



University of Arizona Cooperative Extension

Cochise County Annual Report 2021 Improving Lives, Communities, & the Economy



THE UNIVERSITY
OF ARIZONA

Cooperative Extension

Cooperative Extension enjoys a rich and proud history in this country. On May 8, 2014, we celebrated our 100th year of 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 needed 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 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. We value our partnerships and believe community voices are critical to success.

Today, Cooperative Extension continues its important role, serving communities and families, supporting agriculture, and empowering youth to be leaders. Regardless of the program, Extension expertise meets public needs at the local level through the involvement of volunteers, partners, stakeholders, and advisory committees. Extension would not be what it is today without their dedication and service. We are most grateful for their willingness to be partners in our journey to improve lives, communities, and economies.

We look forward to working with you, as together we create the next chapters of our continuing history!



The University of Arizona Cooperative Extension represents a unique three-way partnership of the federal, state and county government to provide access to the Land Grant University System to local citizens. Partners include the United States Department of Agriculture, the University of Arizona, and Cochise County Government. Regardless of the program, Extension expertise meets public needs at the local level through the involvement of volunteers, stakeholders, and advisory committees. Our roots in communities help us understand local needs and put university expertise and connections where they can make a difference - both in people's lives and in their livelihoods. Increasingly, Extension serves a growing, more diverse constituency with fewer resources, utilizing methods that are timely, relevant, and cost-effective. These Extension-driven programs leverage and multiply each dollar of county and state support with additional outside funding. Included in this report are a few highlights of Extension's impact on this county and its people during 2021.

Cooperative Extension, Cochise County Faculty and Staff (as of 02/01/2022)

Randy Norton, Interim Regional County Extension Director, Cochise and Graham Counties; Extension Agronomist

Kim McReynolds, Area Agent, Natural Resources

Josh Sherman, Area Agent, Commercial Horticulture

Evelyn Whitmer, Area Agent, State Collective Impact / Family and Consumer Health Sciences

Ashley Wright, Area Agent, Livestock

Luis Aguilar Chavez, Extension Assistant II, 4-H Youth Development

Cynthia Aspengren, Community Outreach Manager, Nutrition Education

Andrea Bernal, Community Outreach Assistant II, Nutrition Education

Rhegan Derfus, Community Outreach Professional II, Nutrition Education

Jan Groth, Extension Professional II, Community Horticulture

Alex Kosmider, Community Outreach Professional I, Water Wise

JC McDonald, Extension Assistant II, Rangeland Monitoring

Cheyenne MacMasters, Community Outreach Professional I, Building Healthy Communities

Maria Molina, Community Outreach Assistant II, Nutrition Education

Liza Quinones, Community Outreach Professional II, Building Healthy Communities

Mekenna Smith, Extension Assistant II, 4-H Youth Development

Joseph (Sepp) Sprietsma, Health Education & Promotion Professional II, Building Healthy Communities

Natoyah Swift, Multimedia Assistant I; Community Outreach Assistant II, Nutrition Education

Elisabeth Tyndall, Community Outreach Assistant II, Nutrition Education

Salem Whalen, Community Outreach Assistant II, Financial Literacy/Parenting

Sharon Buono, Business Manager

Cochise County Cooperative Extension Advisory Board

Dennis Moroney, Chair

Aaron Cardona

Barbara Clark

Daniella Reidmiller

Alan Seitz

Nathan Watkins

Moiria White

Advisory Board Alternates

Gwen Calhoun

Tyler Curry

Julia Johnson

Paul Sebesta

James Stewart

Jason Zibart

Cochise County Board of Supervisors

Ann English, Chair

Peggy Judd, Vice-Chair

Tom Crosby

Office Locations

450 S. Haskell Avenue, Suite A

Willcox, Arizona 85643

tel: 520.384.3594

1140 N. Colombo Avenue

Sierra Vista, Arizona 85635

tel: 520.458.8278 x 2141

66 Brewery Avenue

Bisbee, Arizona 85603

(By appointment only)

(520)458-8278 x 2139

Cooperative Extension, Cochise County Faculty and Staff Continued

Tricia Dunham, Administrative Assistant
Connie Forsyth, Administrative Associate
Berlynda Schaaf, Administrative Assistant

