



COLLEGE OF AGRICULTURE
AND LIFE SCIENCES

COOPERATIVE EXTENSION
Gila County



2013 Annual Report to:

Gila County Board of Supervisors
Gila County Extension Advisory Board
The San Carlos Apache Tribal Council



COVER PHOTO: Entrance to Coffeepot Cabin on the 76 Ranch. Photo by Jim Sprinkle.

2013 OVERVIEW

The following pages describe the work of the Gila County Faculty. Faculty implement programs that are planned and conducted in response to needs assessments accomplished through surveys, interviews and discussions with Advisory Boards, County Supervisors, county residents, San Carlos Apache Tribal organizations and Tribal members. In addition to the planned programming efforts of Extension Faculty, a large amount of time is devoted to assisting county residents with specific questions. Volunteers are an integral part of Gila County Extension programming.

Gila County Cooperative Extension has offices in three locations. If you have questions or would like additional information, please contact us:

Gila County Cooperative Extension Offices:

Payson: (928) 474-4160

Globe: (928) 402-8585

San Carlos: (928) 475-2350

GILA COUNTY COOPERATIVE EXTENSION FACULTY AND STAFF

FACULTY

Jim Sprinkle

County Extension
Director & Area
Extension Agent,
Animal Science
Payson Office

Christopher Jones

Extension Agent,
*Agriculture/Natural
Resources*
Globe Office

Sabrina Tuttle

Extension Agent,
*Assistant Professor
Agriculture/Natural
Resources & 4-H
Youth Development*
San Carlos Office

STAFF

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Administrative
Associate
Payson Office

Patricia Dodd

Administrative
Secretary
Globe Office

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SNAP ED
Instructional
Specialist
Southern
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SNAP-ED
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Specialist
San Carlos
Office

Lani Hall

Coordinator,
4-H
Programs,
Payson
Office

Michael

Leonard
Office
Specialist
Globe
Office

GILA COUNTY
BOARD OF SUPERVISORS
2013

District II—Mr. Michael Pastor, Chair
District I—Mrs. Tommie C. Martin, Vice Chair
District III—Mr. John Marcanti, Member

GILA COUNTY COOPERATIVE
EXTENSION ADVISORY BOARD
2013

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Letha Cline
David Cook
Kenny Evans
Albert Hunt
Fred Jimenez
Clark Richins, Chair

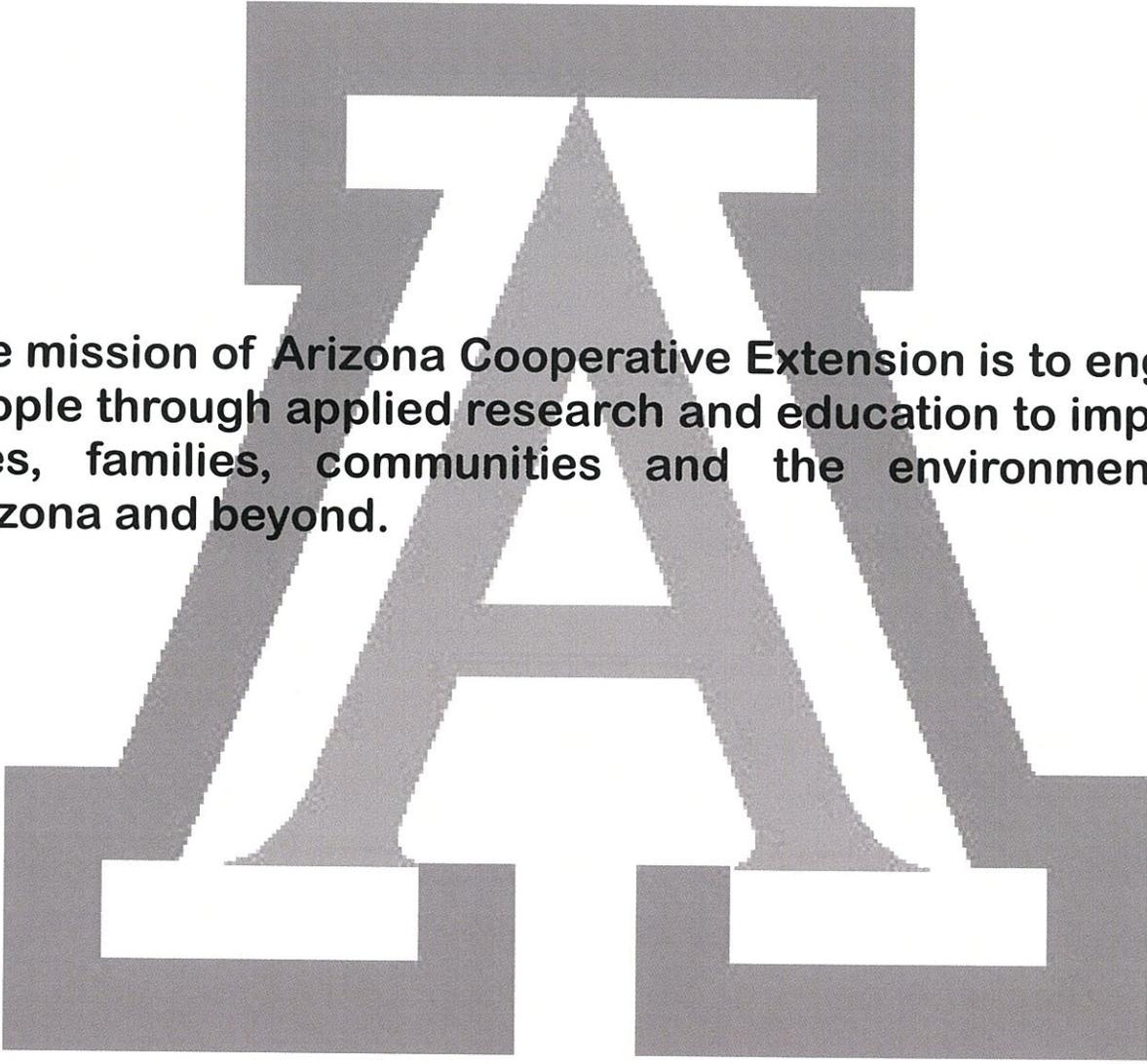
SAN CARLOS APACHE TRIBAL COUNCIL 2013

Terry Rambler-Tribal Chairman
Dr. John Bush-District Vice-Chairman
Gilson Wash District: Tao Etpison & Simon Hooke
Seven Mile Wash District: Bernadette Goode & Mitchell Hoffman
Peridot District: Fred Ferreira & Wendsler Nosie, Sr.
Bylas District Hugh Moses, Jonathan Kitcheyan &
Alicia Talgo Cadmus

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THE UNIVERSITY OF ARIZONA COLLEGE OF AGRICULTURE COOPERATIVE EXTENSION MISSION STATEMENT

A large, semi-transparent, stylized letter 'A' watermark is centered on the page. It has a thick, blocky font with a slight shadow effect.

The mission of Arizona Cooperative Extension is to engage people through applied research and education to improve lives, families, communities and the environment in Arizona and beyond.

LEGAL PROVISIONS FOR COOPERATIVE EXTENSION AND EXTENSION ADVISORY BOARDS

Passage of the Smith-Lever Act by Congress in 1914 officially established the Cooperative Extension Service. The Act provided states with federal funds to carry out Extension work as agreed upon by the respective land-grant colleges and the federal government.

When the Arizona Legislature accepted the provisions of the Smith-Lever Act of 1914, it empowered county governments to appropriate funds to provide additional support to each local county Extension program. It was this cooperative funding from federal, state and county governments that led to the current name, "Cooperative Extension."

In 1921 the State Legislature endorsed the organization of County Farm Bureaus to be the official, county-level sponsors for Extension programs. The enactment of Arizona Senate Bill #179 in 1964 repealed the 1921 legislation. This 1964 legislation established County Extension Boards, appointed by the Board of Supervisors, to be the official sponsors of Extension programs offered in each county.

House Bill #2125, passed in 1974, amended the 1964 legislation to provide greater latitude in the criteria for appointment of County Extension Board members. This legislation also allows counties greater flexibility in the amount of their financial support of County Extension budgets. A further revision in 1986, Senate Bill #1306, addressed the responsibility of each County Board of Supervisors to provide reasonable office space for Cooperative Extension.

In 1991, Congress established the Extension Indian Reservation Program (EIRP) under section 1677 of P.L. 101-624, the Food, Agriculture and Trade Act ("Farm Bill"), which reinstated federal support for extension programs on Indian Reservations. Currently, there are 31 projects on 29 reservations, one of which is on the San Carlos Apache Reservation. Federally Recognized Tribal Extension Program (FRTEP) Extension Agents are employees of the 1862 land grant Cooperative Extension Program, although funding is through the federal Extension branch, National Institute of Food and Agriculture.



Ranchers at the Steve Bixby sale. Left to right: Miriam Boice, Bob Boice, Joe Goff and Frank (Pancho) Boice. Picture taken in 1960. Courtesy of AZ Memory Project.

Celebrating 100 years ▶▶▶

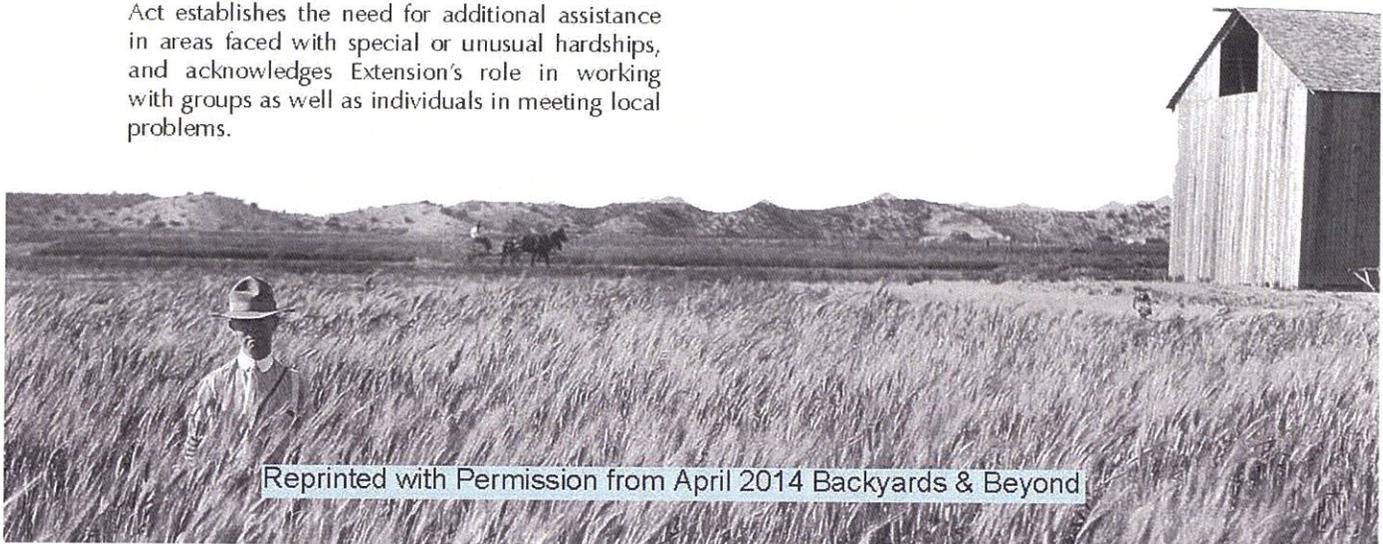


Cooperative Extension enjoys a rich and proud history in this country. On May 8, 2014, we celebrate the Smith-Lever Act, which established the Agricultural Extension Service, known today as Cooperative Extension. Cooperative Extension is a unique educational partnership between the U.S. Department of Agriculture, the nation's land-grant universities and the county governments that extends research-based knowledge through a state-by-state network of extension educators. Working together, we recognize that we achieve much more than we can alone. While the authors of the enabling legislation for Cooperative Extension could not foresee the future, the mandates implicit within the legislation, is as applicable today as in 1914:

- **Serve Agriculture and the Public** - The Smith-Lever Act gave Extension a very broad clientele base—"the people of the United States"—yet also specified that its programs should be concerned with "agriculture and home economics and subjects relating thereto."
- **Define Agriculture Broadly** - The term "agriculture" was used in a comprehensive sense in the Smith-Lever Act and subsequent legislation to include producing, processing and marketing farm and forest products, plus those businesses and industries concerned with supplying the resources needs in the production and marketing process.
- **Enhance Human Development** - The underlying mandate is to provide educational programs for individuals and families which will enhance human development and maximize the individual's contribution to society.
- **Meet Local Problems** - Section 8 of the Smith-Lever Act establishes the need for additional assistance in areas faced with special or unusual hardships, and acknowledges Extension's role in working with groups as well as individuals in meeting local problems.

At the heart of Cooperative Extension is the deep rooted belief that engaging people through applied research and education will improve the quality of their lives, communities and the economy. This mission is the driving force behind 100 years of Cooperative Extension in Arizona. Our populations have changed with fewer Americans living on farms and in rural communities, but Cooperative Extension has constantly changed to meet the shifting needs of people. Our ability to be relevant in the years to come is based on our ability to listen and respond to our "customers"—the people in our communities. Cooperative Extension listens to, learns from, and respects local knowledge. We value our partnerships and believe community voices are critical to success. We look forward to working with you, as together we create the next chapters of our continuing history.

Learn more about our Centennial Celebrations at:
<http://extension.arizona.edu/centennial>



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1912 Arizona became a state.

1913 Arizona 4-H begins.

1913 Tractor demonstrations conducted in Maricopa County.

1913 The phrase "4-H Club" first appeared in use.

1913 Development of water on the range was given first priority by Extension staff.

1913 Sam Armstrong serves as first Gila County Extension Agent until his passing in 1959.

1913 Home demonstration agents emphasized programs related to victory gardens and food preservation.

1913 Irrigating by plant needs and not on a calendar schedule was advocated.

1913 Cattle feeding industry began to show signs of real growth. The first feeders association in the U.S. was formed in Arizona.

1913 State 4-H Roundup was cancelled as a result of war-time travel restrictions. The war manpower shortage made leaders difficult to find.

