue to be introduced by contaminated seed, heavy equipment, recreationists, and wildlife. As an example, camelthorn was recently discovered near the Prescott Municipal Airport. In addition, the nursery and landscape industries could potentially introduce plants which could become invasive (Pampasgrass is one example). Invasive animals are also a threat: the Emerald Ash Borer has been detected in Boulder, Colorado. When this insect reaches Arizona, there will be serious impacts on native ashes and those planted in landscapes.

Extension Agent, Jeff Schalau, provided invasive species educational programs, consultation, pesticide applicator training, and information to Yavapai County residents through workshops and site visits.

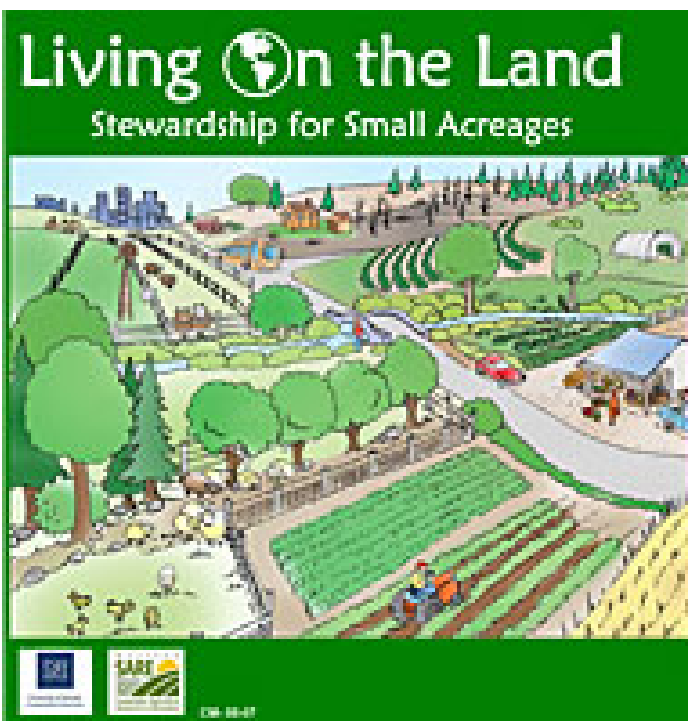
### Water Resources

Cooperative Extension's water resources education programs assist homeowners, businesses and growers to conserve water and help ensure safe, healthy drinking water for all residents and future generations.

Edessa Carr provided water resource education training/support and other water education programs in Yavapai County in 2014. Ms. Carr's programs reached a total of 1,336 youth and 641 adults. Wild Over Water (WOW) is Ms. Carr's outreach program in classrooms which utilized 18 trained volunteers and reached an additional 3,510 students. WOW volunteers present Arizona Project WET activities in Yavapai County school classrooms. The Verde Valley Water Festival (VWWF) was held at Dead Horse Ranch State Park on October 23, 2014 also engaged 70 volunteers and reached 470 students. Prior to the VWWF, Ms. Carr trained 70 high school students during four sessions to assist in delivering the lessons during the festival. Edessa also provided hands-on educational experiences to five groups at the James 4-H Camp which reached 110 students. Low-cost, well water testing was provided to 320 participants. Edessa also provided two continuing education/recognition events for her WOW docents and staffed tables at Verde River Days and the Verde Birding Festival.



Wild Over Water volunteers with Edessa Carr (third from left) at the James 4-H Camp at Mingus Springs. Edessa retired in 2014 following six years of service as Water Resource Program Coordinator. Thanks Edessa!



### New Staff to Support Programs

In 2014, the Arizona State Legislature approved \$3.5 million in new funding for the University of Arizona Cooperative Extension. This funded two additional faculty members: Hope Wilson and MaryJo Moncheski (see page 8). In addition, we have added four new staff members: Mr. Adam Yarnes as Program Coordinator for the James 4-H Camp at Mingus Springs, Ms. Mary Barnes as Program Coordinator for Agriculture and Natural Resources Programs, Ms. Nicole Lund as Program Coordinator for Food Safety, and Ms. Lydia Watts as Secretary in our Prescott office. We are also hoping to begin the search for a Commercial Horticulture Agent in 2015 to work with fruit, nut, and vine crops.

### New Program in 2015: Small Acreage Education

Small acreage education will work to educate the many landowners that own horses, other livestock, orchards, vineyards, and pastures. Subjects covered will include: land use inventory, soil conservation, climate, water resources (wells and septic systems), pastures and livestock, wildfire defensible space, economic opportunities, and how to sustainably utilize these resources on small acreage.

*Living on the Land* is a curriculum developed by western Cooperative Extension professionals which will be adapted to local conditions. Small acreage education will also provide opportunities for Cooperative Extension faculty and staff to work collaboratively with diverse audiences to meet local challenges. Small acreage education classes will meet monthly beginning in fall 2015.

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## Visiting University of Arizona Faculty—2014

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COLLEGE OF AGRICULTURE  
AND LIFE SCIENCES  
COOPERATIVE EXTENSION  
Yavapai County

Joyce Alves, FCS Agent, Apache County  
Janick Artiola, Water Quality Research Scientist, SWES  
Kirk Astroth, Assoc. Director, 4-H Youth Development  
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  
Tom DeGomez, Nat. Res. Agent, Coconino Co.  
Kitt Farrell-Poe, Water Quality Specialist  
Dan Faulkner, Beef Specialist, Animal Science  
Chris Jones, ANR Agent, Gila County  
Paula Kahn-Rivadeneira, Fresh Produce Safety Specialist  
Eric Larsen, 4-H Youth Development Agent, Pima Co.  
Ed Martin, Irrigation Specialist and Associate Director  
Kim McReynolds, Nat. Res. Area Specialist, Cochise Co.

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.  
Jeff Silvertooth, Assoc. Dean and 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  
Kristin Wisneski-Blum, James 4-H Camp

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## University of Arizona Cooperative Extension Faculty and Staff

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|                         |   |
|-------------------------|---|
| <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>Doug Tolleson</b>    | Associate Range Management Specialist, V Bar V Ranch Experiment Station, dougt@cals.arizona.edu |
| <b>Lydia Watts</b>      | Secretary, Prescott Office, lydiawatts@email.arizona.edu  |
| <b>Hope Wilson</b>      | Assistant Agent, Family, Consumer, and Health Sciences, hopewils@cals.arizona.edu               |
| <b>Adam Yarnes</b>      | Program Coordinator, James 4-H Camp at Mingus Springs, adamyarnes@email.arizona.edu             |

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## University of Arizona Cooperative Extension Advisory Board

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

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