Susan Albright, Extension Assistant I, Horticulture, on-call
Sahil Arora, Technical Expert, Dentist, on-call
Greg Gazda, Extension Assistant I, Horticulture, on-call
Taylor Glaser, Office Assistant, on-call
Kathryn (Kamie) Gonzalez, Office Assistant, on-call
Marlene Townsend, Extension Assistant I, Horticulture, on-call
Jody Sharp-Webb, Instructional Specialist, Horticulture, on-call



Kim McReynolds



Randy Norton



Josh Sherman



Evelyn Whitmer



Ashley Wright



Willcox Office



Sierra Vista Office

Our Mission

To engage with people through applied research and education to improve lives, families, communities, the environment, and economies in Arizona and beyond.

Our Vision

To be a vital national leader in creating and applying knowledge to help people build thriving, sustainable lives, communities, and economies.

Our Values

- Integrity – Be honest, respectful, and just.
- Exploration – Be insatiably curious.
- Inclusion – Harness the power of diversity.
- Adaptation – Be open-minded and eager for what’s next.
- Determination – Bear Down!
- Compassion – Choose to care.

Cochise County 4-H Youth Development believes that every child has valuable strengths and has the influence to improve the world around us. In 4-H programming youth complete hands-on projects in areas such as health, science, agriculture, and civic engagement in a positive environment where they receive guidance from adult mentors and are encouraged to take on proactive leadership roles.

4-H programming empowers youth members to become community leaders with confidence, they gain the knowledge to work with others cooperatively, learn to endure challenges, and perseverance to make great things happen.

Through engaging, hands-on experiences, young people **develop specific skills that are important for jobs and careers such as leadership skills, the ability to organize, lead meetings, set and achieve goals, financial awareness, and social skills.** These skills lead to greater physical and emotional wellbeing, and educational and occupational success.

We rely heavily on volunteers to reach more youth, lead educational programs, coordinate activities, and manage clubs and groups.



4-H'ers Excel

- Nearly **4x more** likely to make contributions to their communities.
- About **2x more** likely to be civically active.
- Nearly **2x more** likely to participate in science programs during out-of-school time.
- **2x more** likely and nearly **3x more** likely to take part in science programs compared to girls in other out-of-school time activities.
- Nearly **2x more** likely to make healthier choices.

(Tufts University Study, December 2013)

2021 – BY THE NUMBERS

- ▶ More than **41** Adults served as volunteers for the 4-H Youth Development Programs in Cochise County.
- ▶ **98** Youth enrolled in the 4-H Youth Development Programs in Cochise County.

Contact: Luis Aguilar Chavez
Extension Assistant II
laguilarchavez@arizona.edu

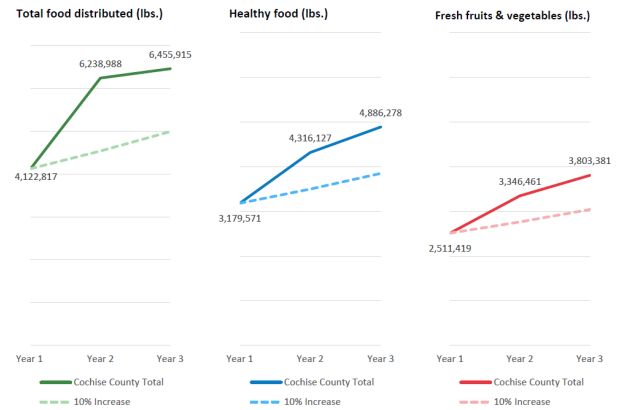
Mekenna Smith
Extension Assistant II
mekennasmith@arizona.edu

Building Healthy Communities (BHC) addresses health issues throughout Cochise County as identified on the Cochise County Community Health Assessment and Improvement Plan so that our county citizens have the options to make the choices that allow them to live a long, healthy life, regardless of their income, education or ethnic background. **Health begins where we live, learn, work, and play.** This 3-year project obtained grant funding from the Legacy Foundation of Southeastern Arizona for a fourth year to improve health outcomes in the county. With the Cooperative Extension as the lead agency, Cochise County Health Department, Cochise County School Superintendent, and the Community Food Bank of Southeastern Arizona have been working collectively to initiate, fortify, and expand the following:

- Healthy Community Committees-Focuses on the social determinants of health through collective impact with policy, systems, and environmental changes to improve the health of our citizens.
- Cochise Leadership Academy-Develops community leadership change agents using the Everyone Leads and UACE Community Training for Leadership curriculum.
- Cultivate a healthy food system-working with local farmers, ranchers, food banks, food pantries/services, and promoting gardens.
- Strengthen School Health Initiatives-with the local schools, School Health Advisory Councils to leverage resources to work together on larger health issues in the schools and their efforts, nutrition education, and school policy initiatives.

Community members and leadership involved in the BHC:

- Developing 501c3 Healthy Community Committees.
- Partnering on transportation grant funding.
- Fortifying and expanding food pantry in schools and the community.
- Are bringing in thousands of pounds of fresh produce to our food deserts.
- Are proving sales opportunities for our local farmers.
- Developed a diaper bank in Southern Arizona.
- Provided garden towers and assisted in gardens in various community settings where people can glean fresh produce.
- Conducted Community Leadership training to emergent leaders in the County.



Source: Community Food Bank of Southern Arizona (2021). [Monthly Distribution data].
Note: Healthy food was operationalized using Feeding America's 'Foods to Encourage' list.

2021 – BY THE NUMBERS

- ▶ Cochise County increased food distribution by **50%** with our partnership of the Community Food Bank of Southern Arizona over the three years of this grant.
- ▶ **8** School food pantries were opened over three years in the rural areas permanently providing food outlets in these remote areas.
- ▶ Hydration Campaign-increased water consumption-**44,155** (20oz) bottles have been filled since installation, water bottles were distributed with a Water Wins Campaign and education.
- ▶ **21** Garden Towers distributed to schools, after school locations, libraries, and health centers where community members can glean fresh produce.

Contact: Evelyn Whitmer
Area Agent, State Collective Impact / Family & Consumer Health Sciences
emarkee@arizona.edu

The Cochise Healthy Communities Initiative works to address and change the health issues throughout Cochise County. The opportunity for health begins in our families, neighborhoods, schools, and jobs where we know that health starts long before illnesses. Through county partnerships, leaders have developed community action with support from the "Healthy Communities" groups in each hub of the county who prioritize and resolve disparities related to health through the Collective Impact Model of community change utilizing the social determinants of health. These "Healthy Communities" groups are also connected to the district's School Health Advisory Councils (SHAC) to leverage resources to work together on larger health issues in the schools. Leadership from all these groups meet at the County Healthy Eating Active Living (HEAL) meeting to discuss county-wide initiatives and impacts. A community health assessment was developed with partner financial backing; with this initiative and through a strategic process across the county (2017) three goal areas have been identified as follows:

1. Mental Health & Substance Abuse-Create policy changes to keep people with mental illness out of jails and prisons. Expand mental health wellness and substance abuse resources for everyone in Cochise County.
2. Good Jobs & Healthy Economy-Promote business growth and job opportunities throughout Cochise County. Promote tourism and cross-border partnerships and business activities for all of Cochise County.
3. Healthy Eating, Diabetes & Obesity also known as Healthy Eating Active Living- **Build and strengthen community options for healthy eating and active living.** Change the cultural expectations about the definition of a good and healthy life. This strategy was funded with a two-million-dollar grant from the Legacy Foundation of Southeast Arizona with the Building Healthy Communities Project



Because of the Cochise Healthy Communities Initiative Program,

- Leadership is making sustainable changes in their communities collectively.
- Leaders are advocating for environmental changes in the community to promote health, mental health/substance abuse to grow a healthy economy.
- Higher leadership in the county is informed and can make county decisions based on the identified needs and perspectives of these committees.