1913 Kathryn Ojerio becomes first full time 4-H Agent in Gila County.

1913 Arizona Cooperative Extension celebrates 100 years of improving lives, communities and the economy.

1913 The college name changes from the College of Agriculture to the College of Agriculture and Life Sciences.

1913 President Lincoln signs the Morrill Act, establishing land-grant colleges in each state.

1914 - 1918 Production of food from home gardens received much attention during the World War I years. With the Armistice in 1918, War Gardens became Victory Gardens and continued to receive emphasis.

1914 Agent J.J. Hamilton organized Arizona's first noxious weed control district in Yuma County.

1914 Extension home economists were busy helping families coping with the devastation of the Great Depression.

1914 Campaign launched to bring the pink bollworm under control.

1914 Project CENTRL (Center for Rural Leadership) initiated.

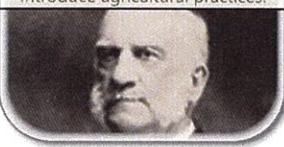







COLLEGE OF AGRICULTURE AND LIFE SCIENCES
COOPERATIVE EXTENSION

COOPERATIVE EXTENSION HISTORIC MILESTONES

1875	1900	1950	2000
<p>1887 Hatch Act establishes Agricultural Experiment Stations tied to land-grant universities for the purposes of scientific research.</p>	<p>May 8, 1914 The Smith-Lever Act signed into law by President Woodrow Wilson.</p> 	<p>1954 U.S. Secretary of Agriculture, Ezra Taft Benson, directed that all Extension employees would be under USDA. This separated Extension from the Farm Bureau and other farm groups.</p>	<p>September 28, 1994 Improving America's School Act - land-grant status was conferred on 29 Native American colleges.</p> 
<p>1903 Seaman A. Knapp (Extension's first demonstrator) establishes first demonstration farm in Terrell, Texas to introduce agricultural practices.</p> 	<p>1919 First Home Demonstration work conducted in southeastern counties.</p>	<p>1950's Cooperative Extension work begins on the San Carlos Reservation.</p> 	<p>1983 Computers delivered for Extension use with WordStar and InfoStar software.</p>
<p>1912 College of Agriculture inaugurated the Demonstration Train. Researchers & educators gave lectures and demonstrations at each of 30 stops.</p> 	<p>1922 The first home demonstration club in Pima County was the Fort Lowell Homemakers.</p>	<p>1942 The U.S. entered World War II on December 7th. All efforts were turned to wartime efforts and increasing farm production and the conservation of farm and household goods.</p>	<p>1990's Partnerships grow as Cooperative Extension collaborates with more public and private groups; Home Economics Extension becomes Family and Consumer Sciences.</p>
<p>1922 A motion picture machine was purchased for Extension work.</p>	<p>Mid 50's A period of revitalization. Extension offices were opened in Santa Cruz and Mohave Counties; home economics program extended with at least one agent in each county by 1962; State legislature increased appropriations to help meet growing demands. Mechanization on Arizona farms moved forward rapidly.</p>	<p>1960's 4-H increased emphasis on science. Balance of experiences in project work, personal development opportunities and leadership. The "skilled citizen" being the prime end-product.</p>	<p>1970 Arizona 4-H Youth Foundation founded with leadership from Dr. Bart Cardon.</p> 
			<p>1980 Range Task Force formed to assist in solving permittee-agency conflicts on management of public lands.</p>

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Cooperative Extension Centennial Honorees 2014

Campus

Beryl Burt
Bartley P. Cardon
Jim Christenson
Gerry Eberline-Schultz
Barry N. Freeman
Ellen Goldsberry
Sarah Harman
Howard Jones
Colin Kaltenbach
Al Lane
Shirley O'Brien
Kenneth S. Olson
Charles U. Pickrell
Roy Rauschkolb
Gene Sander
David M. Stewart
Larry Sullivan
Shirley Jo Harris Taylor
Ray Weick

Apache

Dan Heap
Dick Hext
Charles Leonard Isaacson
Ruth Patterson
Dick & Myna Udall

Cochise

G. T. "Gerry" Bohmfalk
Don & Laura Burnett
Betty Craig
Joe Lane
Louise Moser
Claire Owen
Carmy Page
Dora Teran
Bertha Virmond

Coconino

Bill Brechan
Ernest W. Chilson
H. Stuart Houston
Jim Mast
Herb Metzger
Bob & Judy Prosser
Beth Tucker

Gila

Robert G "Bob" Boice
Lori Brown
David Cook
Kenny J. Evans
James A. "Jimmy" Griffin
Senator A.V. Bill Hardt
Alvin L. Medina
Cayci Vuksanovich
Terry Wheeler

Graham

Lee J Clark
Ronald E. Cluff
Farrel Dennis "Denny" Layton
Carol Willis

Greenlee

Mabel (Flint) Bussard
Daisy Mae Cannon
Bill Cook
Richard Lunt

LaPaz

Janice Shelton
Woodie Winans

Maricopa

Bas Aja
Grant Boice
Leah Brillman
Bill Emerson
Lin Evans
Jeannette Fish
Ron Gass
Cheryl Goar
Marifloyd Hamil
Harper Family
W. Bruce Heiden
Sharon Hoelscher-Day
Jim Kirkpatrick
Dan Klingenberg
Charles "Chuck" Lakin
C.B. "Doc" Lane
George Peabody
Pamela Perry
Gary & Sharon Petterson
Ron Rayner
Gilbert "Shag" Rogers
Emil & Ruth Rovey
Mark & Carrie Schnepf
Carol Ward-Morris
Jim Webb
Carl Weiler

Mohave

Stuart Anderson Family
Lynne Durrant
Howard Grounds Family
Robin Grumbles
Frank Hunt
Del Wakimoto

Navajo

Senator Franklin "Jake" Flake
Ann Jeffers
Emma Malone
Esther Peterson

Pima

Evalyn Bentley
Linda Block
Jean Buzzard
Cynthia Flynn
Marian Hannon
Billie Mauntel
Barbara Stockwell

Pinal

Oliver Anderson
Lavern Chase
Bill & Doris Combs
Dora Duarte
Jim & Mary Faul
M. Alberta Harris
K.K. Henness
Edward Y. Hooper
Keith Jones
Louise Lucy
Walt & Francie Meyer
Paul Prechel
Lupe de Santiago
Bill Stambaugh
Hiawatha Vance
Howard Wuertz
Wilbur Wuertz

Santa Cruz

Dan Bell
Richard Harris
Janet Paz
Bill & Posy Piper

Yavapai

John D. "Danny" Freeman
Andrew Groseta
Delbert Pierce
Marta Stuart
Deborah Young

Yuma

Karen Bowen
Fatima Corona
Robert J. Moody
Vickie Steinfeld
Eric Wofford

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COOPERATIVE EXTENSION IMPACTS GILA COUNTY

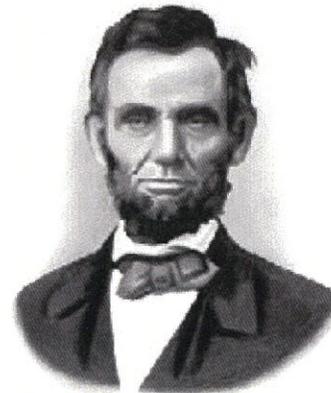
\$953,372 salaries, programs and equipment and
18,150 face-to-face contacts with county residents with
2,469 hours of donated time from 497 volunteers

COOPERATIVE EXTENSION

- Is in more than 100 colleges and universities that comprise the nation's Land-Grant University System
- Is in all 50 states and U.S. Trust Territories
- Has an office in or near most of the nation's approximately 3,000 counties
- Has support from more than 600,000 volunteers nationwide, impacting 6.5 million young people in 4-H

ADDRESSING CRITICAL ISSUES IN GILA COUNTY

- 4-H Youth Development
- Animal Science
- Range Livestock Production
- Youth Leadership
- Home Horticulture & Pests
- American Indian Programs
 - Livestock & Range Management
 - 4-H Youth Development
- Natural Resources
 - Forest Health/Firewise
 - Range Management/Monitoring
 - Noxious Weeds
 - Climate Education
- Water/Watershed Education



In 1862, Abraham Lincoln signed into law the Morrill Act, which started land grant universities.

University of Arizona Resources in Gila County 2013

The following have provided programs, consultations, mediations, or other forms of support on one or more occasions.

Joyce Alves, Family & Consumer Sciences Agent, Apache County Cooperative Extension

Robert Armstrong, Support Systems Analyst, Sr., Arizona Cooperative Extension

Dr. Kirk Astroth, Youth Development Director, State 4-H

LoriAnn Barnett, Program Coordinator, National Phenology Network, Arizona Program

Dr. Julie Brugger, Assistant Staff Scientist, Climate Assessment for the Southwest, Institute of the Environment, University of Arizona

Dr. Michael Crimmins, Climate Specialist, Department of Soil, Water, & Environmental Science

Laura Crumbacher, Curatorial Specialist, U of A Herbarium

Dr. Del Despain, Research Specialist, Sr., School of Natural Resources and the Environment

Peter Ellsworth, Integrated Pest Management Extension Specialist, Arizona Pest Management Center

Dr. Dan Faulkner, Beef Extension Specialist, Department of Animal Sciences

Dr. Larry Howery, Range Management Specialist, School of Natural Resources and the Environment

Ed Franklin, Associate Professor, Department of Agricultural Education

Victor Jimenez, Extension Agent, 4-H Youth Development, Maricopa Agricultural Center

Eric Larsen, Assistant Agent, 4-H Youth Development

Dr. Ed Martin, Associate Director, Programs, Arizona Cooperative Extension

Dr. Mitch McClaran, Professor, School of Natural Resources and the Environment

Andy Medina, Support Systems Analyst, Sr., Arizona Cooperative Extension

Dr. Kitt Farrell-Poe, Water Quality Specialist, Agriculture & Biosystems Engineering

Dr. Steve Poe, Professor Agriculture & Biosystems Engineering

Dr. George Ruyle, Range Management Specialist, School of Natural Resources and the Environment

Cody Sheehy, Videographer, College of Agriculture and Life Sciences

Dr. Jeff Silvertooth, Associate Dean for Economic Development and Director of Arizona Cooperative Extension

Trent Teegerstrom, Associate Specialist, Production Economics, Crop Budget Development & Risk Management Education, FRTEP Project Director

Dr. Doug Tolleson, Rangeland Management Specialist, V Bar V Ranch

Paul Wolterbeek, Volunteer Coordinator, Boyce Thompson Arboretum

2013 Program Focus Areas

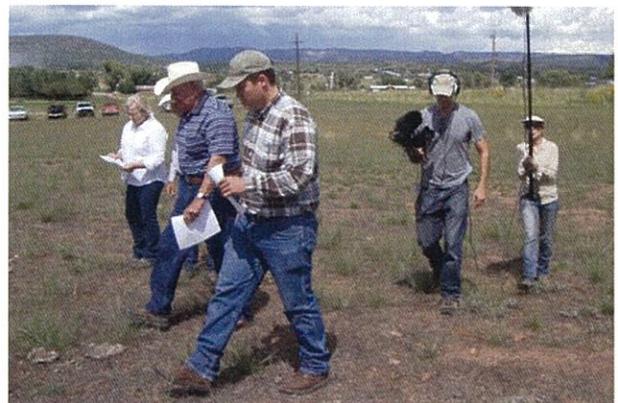
- Home Horticulture and Master Gardener Program
- Climate, Natural Resources and Sustainability Education
- Reading the Range
- Nutrient Requirements of the Beef Female in Extensive Grazing Systems
- Rangeland Monitoring for Gila County
- Linking Rangeland Monitoring to Adaptive Management and NEPA Project Planning
- Natural Horticulture
- Beef
- Ranch Financial Management
- Horse Production
- How Do I Use Range Monitoring Data Now That I Have It?
- Resources Education for Youth
- Overnight Camping Experiences
- Youth Development
- Teen Leadership
- Supplemental Nutrition Assistance Program Education (SNAPed)
- Ag. Awareness
- Life Skills Development
- School Enrichment
- Financial Education
- Career Readiness



Master Gardeners, Kamon Lilly (left) and Tarenta Baldeshi (right) discuss organic wheat production at the Avalon Organic Gardens and Eco-village in Tumacacori, Arizona.



Small stock projects and showmanship are a favorite throughout the county.



University of Arizona College of Agriculture & Life Sciences Cody Sheehy and his wife videotaping the Range Monitoring Workshop in Young Arizona. 3 minute *Reading the Range* video available at: <https://www.youtube.com/watch?v=oTNgwiPNO3Y> .

Personal Impacts to Gila County Residents

Animal Science, Agriculture and Natural Resources

From a rancher participating in *Reading the Range*, "You do everything that is expected of you and then some."

From a landowner who requested information from Jim Sprinkle on juniper control and pasture seeding, "I am astounded by the expertise, scope and detail in your recommendation."

From the President of the Arizona Cattle Growers Association, "You (Jim Sprinkle) are to be commended for your dedication in working with and helping the ranchers on the Tonto National Forest."

From a state legislator who was provided information on Arizona watershed research, "I want to make sure I thank you (Jim Sprinkle) for getting this to me so quickly...Thanks again for all you do for Arizona."

From a FFA participant in the Northern Gila County Fair, "Thank you, Dr. Sprinkle, for all the time you put into helping me find the best ration for my steer. I couldn't have done it without your help."



Jim Sprinkle demonstrates how to use a compass to students from Winslow at a range field day at the Padre Canyon Ranch near Flagstaff.

San Carlos, Agriculture and Natural Resources

San Carlos Planning Office grant writer Francie Brown noted the following about Associate Extension Agent Sabrina Tuttle, in communication about a sustainable agriculture/Rehabilitation and Detention Center Aftercare grant they worked on together: "I know you have much to offer our people here in San Carlos as I have seen your selfless acts conducted over and over again with various members of our population."

4-H Youth Development

Shooting sports projects continued to grow in Gila County in 2013. Both rifle and shotgun project clubs were formed in Northern Gila County. Five adult leaders were certified in shooting sports. Youth archery members from all areas of the county participated in three county level archery shoots as well as various others around the state. Several members attended the State Archery Shoot in Tucson and excelled. Gila County had three division winners, several top five finishers and one senior member that has been invited to compete at the 2014 National competition in Nebraska. The senior archery team from Gila County dominated the state competition and has been invited to compete at the national level as well.

Gila County held the 5th Annual “Tween Camp” at Roosevelt Lake. The camp is a special opportunity for 9-13 year old youth and has a strong focus on leadership development. Twelve “senior age” 4-H members went through training and served as camp counselors at the 2013 Camp. Over 80 youth attended the three day camp. Evaluations based on the life skills of peer interactions, healthy choices and decision making showed substantial pre and post experience results. Comments included: “Camp is the best part of summer.” “I want to be a camp counselor so I can make sure it is always this fun.”

Youth from Southern Gila County participated in Livestock Judging contests at the state level and did very well. One senior member was selected to travel to Denver in January 2014 to participate in the National Livestock Judging event for 4-H Youth. Quality Assurance is taught to all market livestock exhibitors along with animal nutrition classes and numerous hands-on clinics which make youth in our county stellar showmen and producers.

“Launch into Life” was held at the Payson High School with approximately 290 youth and adults volunteers in attendance. Youth attended workshops on topics including: career planning, interview skills, financial education, and resume writing. Youth were also involved in a real-life stimulation activity that involved utilizing skills learned and preparing them for future decisions and situations.

Climate Science and Extension Program Recognition

“It was a pleasure working with you on the National Extension Climate Science Initiative Conference! Your leadership was essential to pulling off this conference. I felt the conference was highly successful and you were the key to its success. I enjoyed working with you and see you interact with everyone in such a positive way. Your Peace Corps experience came through in your human interactions and values. Thanks so much for your work. I value working with you as a colleague and friend.

– Mike Kroenke (Conference Co-chair; Program Director, Sustainable Forests Education Cooperative, University of Minnesota, Cloquet, MN)

“Congratulations on your recent recognition at the Galaxy IV conference for your excellent extension work, by the Association of Natural Resources Extension Professionals with the Distinguished Career Leadership Award and by the National Association of County Agricultural Agents with the Distinguished Service Award. On behalf of the College of Agriculture and Life Sciences, I would like to congratulate you on this honor. It is a tribute to your talent, your hard work, and your commitment to excellent in all that you do. Very best wishes for your future endeavors.”

-Shane C. Burgess, Vice Provost and Dean



Chris Jones extols the efforts of the Gila County Master Gardeners at the Arizona Highlands Garden Conference with emcee Jay Spehar. Photo by Jeannie Putnam.

Program Highlights 2013

Gila County 4-H Lani Hall



The life skills learned in 4-H are teaching our youth to Make the Best Better!

“Contemporary 4-H focuses less on agriculture and more on building life skills through ‘hands-on’ educational projects, which may include communication, technology, outdoor education and recreation, leadership styles and personal development” (Singletary, Smith and Evans, 2001).” Gila County has addressed these needs while continuing a strong focus on traditional programming. 4-H has four essential elements, belonging, generosity, independence and mastery. These elements are a priority in all 4-H youth development programming with Gila County. Positive growth is always the top priority for Gila County 4-H.

In 2013, the shooting sports programs continued to grow in Gila County with the certification of new volunteer leaders in archery, rifle and shotgun throughout Gila County through the state program. Along with the Payson Rim Country Deadshots, and the Globe Arrowslingers, the Payson Rifle Club began. Youth attended mandatory safety courses and participated in several tournaments around the state. The project clubs quickly became very popular and have grown tremendously! Additional volunteers have become certified in order to form more clubs and meet the increasing numbers of youth enrolling. In 2013, Gila County hosted three archery shoots and had several youth participate and score well at the state shooting match. Gila County has become the dominant county in 4-H Archery Tournaments. Two junior members won their divisions and the senior team has qualified to compete at the National competition in 2014 in Nebraska.

The sixth annual “Kids Day at the Fair” was held in Northern Gila County. Approximately 1,000 K-5th grade students from all areas of Northern Gila County were in attendance. This activity not only provides an opportunity for children to learn more about the 4-H programs but current members can exhibit their projects and provide educational activities for the attendees. In addition to the fairs, 4-H members participated in various parades around the county and had several service project activities. Participation in the March of Dimes, Relay for Life as well as the Mountain High games were activities that helped develop generosity within our youth.

Throughout our nation there is a widespread concern about the increase of children that are becoming separated from the natural world which surrounds them. Encouraging youth to become “nature-smart” is one way that Gila County 4-H is addressing the need to “connect children with nature.” In 2013 the fifth annual Gila County Tween Camp was held at Roosevelt lake. Over 75 youth were in attendance along with twelve “teen counselors.” The teen counselors attended pre-training and planning meeting in preparation for the three day camping experience. An educational workshop was provided by the Arizona Game and Fish on animals and their habitat in the area. In addition youth experienced wood working, crafts, physical games, and various other involvement activities. Both the campers and teen counselors were given life skills evaluations that showed strong gains in healthy lifestyle choices, communication skills, decision making and peer interactions. Most importantly the results showed positive changes and great memories of fun!

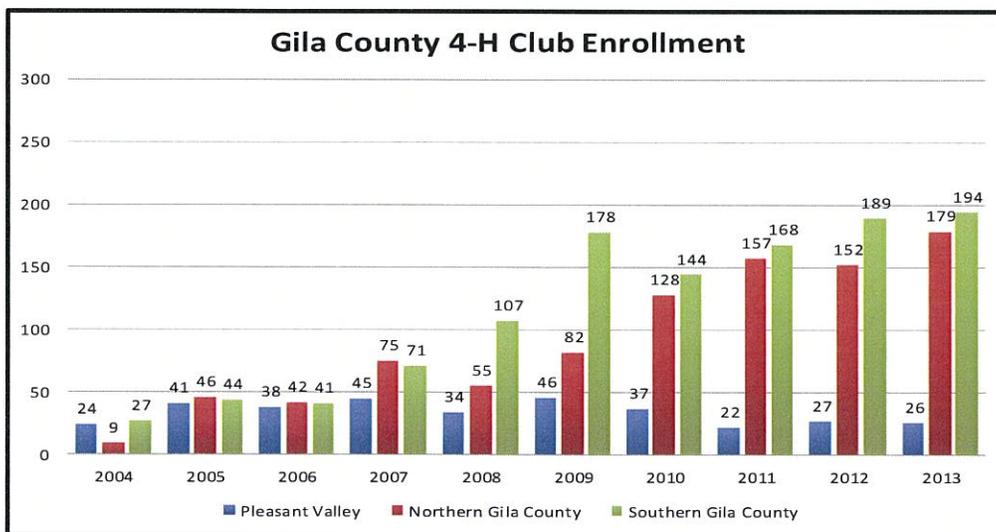
Teen members from all parts of Gila County attended the 26th Annual JOLT (Journey of Opportunities for Leaders of Tomorrow) camp near Heber. This stellar camping experience focuses on leadership skills development and dealing with challenges. This year one of our own Gila County youth served on the state JOLT leadership team. Youth from Gila County also attended the Arizona National Livestock Junior Livestock Judging Contest. One top competitor from Gila County was chosen to represent the state at the 2014 National Judging competition in Denver!

The highly successful Agriculture Awareness program continues to be in the Gila county schools. The second year of the program enabled over 800 youth to participate in this program. The agent has developed this program in conjunction with the Tonto Natural Resource Conservation district board. All fourth grade students have the opportunity to participate. The program includes 6 lessons that are standards based with an agricultural or natural resource theme. Topics include mining, recycling, ranching, cotton farming, poultry science and agriculture careers. The program culminates with a “hands-on” field trip experience where the youth can see and do some of the activities they have learned about in classroom lessons. Participating teachers request to continue their involvement early each year as it is a favorite program amongst the children.

The nationwide Supplemental Nutrition Assistance Program education grant was approved in 2012 for Gila County and continued in 2013. This program not only allows for two full-time instructional specialists but will see that both children and adults will receive much needed nutritional education. This program is in all schools within the county as well as various other adult education areas including food banks, federal assistance offices, low-income housing and other public events. As we make a difference in lives in Gila County, we will see changes in nutritional choices and overall lifestyle.

Partnerships with community organizations and businesses have enabled Gila County 4-H to grow and provide enriched opportunities in 2013. Tractor Supply Company opened in Miami and has provided tremendous support to 4-H. Youth have participated in numerous activities to strengthen public relations which have resulted in Gila County receiving not only monetary support but being named the Regional Champion for the Fall 2013 Paper Clover Drive! Corporate Support from local companies has resulted in equipment donations and increased volunteer time.

In 2013 the 4-H programs continued to grow and thrive. New project clubs were developed to meet the expressed interests of the youth. New projects included photography, communications, life skills and gardening. Livestock projects continue to be a favorite and the continuous support of our communities make this a positive rewarding experience. Judging days and demonstration days were held in all three parts of the county along with showmanship clinics, quality assurance classes, horse shows and community club activities. Gila County 4-H members are learning vital life skills while making wonderful memories and developing into strong optimistic citizens of Gila County!



Program Highlights 2013

Agriculture, Farmer's Market, Master Gardener Program Chris Jones



Miami Town Mayor, Rosemary Castaneda (right) and Gila County Master Gardener Association President, Fred Jimenez (left), in front of the newly renovated Bullion Plaza Museum. Picture by Tara Celentano.

Home Horticulture and Master Gardeners

Chris Jones and the Gila County Master Gardener Association hosted the 14th Annual Arizona Highlands Garden Conference in Miami, Arizona on October 12, 2013. When determining where to hold the conference last year, several venues were explored in the Globe-Miami area. Bullion Plaza Museum, a historic school built for Hispanic students in 1927, had recently been restored. The school's gymnasium, however, was badly dilapidated, including a leaky roof for over 20 years. The gardeners and the Town of Miami agreed to partner: if we would commit to hold the conference at their venue, they would have the gymnasium restored (a longtime but backburner goal). Fundraising began in January 2013 when the agent found a call for grant proposals from the Phoenix Suns and APS for basketball court renovation. The agent and VISTA assisted Mayor Rosemary Castaneda (the lead grant writer), the Town and non-profit group Genesis to write the proposal, which then served as a base document for grant requests and soliciting support from local copper mines Freeport McMoRan Gold & Copper Company, BHP Billiton Copper Company,

KGHM International and Resolution Copper Company. The Master Gardeners also painted a portion of the gymnasium interior, and designed and installed a picnic area between the museum and the gymnasium.

Globe-Miami Farmer's Market

VISTA Tara Celentano served as the volunteer coordinator for the Master Gardeners in 2013. In addition to the garden conference, she played an important role supporting the Globe-Miami Farmers' Market. The farmers' market ran from June 2 to October 27 on Saturday mornings. Tara supported market manager Holly Brantley and provided logistics and promotion. Master Gardeners Pat and Manuel Romero, Cayci Vuksanovich, Jerry Ullum, Bob Zache and Fred Jimenez served as board members and vendors. An average of 15 vendors per week sold fresh local produce, homemade goods and crafts bringing in \$37,687 to the local economy.

Through a program co-chaired by Cochise County Area Agent Mark Apel and Chris Jones, funds were acquired through the UA Green Fund to employ a college student from the University of Arizona for the summer, ie, Sustainability Extern." Hometown Briana Ortega worked as the assistant to the farmers' market manager. Working with Tara and Holly, she helped assure the market's success through promotional activities including the market's FaceBook page and weekly newsletters, conducting kid's and market day activities, and client survey and a mid-market survey report.



Holly Brantley and Tara Celentano enjoy the last day of the Globe-Miami Farmer's Market for 2013.

With the support of the VISTA program, Master Gardeners led the creation of the Globe-Miami Farmers' Market in 2011. When 2013 survey respondents were asked "What impact has the Farmers' Market had on you and the community?" every single person had an answer about the good that comes from the farmers' market. It not only provides healthy foods for the community but lifts spirits, inspires and brings people together. The market was a featured economic impact success stories in 2013 (<https://extension.arizona.edu/globe-miami-farmers-market>).

Climate, Natural Resources and Sustainability Education

Chris Jones is leading a national grassroots effort to help Extension educators more effectively address climate change issues in Extension programming, and is the co-founder of the Association of Natural Resources Extension Professionals' Climate Science Initiative. The goal of the initiative is to help Extension educators become knowledgeable and comfortable with issues involving natural resources and climate science and build capacity to address questions from all sides of the climate change debate. UA Extension Specialist Mike Crimmins and I created a website (sites.google.com/site/anreplclimate), which includes a listserv of 155 Extension educators and others. I organized and hosted 6 national webinars with guest speaker presentations, attended by 16-29 participants. After presentations, listeners engaged with the presenter and each other to discuss the information and their programs.

Evaluations from the national CSI in-service workshop indicate that 50% rated the program overall as Excellent, and 25% rated it as Very Good. On a scale of 1(Low) and 5(High), respondents indicated their comfort level of discussing climate issues with their clientele increased from 3.26 to 4.02, their confidence about incorporating climate issues and adaptation practices increased from 3.29 to 3.93, and their connectedness with other Extension colleagues addressing these issues increased from 2.84 to 3.96. Comments included: "This was just a fantastic learning and networking experience-it exceeded my expectations"; and "The role-playing activities and learning about other extension faculty members' work on this topic. I also liked how the first day gave us a big picture look at a smaller/local/personal level that extension faculty can use in their outreach."

The CSI and national workshop has engaged a national network of Extension educators that helps diffuse confidence in them and their colleagues to address this critical issue at both the field and specialist levels. The continuing work of the national CSI training module creation team is to review and evaluate the modules as presented in Minnesota, and then revise them to create an effective online training experience for a broader audience of Extension educators.

Program Highlights 2013

Reading the Range, Synopsis by Jim Sprinkle

Area Extension Agent, University of Arizona Cooperative Extension, Payson

Situation. The very definition of adaptive management on federal grazing allotments obligates decisions made to be closely tied to rangeland monitoring data. The US Department of Interior defines adaptive management as: *Adaptive management focuses on learning and adapting, through partnerships of managers, scientists, and other stakeholders who learn together how to create and maintain sustainable ecosystems* (see web-link below Figure 1). National Environmental Policy Act (NEPA) decision documents demand sound, scientifically collected rangeland data. At times, however, data may be lacking which could lead to a more informed decision.