2021 – BY THE NUMBERS

- ▶ Healthy Physical Activities were initiated that include Physical Activity Bingo (developed for COVID-19), Feel Good! Sierra Vista challenge, Screen Awareness Week-encouragement to get out and move and reduce recreational screen time.
- ▶ Distributed **2000+** diapers in the community for children and adults.
- ▶ Emergency Food Donation and distribution with the collaboration of the Building Healthy Communities Project, Arizona Complete Health, Benson Food Pantry, Douglas Food Bank, and Merritt Foods. Distributing turkeys, hams, canned foods, non-perishable foods, school lunch delivery during several months of the COVID-19 Pandemic.
- ▶ Prescription drug cost comparison/medication savings; special physical/mental/nutritional health assistance by local volunteers.

Contact: Evelyn Whitmer
Area Agent, State Collective Impact / Family & Consumer Health Sciences
emarkee@arizona.edu

Nut and fruit trees, and vines contribute over \$200 million to Arizona's economy on an annual basis. The production and acreage of these crops is steadily rising. More than 48,000 acres are planted in tree nuts and vines (~34,000 in pecan, ~12,000 in pistachio, ~2,000 in grape). To date, less than half of the acreage in pecan and pistachio is in the fruit-bearing age. Therefore, the future economic impact is expected to rise.



Cochise County supports the majority of pecan, pistachio, and wine produced in the state of Arizona. In all these perennial crops, fungal or bacterial pathogens, mineral nutrition deficiencies, and salinity toxicity can significantly impact mortality, quality, and yield. One of the most common fungal diseases is the *Phymatotrichum* (a root rot disease indigenous to Southwest soils), affecting most dicot species of plants. In pistachio, *Septoria* leaf spot, and shoot blights, *Phoma* and *Botryosphaeria* have been an issue. *Phoma fungicola* is limited explicitly to Arizona pistachios. The Commercial Horticulture program has collaborated with plant pathology specialists, both nationally and internationally, with multi-state level approaches to research these biotic agents'



development and lifecycles, mineral nutrition treatments, rootstock performance, and best treatment options. There are three American Viticulture Areas (AVA) that are federally recognized in the state of Arizona. The designated AVA's include Sonoita/Elgin, Willcox, and now Verde Valley. This program is directly responsible for the annual UArizona Viticulture Symposium. More than 78% of the state's total grape production is in Cochise County; therefore, this program seeks grant funding, organizes education, and evaluates the grape producers' viticulture needs annually. With warming trend patterns increasing in the winter months, weather extremes also present a risk for commercial crops in Southeast Arizona. The producers and the community must be informed when an extreme weather event may negatively impact the areas. The demand for learning about horticulture and farm business planning has grown in Cochise, with a specific interest in developing produce, fruits, and nuts on small acreage farms, focusing on sustainable agriculture and improving soil health the priority. This program is designed to maintain support and resources to protect Cochise County food producers and their investments, large and small alike.



Because of the Cochise County Commercial Horticulture Program,

- *Plan, implement and evaluate effective outcome-based programs to support identified issues in horticulture crops.*
- *Integrate new science-based knowledge, technologies, decision-support systems, and best management practices for growers and stakeholders.*
- *Optimize efficient, economical, and sustainable production of horticultural crops and strengthen local and regional food supplies.*

2021 – BY THE NUMBERS

- ▶ **5** Experimental research projects were conducted which focused on local horticultural issues.
- ▶ **160** Producers attended the 26th annual Arizona Pecan Growers conference where **12** local and national experts presented on critical topics of the cultivation of pecan.
- ▶ **64%** Of pecan producers evaluated indicated they will adopt a method learned from science.
- ▶ **100** Collaborations with local, state, and national stakeholders were conducted.
- ▶ Over **\$1.1** million obtained in grants and in-kind gifts since 2015 for program support. Of this, over **\$400,000** directed to this program in Cochise County.
- ▶ **178** Constituents subscribe for communication between a diversity of producers in Southeastern Arizona, the National Weather Service, and Extension scientists to be alerted of weather risks.
- ▶ Due to the COVID-19 pandemic and mask mandates, some in-person events supported by this program were postponed in hopes to resume in 2022, including the annual UArizona Viticulture Symposium, Pistachio Growers meeting, Southeast Arizona Ag Day, and Pecan Field Day.