In February 2000, a ranch owner in Tonto Basin, Arizona was in crisis regarding his 21,000 acre grazing permit. Under consideration by the US Forest Service (USFS) was to either

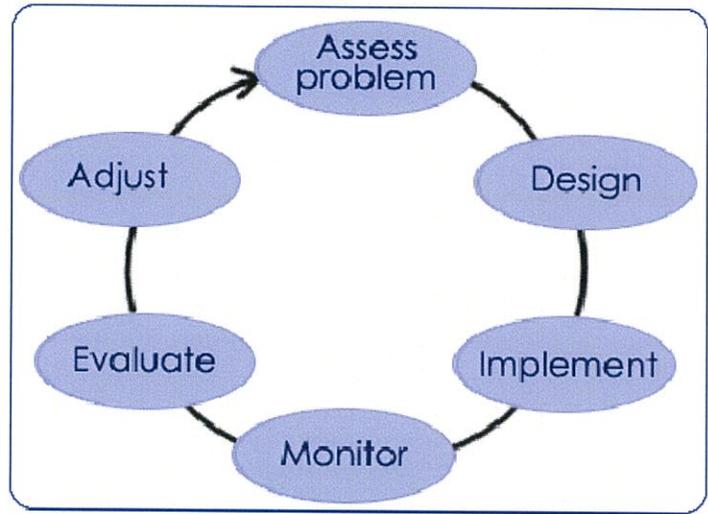
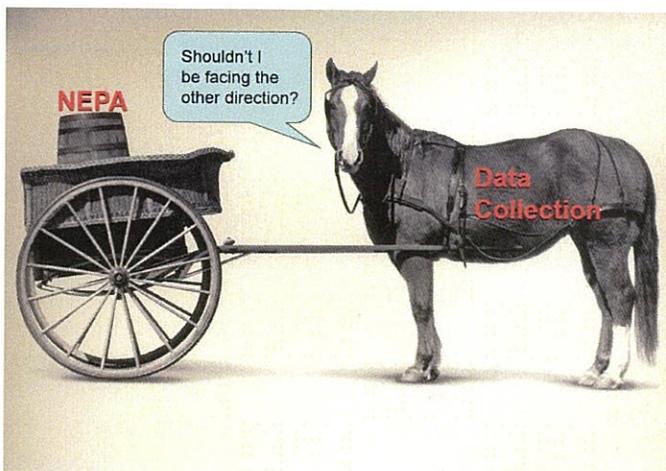


Figure 1: Diagram of the adaptive management process.

From: <http://www.doi.gov/initiatives/AdaptiveManagement/whatis.html>



Adapted from: http://blog.prudentialact.com/wp-content/uploads/2012/10/cart_before_the_horse12.jpg

completely remove all livestock from the allotment or only allowing grazing at a greatly reduced capacity (42 cows) due to watershed concerns. It became apparent that there was a lack of data to fully describe those concerns. In a meeting with the President of the Gila County Cattle Growers and the rancher, Dr. Sprinkle was asked if there was anything the University of Arizona could do to help. Dr. Sprinkle informed the rancher and the Gila County Cattle Growers President that with the rancher's active participation we could gather range monitoring data and present it to the USFS for consideration. As Dr. Sprinkle subsequently met with the USFS, it was agreed that the data would be useful in determining appropriate future management actions. After gathering range monitoring inventory data and formulating a management plan to address issues of environmental concern, the rancher and Dr. Sprinkle presented this management alternative to the District Ranger and the Range Specialist and to the Tonto National Forest Interdisciplinary Team. Upon review of the data provided, the USFS decided to allow the rancher to stock the allotment with 85 cows and to reevaluate the stocking rate upon receipt of three year's additional monitoring data. Based upon this experience, it was decided that many other grazing allotments in the Tonto National Forest could possibly benefit from increased collaborative range monitoring data collection. Additionally, it was **hoped** that range monitoring data could be used by both the rancher and the agency to assist in grazing management decisions and in NEPA document preparation for grazing permit renewals.

In the December 2010 Journal of Forestry, Brown and Squirrell made several observations about the fate of adaptive management in the USFS. They pointed out that "*Learning through adaptive management is a complex process derived from both technical and social processes.*" They made three additional observations related to data collection which are pertinent to our concerns: 1) Failure to learn may be attributable to the lack of data and lack of a commitment to a learning framework; 2) Knowledge that lacks a link to action would seem to constitute little more than facts on the shelf; and 3) Innovative

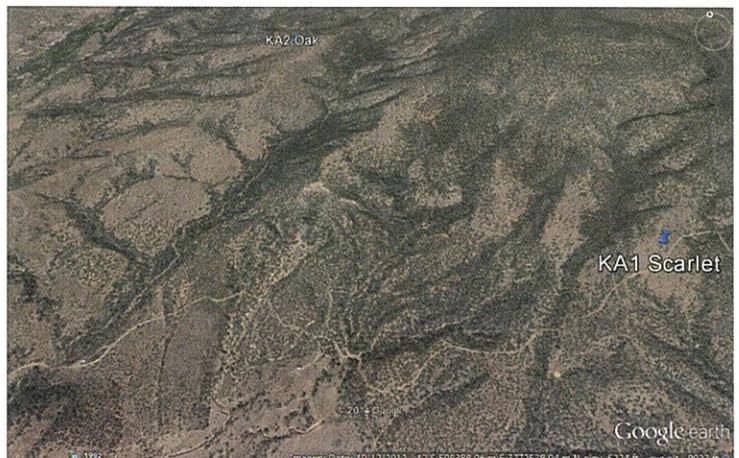
action that lacks a structure by which to extract new knowledge is little more than hopeful activity.

Realizing some of the constraints facing the incorporation of range monitoring data into adaptive management and NEPA documents, a collaborative effort was initiated between the University of Arizona Cooperative Extension, the Gila County Cattle Growers, the USFS Tonto National Forest, the Natural Resources Conservation Service, and the Tonto Natural Resources Conservation District to obtain grant funding to address this need. We authored a grant entitled *Linking Rangeland Monitoring to Adaptive Management and NEPA Project Planning* and obtained a \$50,000 grant from the Public Lands Council with a \$25,000 match from Tonto National Forest and \$25,000 from the Natural Resources Conservation Service. The grant will integrate rangeland monitoring data into the development of proposed actions under NEPA for at least 22 grazing allotments facing NEPA grazing permit renewals in 2016. The objectives of the grant are:

1. Increase the amount of coordination between agency employees and critical stakeholders (including grazing permittees) in identifying resource concerns on grazing allotments and the accompanying missing data to define those concerns.
2. Improve efforts to tie range monitoring data collection and existing databases to Ecological Site Descriptions and/or Terrestrial Ecological Unit Inventory soil maps that define a landscape.
3. Promote the systematic collection and summarization of meaningful range monitoring data that can provide information to help explain the reasons and/or the scope of resource concerns.
4. Enhance the degree of sophistication and knowledge concerning the interpretation of data collected to more effectively project likely outcomes for proposed management actions.
5. Encourage the involvement of critical stakeholders (including grazing permittees) in developing proposed actions (which still meet and address environmental concerns) that are tied to resource concerns, adaptive management, and viable ranching operations.
6. Reduce shortcomings in the evaluation of NEPA decisions for effectiveness in addressing resource concerns through subsequent range monitoring data collection.
7. Emphasize the need for agency employees and grazing permittees to fully embrace and exploit range monitoring data for effective futuristic planning with regards to annual operating instructions and adaptive management.
8. Jointly design and deliver an educational program to address all of the above.

Just as range monitoring on the Tonto National Forest has moved from a model of just **talking and teaching** about monitoring to actually **doing** “on the ground” monitoring; we now propose to move from a model where we **hope** data collected will be included in NEPA documents to a model where allotments will be selected for monitoring based on upcoming NEPA analyses and data to be collected will be identified, collected, and **used collaboratively** to help drive proposed actions. We also wish to continue to educate and provide technical assistance about acceptable standards for monitoring and data interpretation for those grazing permittees who will be continuing to collect range monitoring data but who are not facing imminent NEPA deadlines.

In 2013, the Reading the Range monitoring program received the Western Extension Directors Association Award of Excellence and was part of the National Rangeland Research and Development Award presented by the US Forest Service to the University of Arizona. A 3 minute video on Reading the Range is available at: <https://www.youtube.com/watch?v=oTNgwiPNO3Y> .



Satellite imagery is used to help locate potential monitoring sites for rangeland management.

Program Highlights 2013

Agriculture/Natural Resources/4-H

Sabrina Tuttle

Youth Gardening/Nutrition Projects

With the aid of the People's Garden grant, the Extension Office continued 5 gardens at these locations: Mount Turnbull Academy Alternative High School in Bylas; San Carlos Alternative High School; Heirloom Apache Corn seed garden at the Extension Office; Boys and Girls Club at the San Carlos Diabetes Prevention Center; San Carlos Rehabilitation and Detention Center. Students and youth, as well as teachers and community educators, learned about the following topics: plant needs, garden preparation, garden planting, soils, food, harvesting and storing seeds for a seed bank, taste testing of vegetables/fruits, the DVD Food, Inc., about the U.S. food and agriculture system. All of the classes except Food, Inc. included hands-on components.

2013 Gardening Class Attendance (including duplications)		
	Youth	Adults
Mt. Turnbull Academy	82	6
SC Alternative School	220	0
Boys and Girls Club	101	10
SC Rehabilitation/Detention Center	116	31
Total	519	47

High school students at Mount Turnbull Academy, SC Alternative and the SC Rehabilitation/ Detention Center and junior high and elementary school youth at Boys and Girls Club learned and practiced gardening techniques. At the schools, the instructional specialist also learned how to plan, construct, plant and maintain a garden with traditional Apache and conventional garden crops, which he used to implement First Things First preschool gardens.

A Borich scale evaluation (n=19), including 2 open-ended questions with students from San Carlos Alternative School and Mount Turnbull Academy, looked at various aspects of the classes. On a 5 point scale, students improved 1.7-1.9 levels from before the class vs. after the class in the subject matter areas of plant needs, garden preparation, garden seed planting and transplanting, composting, and smoothie making/fruit taste test. Favorite classes included: Garden preparation and planting (9); Taste test/smoothie making (5); hands-on work outside, transplanting, seeing strawberries used in smoothies, "everything! "

When asked how they would use the class they replied, "share with family/friends (2), teach/ explain how to garden and teach family (2), garden at home (9), transplant, make smoothies.

Agriculture and Natural Resources

During the *Ranch Financial Management/Restocking Workshop* 10 participants learned about types of financial plans for ranches, funding through grants, and an introduction to spreadsheets used in financial planning/restocking of ranches. At the *Ranch Financial Management/ Restocking Workshop*, the 10 participants also learned an overview of ranch financial management and restocking plans, which will be continued in more detail of the separate

elements as a series of two more workshops in 2014. They expressed interest in learning more about restocking, spreadsheets, and ranch production and veterinary techniques and records which will be concluded at workshops in 2014. Summative evaluations are planned for the last workshop in 2014.

Thirteen and eighteen participants attended the *Natural Horsemanship Workshop for Youth and Adults #2 and #3* at Apache Gold Casino and Peridot Rodeo Arena, which were demonstrations and practice of basic/intermediate horse training techniques. In Clinic #3, 7 participants with horses learned these techniques by participating in hands-on and "horse-on" activities. At the *Natural Horsemanship Workshop for Youth and Adults Clinics #2 and #*, 13 and 18 participants learned the practice of over 10 horse training techniques. In Clinic #2, 7 participants with horses learned these techniques by participating in hands-on activities with horses. We will plan to hold one more clinic in Bylas in 2014, as San Carlos and Peridot communities were covered in 2013.

During the *Solar Pump Workshop*, 13 Participants learned how solar pumps work by observing a solar pump demonstration and through discussion. They also learned about funding to get pumps set up on their ranch, and were encouraged to contact the UA Dept. of Agricultural Education grant coordinator to get help applying for these grants. Ash Creek Cattle Association started getting help with applying for a grant for solar pumps.

Healthy Living and First Things First Program

The instructional specialist, Juan Arias, implemented the 4 curricula, including Family Bookbag, Color Me Healthy, Grow It, Try It, Like It, and Family Style Meals in the following locations: 2 Apache Childcare Centers, 1 Youth Home, 1 Home Childcare, 2 Child Readiness Centers, and 2 Headstart Preschools. He reached 105 youth and 28 adults. He trained the youth in hands-on gardening with age appropriate tools. He trained the adults in all 4 curricula, as well as in gardening.

The Extension Agent and Instructional Specialist conducted an evaluation at 8 locations, n=11, with preschool and childcare staff. The staff indicated that they had learned the following: Planting (10 respondents), taking care of vegetables (8), identification of plants (3), Food Plate--MyPlate (8), Reading (5), eating fruits and vegetables (8), portion sizes (3), serving food (9), exercises/becoming active (9), Identifying plants vs. weeds/weeding (2).

The two most important things that each staff member learned were: eating healthy, more veggies and fruits, gardening, exercises/becoming active, yoga cards/shape mats (learned that the kids loved it!), self-serving family style meals, reading, planting seeds and transplants, music movement and talking, and eating healthy food. The respondents also stated that they would like to learn about how to eat healthy and be more active indoors and outdoors, more on planting, what fruits and veggies to plant and when seasons change, "pretty much covered everything", to "What do you have that's available?" Some of the staff started earlier than others, and showed more knowledge gained.

Grants Awarded or Continuing for Gila County 2013

Some of the grants listed were team efforts that benefited additional localities in Arizona beyond Gila County.

Funder	Amount	Purpose
Agribusiness Companies	300	Range Livestock Nutrition 101
Apache Gold Casino	300	Sponsorship of Youth Horse Training
Arizona Cooperative Extension	1,000	Travel Grant to Receive Western Extension Directors Association Award of Excellence
Arizona Cooperative Extension	500	Arizona State 4-H Youth Foundation Program Camp Grant
AZ Sustainable Agriculture Funds for Professional Development	500	Travel Grant for Professional Development
Extension Community of Practice (CoP): Climate, Forests and Woodlands	10,000	University of Nebraska-Lincoln
Gila County Cattle Growers Association	9,200	Reading the Range
Gila County Pioneers	500	Agriculture Education
National Institute of Food and Agriculture	4,891	National Conference on Extension, Forests and Climate Change (extended, Original Award 120,000)
National Institute of Food and Agriculture	17,993	eXtension Community of Practice-Climate, Forests and Woodlands (Original Award 40,000)
Natural Resources Conservation Service	25,000	Reading the Range
Public Lands Council	50,000	Reading the Range
Restocking Financial Workshop	250	R-100 Tribal Ranch, San Carlos Cattle Associations (meal and snack)

Grants Awarded or Continuing for Gila County 2013

Some of the grants listed were team efforts that benefited additional localities in Arizona beyond Gila County.