Contact: Joshua Sherman
Area Agent, Commercial Horticulture
jdsherman@arizona.edu

Commercial Beef Extension programs equip cattle producers to make informed decisions regarding herd health and management, cattle nutrition, genetics, stock selection, food, and product safety. The importance of economics of profitability, sustainability, the well-being of animals, and public perception of the beef industry. Commercial beef production in Cochise County is primarily composed of cow-calf operations (ranches) that utilize a variety of federal, state, and private lands for grazing cattle, several feed yards, and a livestock auction yard. There are approximately 335 cattle operations in the county raising 57,000 head of cattle. As a whole, the **Cochise County beef industry contributes \$34.5 million in sales to the economy**. In addition to the economic contributions, ranches maintain working landscapes and healthy rangelands that also benefit wildlife and public recreation.

Because of the Cochise County Commercial Livestock Program,

- *Ranchers are better equipped to make decisions that improve herd health, develop cattle that match their forage resources, increase pounds of healthy calves produced, and enhance the value of their livestock.*
- *Properly managed livestock grazing supports healthy rangelands and wildlife habitat.*
- *More operations utilizing and benefit from implementing low-stress animal handling and other consumer-driven guidelines from the Beef Quality Assurance program.*



Following CDC, Cooperative Extension, and University of Arizona COVID-19 guidelines, all programming went virtual in March of 2020. Rural internet access made virtual programming a challenge, but several webinars focusing on important emerging topics were well attended and some in person programming was possible at the end of 2021.

2021 – BY THE NUMBERS

- ▶ **245** Producers attended the 2021 Virtual Range Livestock Nutrition Workshops, which covered topics related to beef, rangeland management, and small ruminant production.
- ▶ The **1st** Annual Southeastern Arizona Artificial Insemination Clinic was held in Green Valley. **14** Beef producers attended this three-day workshop to learn how to take advantage of AI on their operations.
- ▶ **10** Articles were published in the Arizona Cattlelog, official publication of the ACGA
- ▶ **4** Issues of “Arizona Range and Livestock News” were distributed to **464** readers per issue across Southeastern Arizona.
- ▶ **458** Equine owners tuned in to **8** webinars on equine health topics when the Southern Arizona Equine Health Symposium was held virtually in January 2021.

Contact: Ashley Wright
Area Agent, Livestock
awright134@arizona.edu

Production of field crops in the Cochise County area is very diverse including but not limited to corn (silage and grain), small grains (wheat and barley), dry beans (pinto and other assorted types), cotton, and grain sorghum. Rising production costs associated with seed, fertilizer, water, and energy are making it difficult for growers to remain profitable at current commodity price levels. Recent technological advances such as transgenics, innovative pest control chemistries, improved varieties and hybrids, and site-specific management technologies, to name a few, have the potential to help growers regain competitiveness in a global production marketplace. Implementation of these new technological advances can be daunting for the grower. Our responsibility in Cooperative Extension and Agricultural Experiment Station is to develop sound recommendations through research and demonstration of how best to implement these new advances in an economically and agronomically sustainable fashion.

Response

During the calendar year 2021 several research projects were conducted to continue to refine current recommendations and to evaluate several new technologies and their application to production systems in the Cochise County area. These projects included corn hybrid evaluations with several hybrids containing novel genetics providing new options for control of corn earworm, evaluation of currently available cotton cultivars with a variety of transgenic traits, and evaluation of several winter forage varieties of wheat and triticale. An additional trial evaluating new and commercially available nematicides used for control of Rootknot nematode (RKN) in dry beans (pinto) was conducted. Results from 2021 projects along with summaries of previous years' work was presented at several grower field days and meetings during 2021 and early 2022. These meetings included a cotton and corn field day (September and November 2021 respectively), Southeastern Arizona Farm and Ranch Trade Show (February 2022) along with numerous individual farm visits to clientele across the southeast region of Arizona.