Funder	Amount	Purpose
Region III US Forest Service	5,000	Reading the Range
Senator Hardt Endowment	840	2013 4-H Tween Camp
Shirley Caris Foundation	25,000	Shirley Caris Foundation Award; Agriculture Education and 4-H Programs
Tonto National Resource Conservation District	7,367	Agricultural Education Program Funding
Tonto National Forest	25,000	Reading the Range
UA CALS	1,500	Sustainable Living Education Programming in Cooperative Extension
UA Green Fund	3,969	Farmer's Market Extern Student Worker
University of Arizona Cooperative Extension	1,000	Reading the Range
U of A School of Natural Resources and the Environment	5,000	Reading the Range
United Way	80,002	San Carlos Nutrition, Obesity, and Physical Activity Grant, Sub-Contractor to United Way of Tucson for First things First in the San Carlos Region
USDA	139,899	SNAP ED (Supplemental Nutrition Assistance Program Education)
Total	415,011	

Funding for Gila County 2013

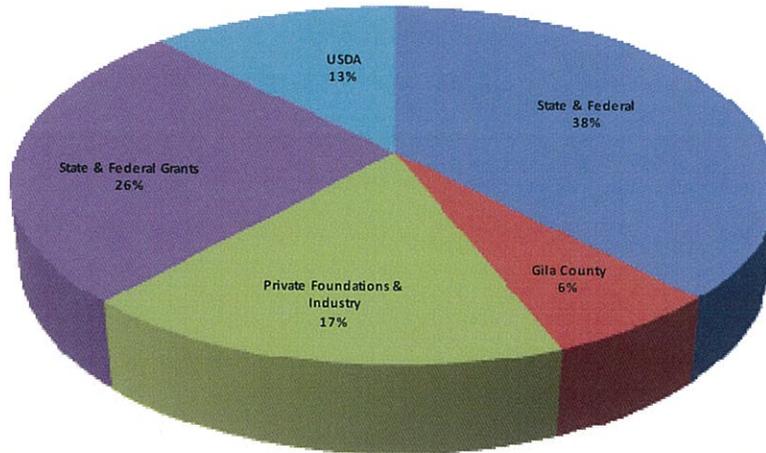
Salaries/Wages:	\$539,960
Operations/Programs:	<u>\$413,412</u>
Total:	\$953,372

Gila County Expenditure Budget for the year 2013

	Salaries/Wages/ERE	Operations/Programs
State & Federal¹	359,671	0
Gila County	1,476	58,524
Gila County Grants²	0	0
Private Foundations & Industry	0	166,142
State & Federal Grants²	104,026	144,843
US Department of Agriculture³	74,787	43,903
Totals	539,960	413,412

These values do not represent office space and utilities provided by Gila County and the San Carlos Apache Tribe.

- ¹ State funds from state appropriations to University of Arizona College of Agriculture.
- ² Federal funds from US Department of Agriculture for Cooperative Extension programs. Grants are listed on the preceding pages.
- ³ USDA funds provided specifically to support Extension Agent for the San Carlos Apache Reservation.



Jim Sprinkle, Ph.D.
**County Extension Director & Area Extension Agent,
Animal Science for Gila and Yavapai Counties**

Faculty Rank: Area Agent, Animal Science



Jim Sprinkle (center) receives the **Western Extension Directors Association Award of Excellence for *Reading the Range*** at Coeur d'Alene on behalf of Dr. Jim Sprinkle, Dr. George Ruyle, and Dr. Del Despain. Pictured (left to right) with Andy Groseta (AZ Cattlegrowers Assoc. President & Council for Agricultural Research, Extension, and Teaching ~ AZ), Dr. Jeff Silvertooth (AZ Cooperative Extension Director), Dr. Shane Burgess (Dean, U of A College of Agriculture & Life Sciences), Mr. Tom Jones (CEO Grand Canyon Electrical Cooperative Assoc., Council for Agricultural Research, Extension, and Teaching ~ AZ).

A primary responsibility of this position is to provide leadership in developing and conducting educational programs in animal science, primarily livestock production, with emphasis in Gila and Yavapai Counties. The area agent will also participate in planning or implementing natural resource educational programs that complement range livestock production.

The agent is expected to participate in or lead team efforts across county lines and statewide in educational programming or appropriate applied research, particularly with the Arizona Range Resource Education Committee. The agent shall contribute in establishing multi-county and statewide partnerships with other extension, research, and multi-agency personnel to implement these programs.

The agent shall conduct problem-solving research on site with land managers, livestock producers, other extension faculty, and interested parties. Results of research shall be included in extension programming efforts and applied and scholarly publications.

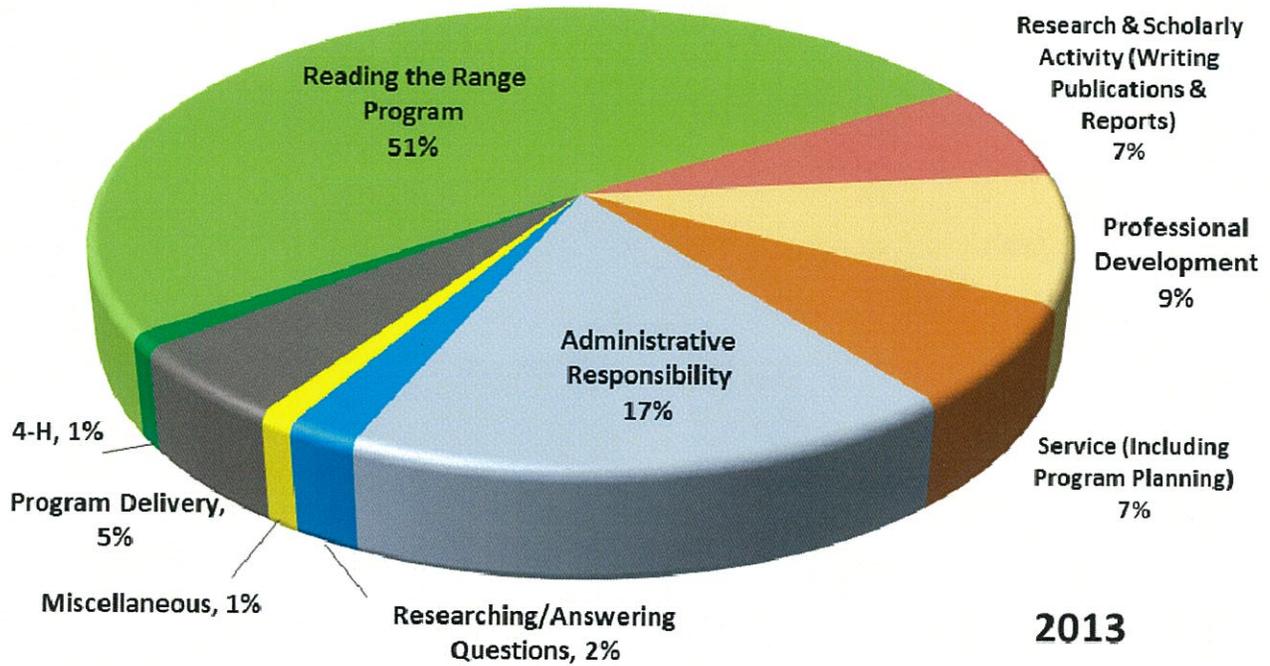
The agent shall work with 4-H clubs, providing animal science expertise through consultations, workshops, and publications. Additionally, the agent shall work with target audiences identified through local needs assessment in solving problems and utilizing new technology and information in production, resource management, marketing and other areas. The area agent shall participate in appropriate multi-disciplinary teams, livestock production industry and commodity groups, agencies and organizations, and communicate research interests and educational needs to extension and campus faculty.

The agent is expected to keep current in his area of specialization and transfer appropriate research-based information and technology to clientele via publications, educational programming, or the media. The agent is also expected to comply with all Civil Rights mandates and actively solicit participation from under represented groups in Extension programming.

As Gila County Extension Director, this position carries a 20% administrative appointment to supervise Extension work in three offices at Payson, Globe, and the San Carlos Indian Reservation.

TIME BUDGET FOR EXTENSION AGENTS

Jim Sprinkle, Area Extension Agent, Animal Science



Grants Awarded in 2013

In 2013, Jim assisted in bringing in \$122,000 in new grant money for Livestock and Resource Management.



Rangeland monitoring on the Diamante Ranch near Globe.

Publications

Peer Reviewed Journal

Coleman, S.W., Gunter, S.A., Sprinkle, J.E., & Neel, J.P. 2013. *Difficulties associated with predicting forage intake by grazing beef cows*. Journal of Animal Science. Accepted.

Peer Reviewed Abstract

Gunter, S.A., Faulkner, D.B., Meyer, A.M., Scholljegerdes, E.J., Sprinkle, J.E., Soto-Navarro, S.A., & Coleman, S.W. 2013. *Difficulties associated with predicting forage intake by grazing beef cows*. American Society of Animal Science Annual Meeting Abstracts.

Pamphlet/Newsletter

Sprinkle, J.E. 2013. *Beef cattle mineral supplementation of Arizona rangelands*. 3 pp. Arizona Cattlelog.

Extension Report

Sprinkle, J.E., Stratton, J., England, D., and Leonard, M. 2013. *15 Range monitoring reports summarized in 2013 for data collected from 2009 to 2012*. 8,484 pages for the 15 reports.

Sprinkle, J. with 12 others from the West. 2013. *W-1012: Improving ruminant use of forage in sustainable production systems for the Western United States*. Dan Faulkner, Editor.

Video

Reading the Range. Video Production. Interviewee on this video production produced by Cody Sheehy and Dave Bogner with Alan Davis as editor.

Review/Revisions

Reviewed abstracts for Western Section, American Society of Animal Science Annual Meeting, Extension Section.

Reviewer for Environmental Impact Statement for the Salt River 6. At the request of Gila County Cattle Growers Association, reviewed the EIS for six allotments along the Salt River.



Winning the **US Forest Service National Rangeland Research and Development Award** at the Society of Range Management Meeting in Oklahoma City, from left, are Dr. Del Despain, Arizona Strip, St. George Utah; Dr. Jim Sprinkle, Payson, AZ; Dr. Doug Tolleson, V Bar V Ranch, Camp Verde, AZ; Dr. George Ruyle, Tucson; and Kim McReynolds, Willcox, AZ with Charlie Richmond, Jim Pena and Dave Stewart of the US Forest Service.

2014 Plan of Work: Focus Areas

Jim Sprinkle

Research:

1. Submit the four year beef cattle trace mineral research on the V-V Ranch to the *Journal of Animal Science*.
2. Continue to work with Dean Fish of Santa Cruz County and Doug Tolleson of the V-V Experimental Ranch to summarize beef cattle mineral intake research data collected in 2012 for submission to the *Journal of Animal Science*.
3. As part of a graduate committee, participate in the design and execution of range cow forage intake research on the V-V Ranch.

Extension:

1. Continue to facilitate data collection and summary in the *Reading the Range* program for new and returning ranchers who are facing NEPA in 2016 or are interested in continued data collection. Seek to maintain funding for data entry personnel and for field technicians to assist in data collection. Recruit an intern to assist with data collection the fall of 2014. Finish 2011 to 2013 monitoring data reports by the fall of 2014. With Del Despain's involvement from dedicated grant funding, have a functioning statistics module in the VGS software by early summer. Retract Extension programming in other areas in order to accommodate the completion of data summaries.
2. Provide an additional training to *Reading the Range* participants and agency partners in data interpretation for the *Reading the Range* data.
3. Present a workshop on *Developing and Using Cooperative Monitoring for Adaptive Management and NEPA*.
4. Serve as chair of the *Range Livestock Nutrition Working Group* and provide a range livestock nutrition workshop at Tucson. This is in partnership with Doug Tolleson and will precede the Winter AZ SRM meeting.
5. Effectively participate with the University of Arizona School of Animal and Comparative Biomedical Sciences as a Regional Livestock Specialist. As a member of the Extension committee and in partnership with Dan Faulkner, Livestock Specialist, develop a workshop in Gila County on Beef Quality Assurance and on beef topics from conception to consumer. This program will probably be scheduled in Globe for early June.
6. As chair of the Northern Arizona Centennial committee, help organize a celebration and program to be held at the V-V Ranch on July 24, 2014.

Service:

1. Serve on a graduate committee for a Department of Animal Sciences graduate student who will be investigating selecting and improving the efficiency of free ranging beef cattle.
2. As Co-Chair of the *Extension Visioning Committee* and in conjunction with Extension agents and specialists, department heads, County Extension Directors, Extension and College of Agriculture and Life Sciences administration, the Visioning Committee, and with Darcy Dixon, Co-Chair of the committee, help finalize the statewide programmatic prioritization with stakeholders.

Administration:

1. Serve as Gila County Extension Director and seek to enhance funding to provide full time office coverage for the Globe office.
2. Seek to expand Extension programming for families and youth in Gila County with the hire of an area agent for Family and Consumer Health Sciences who will be headquartered in Yavapai County but will have 15% programmatic responsibilities in Gila County.
3. If the Decision Package is awarded to Cooperative Extension, focus on addressing priorities identified by stakeholders in the Visioning process.

Lani Hall, MAed
**Gila County Program Coordinator, 4-H Youth
Development**

Coordinator, 4-H Programs

This coordinator is responsible for developing the 4-H Youth Development program throughout Gila County. 100% of the coordinator's time is focused on positive youth development programs in all areas of expressed interest and/or needs. As 4-H Youth Development in Gila County continues to grow, areas of focus will change but positive Youth Development will always be top priority.

The coordinator is responsible for leader recruitment, training and certification. The coordinator serves as a resource for leaders as they conduct their regular project club meetings and activities. It is the responsibility of the coordinator to verify that civil rights and affirmative action are included in all 4-H Youth Development programs.

The coordinator is responsible for the development of educational programs that meet the needs and desires of Gila County 4-H families. This included programs in all areas of positive youth development including but not limited to: animal science, youth leadership training, livestock quality assurance, crafts, geology, consumer and family sciences, record keeping.