2021 – BY THE NUMBERS

- ▶ 7 Individual field trials were conducted in Cochise County focusing on local production agricultural needs.
- ▶ Results from these and other trials were disseminated to local stakeholders through 3 separate field days conducted in the southeastern Arizona region.
- ▶ New varieties and hybrids are adopted by local producers based upon results generated from variety and hybrid testing programs.
- ▶ Over 30 field site visits were conducted with local producers to identify and evaluate issues and solutions to agricultural production problems
- ▶ Over \$150,000 annually in grants and gifts is brought in to support this research and education program. This funding comes from commodity groups, agricultural industry, and from federal agencies.

Contact: Randy Norton
Area Agent, Commercial Production Agriculture
rnorton@arizona.edu

Master Gardeners (MG) are a vital part of consumer horticulture programming and education provided to our community by the Cooperative Extension. Initially conceived at Washington State University in 1973, and arriving in Arizona in 1983, the Extension Master Gardeners program attendees are trained volunteers who successfully complete a 16-week class series followed by 50 community volunteer hours to receive certification. They **support the UArizona Cooperative Extension by providing science-based information on environmentally responsible gardening and landscaping practices and skills** to the public. This is possible due to an educational demonstration garden (Discovery Gardens at UArizona Sierra Vista), monthly workshops (the MG Workshops series), by answering countless questions from the public which are received in the Master Gardener office and at Farmers' Markets Plant Clinics and providing one-on-one consultations or demonstrations. Today, the need for these volunteers continues to grow between the uniqueness of our local desert-adapted plant species, the increasing number of new arrivals, and interest and demand for gardening-related advice.



Because of the Cochise County Master Gardener Program,

- *Improvement of the natural environment through public education which leads to the wise use of natural resources and efficient gardening practices and skills.*
- *Increased residents' access to UA Cooperative Extension through their broad and continuous public presence through workshops offered, public questions answered, and referrals to research-based information.*
- *Hands on education is provided to community members with the latest horticultural information from the University of Arizona, about environmentally friendly landscapes which lead to wise water use, reduced pesticide use, and successful desert landscapes.*



2021 – BY THE NUMBERS

- ▶ **1,705** Volunteer Hours
- ▶ **14** Students completed the Master Gardener certified training course.
- ▶ **128** Community members attended Master Gardener workshops on container vegetable gardening, growing bulbs, and growing and storing herbs for culinary use.
- ▶ More than **150** emails and **280** phone calls were answered regarding landscape/gardening inquiries.
- ▶ **10** Community events offered continuing education.
- ▶ **11** Published articles in popular press and Extension journal.
- ▶ Estimated **2,100** students participated in field trips through the Discovery Gardens program.
- ▶ **185** Community members attended live Zoom continuing education workshops provided monthly.

Contact: Joshua Sherman
 Area Agent, Commercial Horticulture Agent
 jdsherman@arizona.edu

Jan Groth
 Extension Professional II, Horticulture
 jangroth@arizona.edu

Financial literacy is an area that addresses all social and economical status subgroups, age groups (children and adults), differing cultures, and in rural, urban, and tribal settings. Through a partnership with the Norton School's Take Charge America Institute for Consumer Financial Education and Research, the Extension Financial Literacy Working Group has grown to include 30 members representing Extension offices in 13 counties and all five Federally Recognized Tribal Extension Programs. The COVID-19 Pandemic forced a shift from in-person to online program delivery, which, after making adjustments in 2020, were able to reach program participants without the limitations of travel. This program is a multi-county program. **78% of participants reported specific "spending leaks" over the course of one year averaging \$3,395 annually or \$65 per week.**

Because of the Cochise County Financial Literacy Program,

- *Participants report increased competencies in financial literacy skills and learned skills to shop on a budget.*
- *Participants increased awareness of personal values and choices pertaining to finances.*
- *Participants increased intentions to make behavioral changes pertaining to personal financial practices.*



2021 – BY THE NUMBERS

- ▶ **97%** Of respondents reported that they will think differently about how they manage their money
- ▶ **92%** Of respondents reported that they could have more money if they made different spending choices
- ▶ **35%** Of participants intended to pay off bills
- ▶ **43%** Of participants have started savings
- ▶ **23%** Of participants will now concentrate on purchasing only items that are needed.
- ▶ **26%** Have developed a spending/savings plan