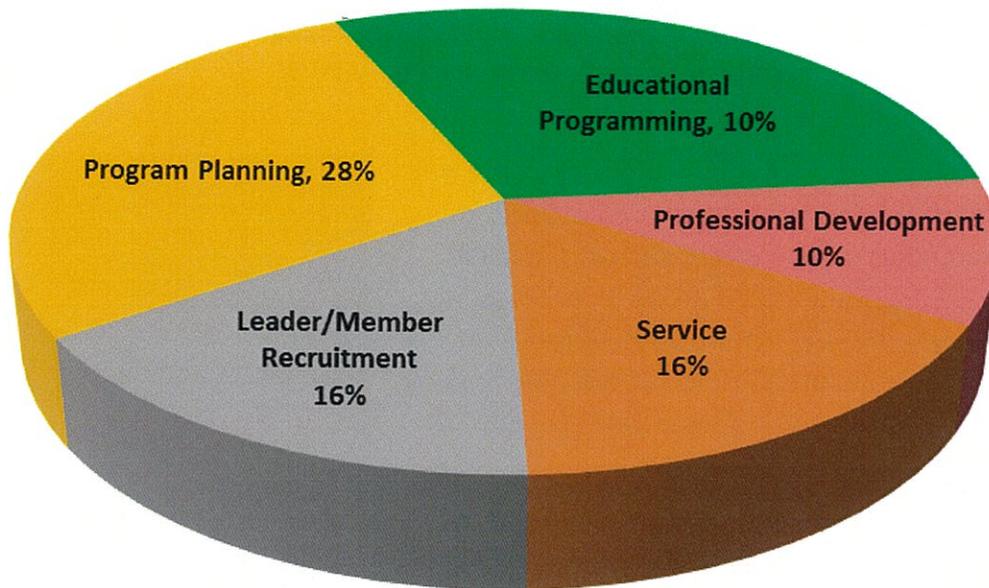
The 4-H program coordinator develops a network of certified volunteer leaders, 4-H youth and community volunteers to form a positive collaboration. The end result is a strong program that not only benefits Gila County youth 4-H members but our communities. The coordinator is an advisor for three leaders council; Southern Gila County, Northern Gila County and Pleasant Valley. The coordinator will serve as a resource for leaders and youth as well as a facilitator of educational programs that meet the overall needs of youth in Gila County.

The primary purpose for the Program Coordinator, 4-H Youth Development is to deliver research based, non-formal, objective education to Gila County youth and families. This education will assist in developing leadership and promoting healthy lifestyles and communities.



Time Budget for Extension Agents

Lani Hall, Program Coordinator, 4-H Youth Development



2013

Grants Awarded in 2013

In 2013, Lani led or contributed significantly to the acquisition of \$194,706 in grant money for conducting programs and publication development.



The Sixth Annual Gila County Tween Camp was held at Roosevelt Lake in 2013. Educational activities were held along with lots of fun in the sun and making of great memories.

Publications

Pamphlet/Newsletter

Hall, L., 2013. *Today's 4-her*. Periodic newsletter of activities and events sent to over 300 recipients and posted online.

Invited Speaker

Hall, L., 2013 *Fundamentals of the event "Goat-tying"* Invited by the Town of Payson Parks and Recreation to serve as an instructor for the Equine education workshop series. Payson, AZ. on April 9 and 16th 2013.

Hall, L., 2013 *4-H Youth Development in the Rim Country*. Invited by the Town of Payson as an invited guest on "Town Talk," the bi-weekly television talk show. Payson, AZ on Feb. 28, 2013.

Hall, L., 2013 *Resume and interview Skills*. Invited to Payson High School Senior Conference. Payson, AZ on May 15, 2013.

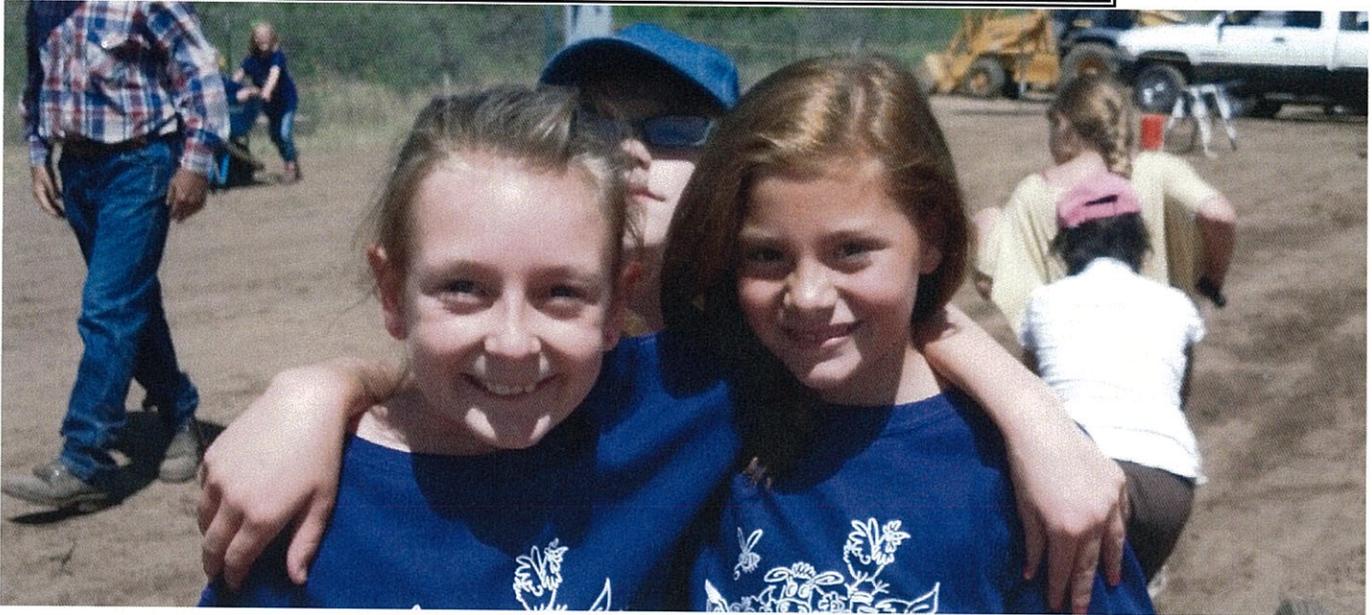
Hall, L., 2013 *4-H Youth Development in the Rim Country*. Invited by the KMOG as an invited guest on "The Forum," the daily radio talk show. Payson, AZ on August 29, 2013.



SNAPed Instructional Specialists attend School Events and teach children to "Think Your Drink" by providing healthy options! Photo by Teri James.

2014 Plan of Work: Focus Areas

Lani Hall



Caption: "Ag Daze" is a fun filled educational opportunity that is offered to all 4th graders throughout Gila County. It is the culmination of the Agriculture Awareness school enrichment program.

Extension:

- Agriculture Awareness Education will be taught in all fourth grades as well as multiple grades in smaller schools within the county. This program involves six Agriculture related lessons taught in the classrooms as well as a culminating "hands on" experience at a local ranch. All lessons are aligned to state standards. This will be the fourth year of the program in Gila County.
- Youth Livestock Quality Assurance will be taught in all areas of county. As required by the state, each market animal sold in Arizona must be sold by an exhibitor certified in Livestock Quality Assurance. Certification must be renewed every 3 years.
- There will be a "Tween Camp" experience for 9-13 year old youth. This annual camp is held for both 4-H and non-4-H youth and has an average attendance of 75 campers. Ten to 15 "teen" counselors go through leadership trainings each year and serve as group leaders.
- Supplemental Nutrition Assistance Program education will be taught throughout the county to children in grades K-8 as well as adult education for SNAP recipients. Education will be provided in not only K-8 schools but preschools as well as adult venues where nutrition education opportunities are available.
- Provide "School kids day" experience for all elementary school age children to attend the county fairs with educational lessons and hands on opportunities for youth.
- Focus on developing life skills and 4-H essential elements amongst all 4-H members with the county. Provide trainings and guidance as need to certified volunteer leaders.

Service:

- Serve as Program Coordinator for Gila County SNAPed program which is part of the central region SNAPed.
- Serve on the Advisory Board for Payson Center for Success.
- Serve as an advisor for the Northern Gila County Fair Board.
- Serve on the Advisory Board for the Payson Agriculture Education Foundation.

Christopher Jones
Extension Agent, Agriculture & Natural Resources
Globe Office

Faculty Rank: Associate Agent, Agriculture & Natural Resources

A primary responsibility of this position is to provide leadership in developing, implementing and evaluating educational programs aimed at improving the sustainability of natural resources, increasing understanding and involvement in land use and natural resources policy, and increasing the effectiveness of program-related producers, groups and individuals to solve their own problems and improve their quality of life.

The agent leads or participates in team efforts in Gila County, statewide and nationally in extension program development, including outreach methods and educational materials, particularly as it applies to the needs of the high desert and mountain environments, such as residential horticulture and climate change impacts on natural resources. The agent shall contribute in establishing multi-county, statewide and national partnerships with other extension, research and multi-agency personnel to implement these programs. The agent shall participate in appropriate multi-disciplinary teams, agencies and organizations, and communicate research interests and educational needs to extension and campus faculty.

The agent shall work with Master Gardeners and other groups in Gila County, including youth, providing leadership and expertise through training and coordination of volunteer activities. The agent shall work with target audiences identified through local needs and planning assessments in solving problems, utilizing new technology and information in natural resource management, climate, water issues, fire mitigation, noxious weed education and other areas.

The agent is expected to keep current in his area of responsibility and transfer appropriate research based information and technology to clientele via publications, educational programming, or the media.

The agent is also expected to comply with all Civil Rights mandates and actively solicit participation from under-represented groups in Extension programming.

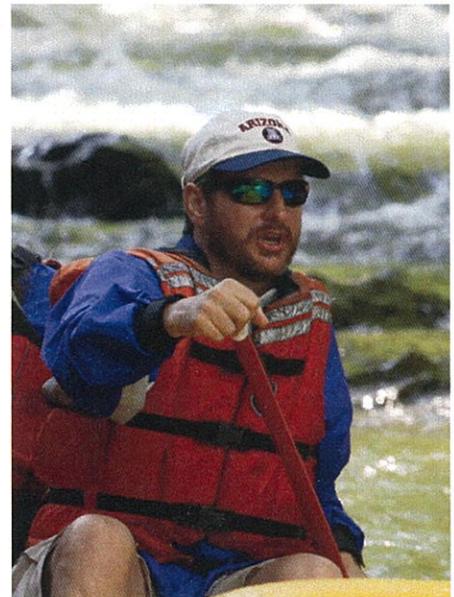
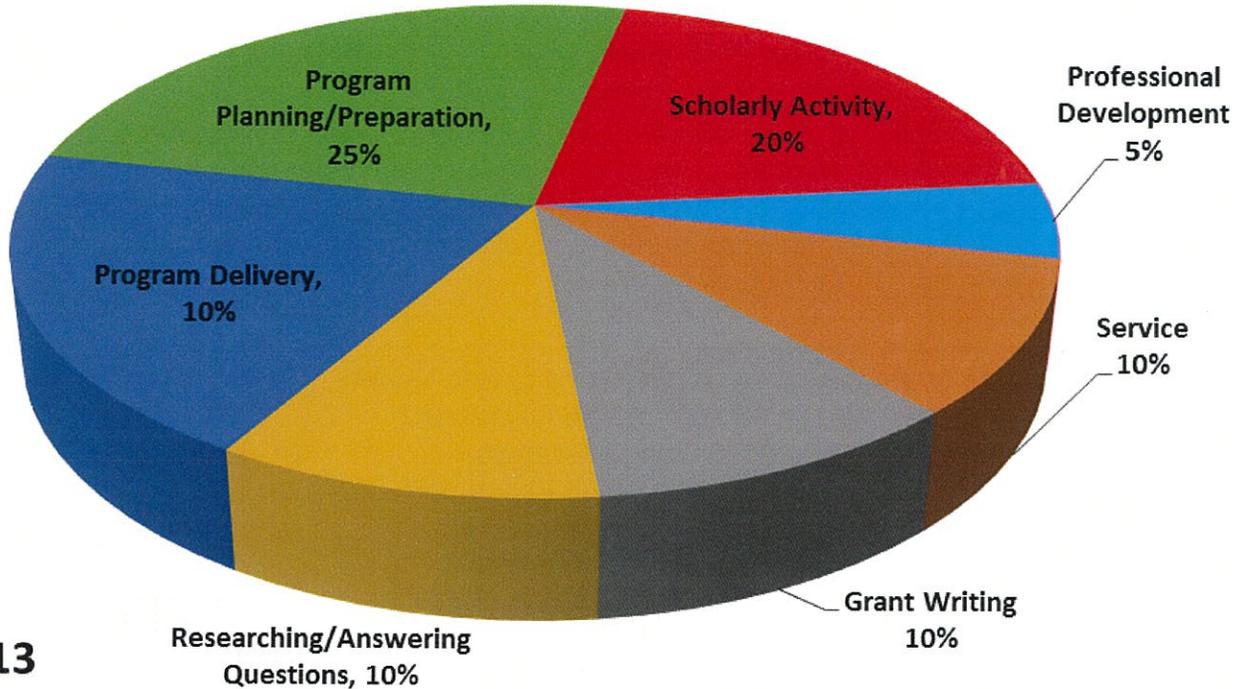


Photo courtesy of Nantahala Rafting Company.

Time Budget for Extension Agents

Chris Jones, County Extension Agent, Agriculture & Natural Resources



2013

Grants Awarded in 2013

In 2013, Chris led or contributed significantly to the acquisition of \$38,353 in grant money for conducting programs and publication development.



Chris Jones and Mike Kroenke at Lake Superior during one of the tours for the National CSI Conference in Minnesota. Photo by Valerie Barber.

Publications

Chapter

Gibson, R., C. Jones, and J. Schalau. 2014. *Vertebrate Pests*. Arizona Master Gardener Manual Revised. University of Arizona CALS Press. Tucson, AZ. 60 pp. (Submitted).

Professional Journal

Apel, M., C. Jones and D. McDonald. 2013. *The Accidental Sustainability Agent*. Journal of Sustainability Education.

http://www.jsedimensions.org/wordpress/content/the-accidental-sustainability-agent_2013_02/

Jones, C. and M. Lenart. 2014. *Forestry Professionals and Extension Educators vs. Climate Change: Implications for Cooperative Extension Programming*. Journal of Extension [Online]. (Accepted.)

Lenart, M. and C. Jones. 2014. *Perceptions on climate change influence willingness to undertake forestry adaptation and mitigation*. Journal of Forestry. (Under 2nd review).

Fact Sheet

Jones, C. and J. Kelly. 2013. *Pines (Pinaceae) of Arizona*. University of Arizona CALS Cooperative Extension. AZ#1584. 48 pp.

Jones, C.K. 2013. *Tent Caterpillars*. eXtension Climate, Forests and Woodlands Community of Practice. 4pp.

Jones, C.K. 2014. *Fall Webworms of Arizona*. University of Arizona Cooperative CALS Extension. 11pp. (Accepted).

Jones, C.K. 2014. *Invasive, non-native thistles of Arizona*. University of Arizona CALS Cooperative Extension. 10 pp. (Submitted.)

Website

Lenart, M., C. Jones, V. Barber, A. Grotta, M. Crimmins, C. Schnepf, H. Smith, K. Sullivan and E. Taylor. 2013. *eXtension: Forests, Woodlands and Climate Community of Practice*. http://extension.org/climate_forests/woodlands 300+pp.

Abstract

Jones, C.K., M.B. Apel, M. Blodnik, R. Brain, C. Elliott, J. McDonnell and B. Schmitt. 2013. *Communicating Climate and Sustainability Issues through Extension Programming*. Proceedings of the Joint Council of Extension Professionals Galaxy IV Conference. Pittsburgh, PA 1p.

Jones, C.K. 2013. *The ANREP Climate Science Initiative: Building Successful Collaborations*. Proceedings of the Joint Council of Extension Professionals Galaxy IV Conference. Pittsburgh, PA 1p.

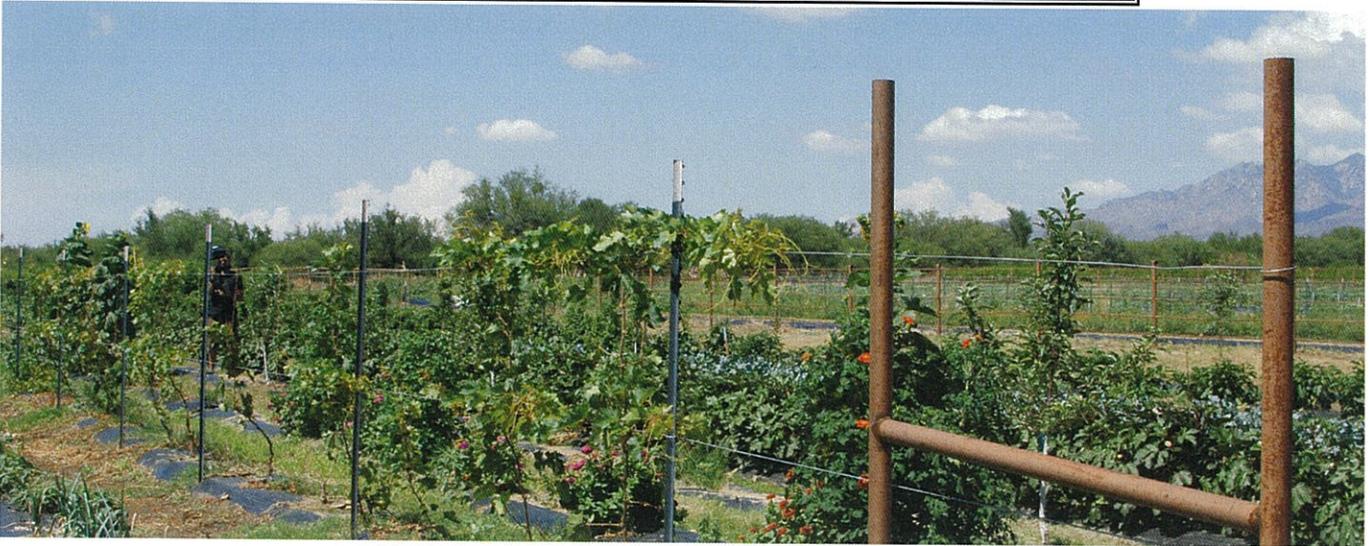
Invited Speaker

Jones, C.K., M.B. Apel, M. Blodnik, R. Brain, C. Elliott, J. McDonnell and B. Schmitt. 2013. *Communicating Climate and Sustainability Issues through Extension Programming*. Joint Council of Extension Professionals Galaxy IV Conference. Presented at Pittsburgh, PA.

Jones, C.K. 2013. *The ANREP Climate Science Initiative: Building Successful Collaborations*. Joint Council of Extension Professionals Galaxy IV Conference. Presented at Pittsburgh, PA.

2014 Plan of Work: Focus Areas

Chris Jones



An organic field in Tumacacori at Avalon Organic Gardens and Eco-village. Photo by Tara Celentano.

Home Horticulture

- Teach Master Gardener class for school teachers to encourage development of school gardens.
- Teach Master Gardener class in Payson, Fall 2014.
- Assist in the reorganization of Master Gardener Association to establish a community working group model.
- Provide continued support for the Globe-Miami Farmers' Market.
- Acquire and supervise a new UA Green Fund Student Sustainability Extern to assist with the farmers' market and other related outreach activities, Summer 2014.

Climate Change, Sustainability & Natural Resources

- Provide leadership for the Environment and Sustainability Signature Program Team
- Seek to reestablish and lead Extension Natural Resources Signature Program Team.
- Teach Master Watershed Stewardship course in Payson, Fall 2014.
- Provide leadership for the ANREP Climate Science Initiative.
- Divest leadership role for the eXtension Community of Practice on Climate, Forests and Woodlands.
- Carry peer-reviewed article on the Climate and Forests Survey results to publication.
- Carry peer-reviewed factsheets on thistles and webworms to publication.

Forest Health & Firewise

- Work with Gila County fire departments and other partners as needed to offer fire mitigation education throughout the county.

Riparian Areas & Grazing Systems Program

- Assist area animal science agent as requested for program development and delivery.

Sabrina Tuttle, Ph.D.
**Extension Agent, Agriculture/Natural Resources
& 4-H Youth Development—San Carlos Office**

Faculty Rank: Associate Agent/Assistant Professor

This position provides educational programs and practical information to the residents of the San Carlos Apache Reservation. The program areas are agricultural production, natural resource management and 4-H youth development. Approximately 50% of the agent's time will be spent in agriculture and natural resource programming and 50% in the 4-H youth development programming. The agent also serves as Assistant Professor in the Department of Agricultural Education, where she is affiliate faculty, and performs instructional and research activities, linked to her extension experience.

Through information from applied, translational research and needs assessments, the agent caters educational programs to the cultural characteristics of the Native American community. She provides practical information to the people on the San Carlos Apache reservation on the topics of animal production (primarily cattle and horse) and range management through workshops and technical assistance. She teaches gardening and nutrition

education with both youth and adults, collaborating with others in doing so. The office also helps to organizes 4-H Clubs in steer, horse, gardening and archery. Another area she covers is Natural Resources, where she collaborates the Tribal Forestry in the Natural Resources Practicum camp.

The Agent conducts Agricultural Education and Extension research and publication at regional, state, national, and international levels. She also performs occasional instructional duties as a guest speaker or intern supervisor for the Department of Agricultural Education as requested.

The agent develops an Extension advisory committee which will give direction on critical issues for program development. These issues include economic development of the 5 Cattle Associations and 2 Tribal ranches, as well as providing youth with career orientation, leadership, and also gardening and nutrition skills to combat diabetes. The advisory committee consists of community members, Tribal agency personnel, 4-H volunteer leaders and school personnel. The agent involves Tribal leadership, the Extension Advisory Committee, commodity groups, tribal, state, and federal agencies, county Extension staff and clientele in program planning and methods to evaluate program effectiveness. The agent uses qualitative methods such as appreciative inquiry and focus groups, as well as short surveys and individual interviews to plan and evaluate. She also identifies and develops a core of volunteers, collaborators, and cooperators. School teachers and principals, 4-H leaders, tribal agency personnel, and UA Extension specialists, administrators, and agents all assist with the reservation extension program to expand programs. The agent strives to maintain technical competence in agricultural, youth development, and natural resources subject matter relative to San Carlos Apache Reservation's needs.

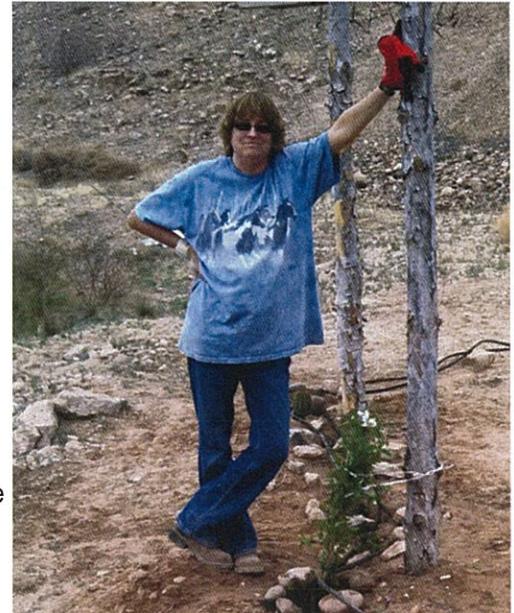
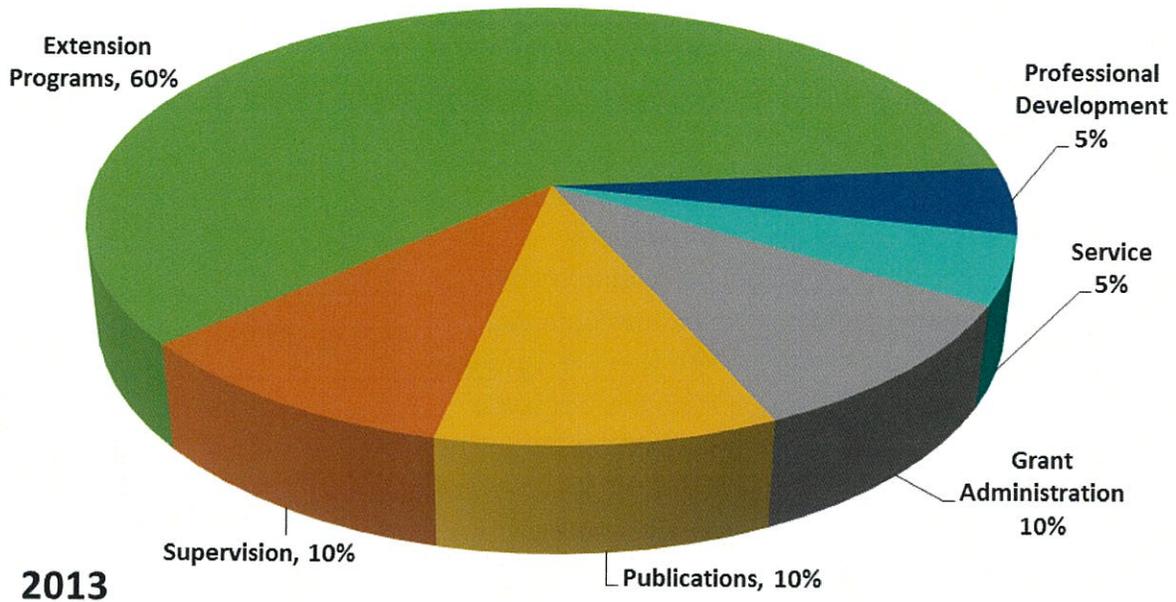


Photo by Juan Arias.

Time Budget for Extension Agents

Sabrina Tuttle, Area Extension Agent, San Carlos



Grants Awarded in 2013

In 2013, Sabrina led or contributed significantly to the acquisition of \$80,552 for the San Carlos Nutrition, Obesity and Physical Activity Grant as a sub-contractor to the United Way of Tucson for the First Things First San Carlos Region.



First Things First program preschoolers planting with Juan Arias at San Carlos Youth Home. Picture author unknown.

Publications

Publications

Peer Reviewed Journal Abstract

Tuttle, S.L., Waits, J.O., Martinez, C.L., Benally, J.Y., Livingston, M.R., Alden, E.A., and L. Masters, (2013). *Overcoming Barriers to Participatory Extension and Development*. Journal of the Association of International Agriculture and Extension Education, 20(2). <https://www.aiaee.org/vol-202-summer-13.html>

Editorially Reviewed Periodical Article

Tuttle, S.L.(2013). *The history of immigration and demographic trends in the Western United States*. Rural Connections: A Publication of the Western Rural Development Center, 1(8). http://wrdc.usu.edu/files/publications/publication/pub__2846540.pdf

Newsletter

Tuttle, S.L. and S. Dillon. (2013, July). Cattle and Horse News. San Carlos Apache Reservation Cooperative Extension.

Conference Poster Presentations

Tuttle, S.L., Livingston, M.R., Benally, J.Y., Waits, J.O., & Martinez, C.L. (in press). *Improving diets of youth and adults through nutrition and traditional food preparation education programs with four Native American reservation programs*. Poster presentation at the Association of International Agricultural Extension Education conference, April 27, 2014, Miami, Florida.

Tuttle, S.L., Livingston, M.R., Alden, E.A., Moore, G. Martinez, C.L. (in press) *Gardens that withstand the test of time—Sustainable traditional and conventional extension projects on four Native American reservations in Arizona/New Mexico*. Poster presentation at the Association of International Agricultural Extension Education Conference, April 27, 2014, Miami, Florida.

2014 Plan of Work: Focus Areas

Sabrina Tuttle

Extension

San Carlos Cattle and Range Program

1. Complete series of Ranch Financial Management and Restocking workshops, #2 and #3 in the series.
2. Conduct two Horse Training workshops, and help Fred Wesley and others plan and write a request to the San Carlos Apache Tribal Council on establishing a series of ranch sorting and penning activities with youth and adults.

4-H Youth Development

1. The Agent will continue with Junior Master Gardener classes at 4 locations; work with the San Carlos Juvenile Rehabilitation/Detention Center and Boys and Girls Club to make displays about their gardens for exhibit at community locations. The Agent will establish a new garden area at the San Carlos Skill Center.
2. The Agent and other Extension faculty will survey statewide Extension faculty on how they evaluate gardening programs with adults and youth, and will develop common qualitative and quantitative evaluation instruments that will help to show the outcomes and impacts of gardening programs.
3. The Agent will recruit 4-H leaders and members and establish at least one club per year.

Family and Consumer Science

1. Instructional Specialist will recruit 2 more home childcare locations for the First Things First preschool program, and maintain current program.
2. The Agent and Instructional Specialist will document First Things First program successes and exhibit/publish them in the community, state, nation and world.
3. The Agent will seek another grant for school/preschool audiences with the Instructional Specialist, such as SNAPED nutrition or Brain Builders.

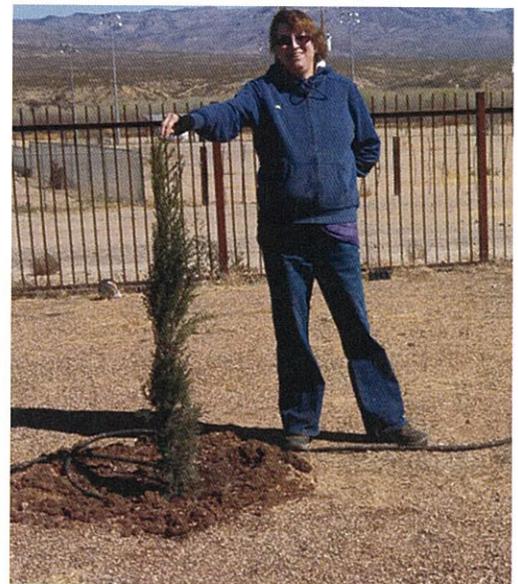


Photo by Juan Arias.

Sights and Scenes of Cooperative Extension at Work

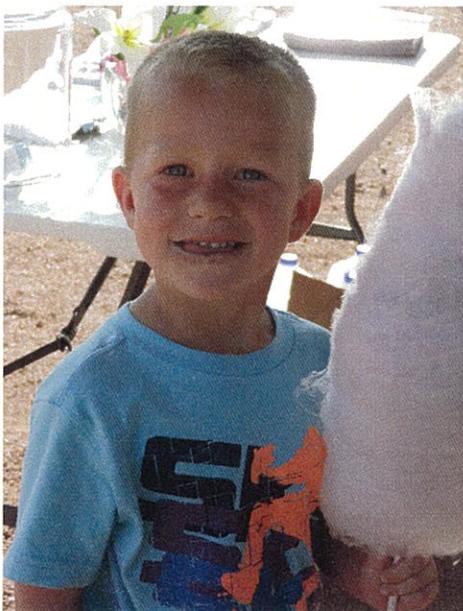
Gila County 4H Program



Above: "School kids day at the Fair is a favorite for both exhibitors and attendees. Right: Approximately 1000 kids from all areas attend the fun filled day!" Small stock projects and showmanship are a favorite throughout the county.



"Numerous clinics and practices were held throughout the county resulting in top livestock project production. 4-H members learn by doing.



4-H is not only about wearing the green and white but making lifelong friends and memories!



"The petting zoo is provided during the fair for children both young and old."

San Carlos Cooperative Extension



First Things First program preschool gardeners watering transplants at Apache Childcare. Photo by Juan Arias.



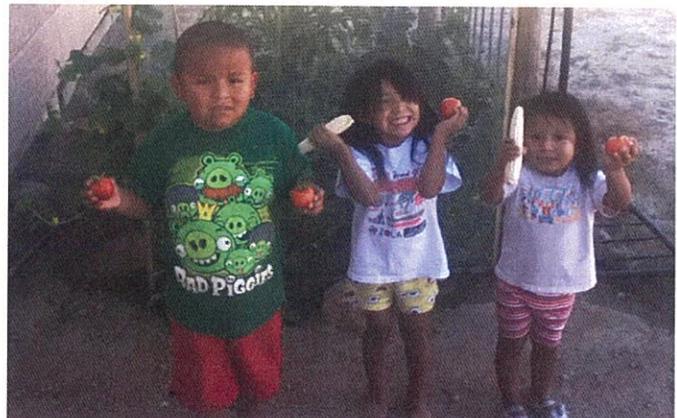
Dr. Tuttle teaching Junior Master Gardener class at Boys and Girls Club . Photo by Juan Arias.



San Carlos Alternative School garden prepped and planted. Photo by Juan Arias.



First Things First program preschool gardeners handling earthworms at Apache Childcare. Photo by Juan Arias.



Preschool youth in the First Things First gardening, nutrition, literacy, and physical activity program. Photo by Juan Arias.

Globe-Miami Farmer's Market



Brianna Ortega was the Farmer's Market Extern for the Gila County Extension Office for the 2013 season. Photo by Tara Celentano.

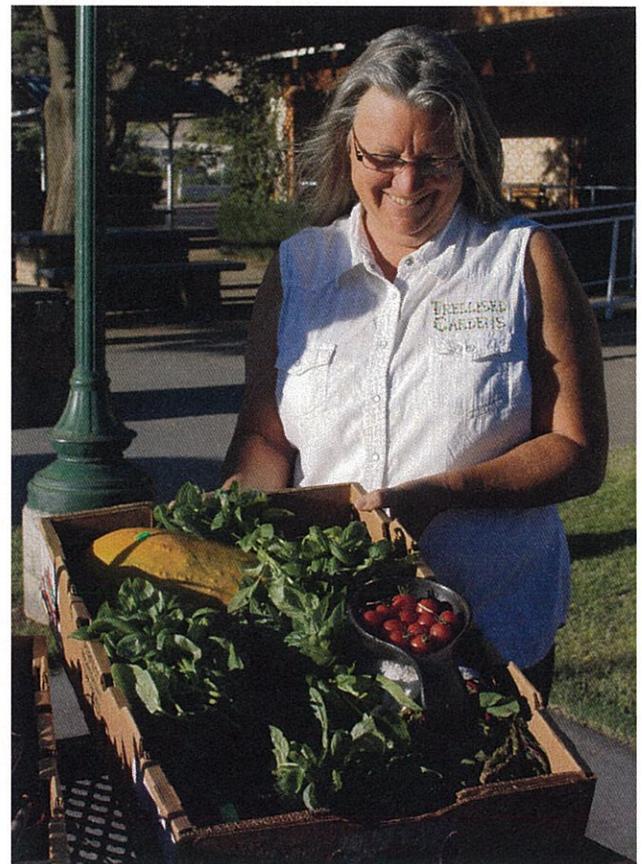


Farmer's Market vendor, the "Rustic Bar", sells handmade soaps using all-natural ingredients. Photo by Tara Celentano.



Left, close-up of the organic cherry tomatoes from Margaret Greenwood's Garden.

Right, Vendor, Margaret Greenwood, from the Trellised Gardens, shows off her early June harvest on the first day of the 2013 Farmer's Market Season. Photos by Tara Celentano.

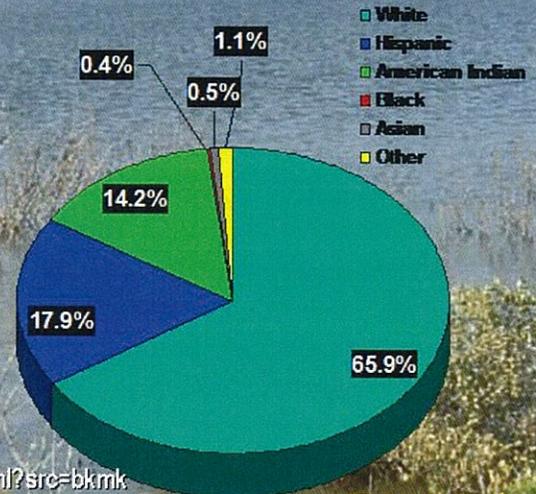


Gila County Demographics

Gila County Employment⁵

Health Care/Social Asst.	12.3
Retail Trade	11.9
Construction	10.1
Public Administration	10.1
Accommodation/Food Svc.	8.0
Mining	7.7
Education	7.6
Arts/Entertainment/Rec	4.7
Real Estate	3.5
Professional/Scientific	3.3
Finance/Insurance	1.6
Agriculture/Forestry/Hunt	1.4

Median Household Income	\$37,905
Percentage below Poverty	20.7%
Unemployment ¹	10.0%
No Health Insurance (18-64) ²	16.5%
Least Healthy of 15 AZ Counties ³	
High School Grad or >	83.5%
Bachelors Degree or >	14.5%



¹http://www.econstats.com/blsla/la_az_ur_y.htm

²<http://www.census.gov/did/www/sahie/data/index.html>

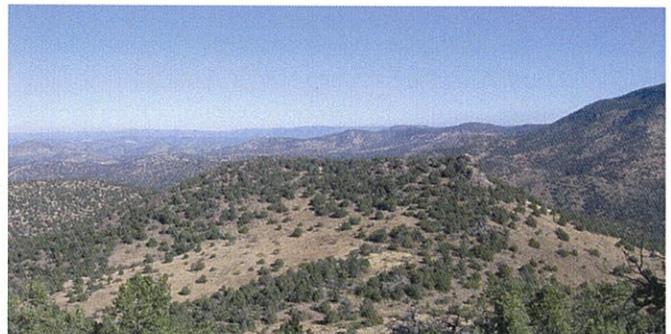
³<http://www.countyhealthrankings.org/arizona/gila>

⁴<http://factfinder2.census.gov/faces/tableservices/jsfl/pages/productview.xhtml?src=bkmk>

⁵http://factfinder.census.gov/servlet/STTable?_bm=y&-state=s&-context=s&-r_name=ACS_2009_5YR_G00_S2403&-ds_name=ACS_2009_5YR_G00_-tree_id=5209&-redoLog=true&-caller=geoslect&-geo_id=05000US04007&-format=&-lang=en



Mount Turnbull Academy Alternative School preparing garden for planting. Photo by Juan Arias.



Coffeepot Pasture on the 76 Ranch.



Amy and Shea Wills assist with range monitoring on the Potato Butte Ranch.



Teri James and Londa Ortega are the SNAPEd Instructional Specialists for Gila County.

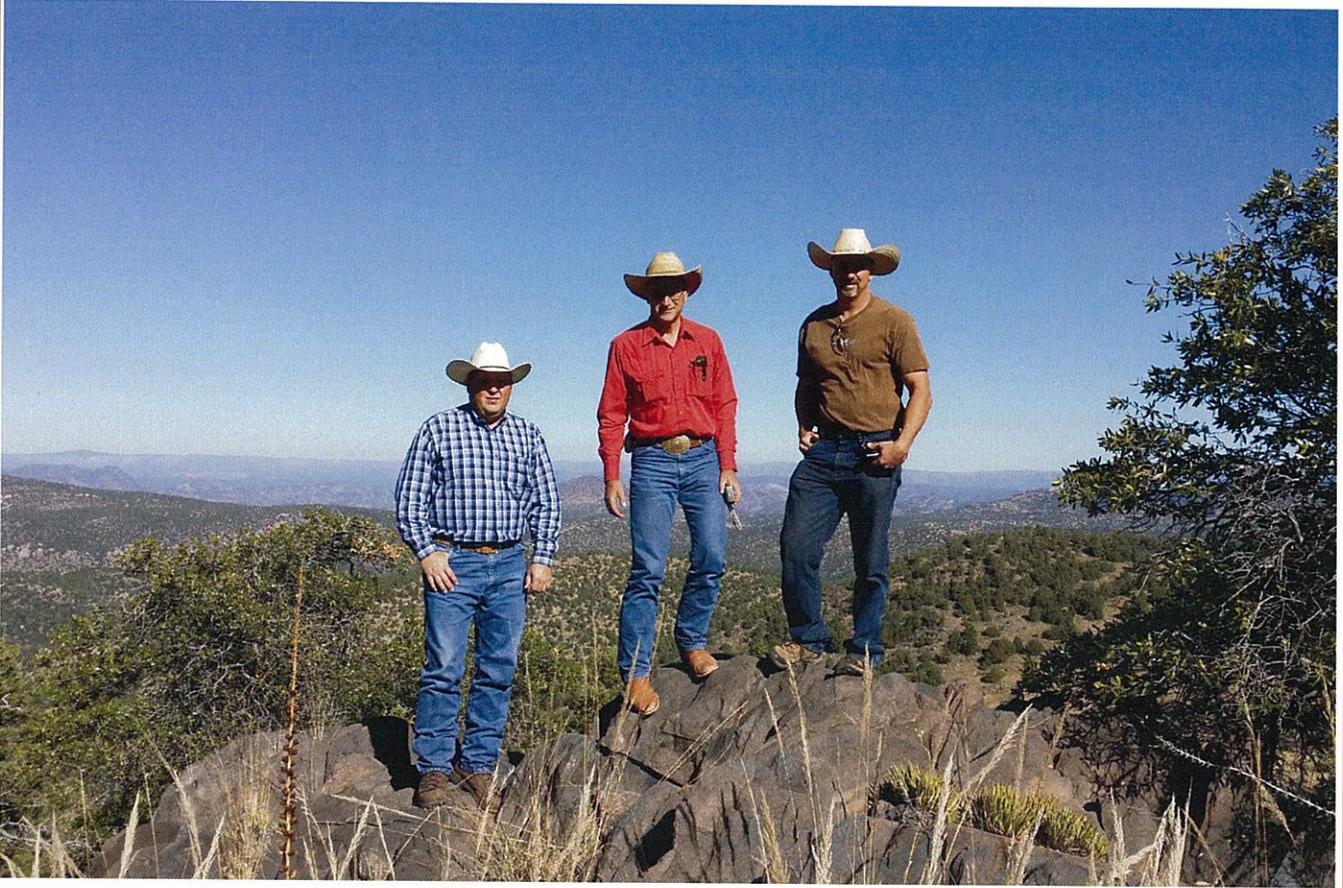


The Payson Community Garden boasts 200 active gardening plots and the region's largest pumpkin patch. All participating gardeners are requested to donate 20% of what they grow to the local food bank. In the past three years, they donated over 20,000 pounds. Agent Chris Jones provides gardening education, technical support and troubleshooting for the garden. Photo by Anita Barker.



Several varieties of tomatoes were available for purchase at the 2013 Globe-Miami Farmer's Market. Photo by Tara Celentano.

Gila County Range Monitoring Program



Byron Lambeth (NRCS), Jim Sprinkle, and Tad Neal (76 Ranch) obtain a birds eye view while looking for a new key area for monitoring in the Coffeepot pasture.



Sycamore tree in Gun Creek on the 76 Ranch.



Students from Winslow High School engage in hands on learning at Padre Canyon Ranch near Flagstaff.



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 Silvertooth, Director Cooperative Extension, College of Agriculture & Life Sciences, The University of Arizona. The University of Arizona is an equal opportunity, affirmative action institution. The University does not discriminate on the basis of race, color, religion, sex, national origin, age, disability, veteran status, or sexual orientation in its programs and activities.