Contact: Evelyn Whitmer
Area Agent, State Collective Impact / Family & Consumer Health Sciences
emarkee@arizona.edu

Salem Whalen
Community Outreach Assistant II
salemwhalen@arizona.edu

As we continue to take on the changes that COVID-19 brought, the Expanded Food and Nutrition Program (EFNEP) and SNAP-ED/AZ Health Zone were able to step up programming to meet the needs of the communities in Cochise County. By utilizing online tools to adjust programming, new audiences had access to nutrition and physical education programming, and previous program participants were able to stay connected virtually. Even amidst a pandemic, the nutrition and physical activity education programs offered through the Cochise County Cooperative Extension were able **to promote healthy nutrition, physically active lifestyles, and systems change that lead to healthier individuals and families in our communities.**

Our SNAP-Ed (Supplemental Nutrition Assistance Program-Education), or AZ Health Zone, serves community sites, coalitions, schools, families, and individuals that meet SNAP eligibility.

The USDA Expanded Food and Nutrition Education Program (EFNEP) is designed to assist limited-resource audiences to acquire knowledge, skills, attitudes, and to change behaviors necessary for nutritionally sound diets, and to contribute to participant’s development and the improvement of the total family diet and nutritional well-being.

EFNEP used "Dining with Diabetes, Mediterranean Cuisine, Eating Smart, Being Active for adults, Choose My Plate, and Fight BAC for youth at two community centers, and three senior centers in Cochise County, as well as the outreach program for the hospital, Canyon Vista to present adult programing. EFNEP also worked with Willcox, Coronado, and Bisbee schools, as well as with the Boys and Girls Club of Bisbee and the Kids WORLD afterschool program in Sierra Vista.

SNAP-ED/AZ Health Zone partnered with statewide organizations and local farmers markets to purchase and deliver locally grown foods to isolated seniors. 50 Food bags were provided to 25 low-income seniors, 5 volunteers, 5 local vendors, \$750 spent on local produce.

Because of the Cochise County Nutrition Education Program,

- *People reduced food waste through food preservation.*
- *Learned skills to shop on a budget.*
- *Have food safety skills to keep their families safe.*
- *Understand new ways to prepare food.*
- *Communities have more access to healthy and affordable foods.*
- *People live, work, and learn in environments with increased healthy lifestyle opportunities.*



2021 – BY THE NUMBERS

- ▶ 4 Sites developed classroom policies, affecting **120** children, by increasing family engagement, enhancing physical activity, and increasing food security.
- ▶ Marketing, promotion, and education of using benefits at the farmers market for families on SNAP and WIC contributed to the **\$8,600,000** of fruits and vegetables provided to mothers, children, and babies statewide (FY18 ADHS Annual Report).
- ▶ **3** Elementary schools were positively affected by a Farm to School program initiated and supported by SNAP-Ed, increased fresh, local, and healthy foods for over **900** youth
- ▶ SNAP-Ed programming reached **2,779** individuals through Food Systems direct education, professional development, and events.
- ▶ SNAP-Ed Early Childhood programming reached **409** adults and **218** youth through direct education, professional development, and events. Total participants directly reached is **627**.
- ▶ SNAP-Ed School Health programming reached **339** adults and **151** youth through direct education, professional development, and events. Total participants directly reached is **490**.

Contact: Evelyn Whitmer
 Area Agent, State Collective Impact / Family & Consumer Health Sciences
 emarkee@arizona.edu

The Positive Discipline program is a research-based curriculum by Jane Nelson designed to teach young people to become responsible, respectful, and resourceful members of their communities. Positive discipline teaches the importance of social and life skills. This program is a multi-county effort and program information is cumulative.

In Cochise County only 66% of families receive prenatal care where 3 out of 10 Latina pregnant people in the border counties receive inadequate or no prenatal care. In Arizona, 13.7% of birthing parents reported having postpartum depression of those 32% were under the age of 19 and 35% lived in the rural areas. The Adverse Childhood Experiences (ACEs) in Arizona has increased over the past two years. The highest ACE among children was divorce or separated parents (26%) and children that lacked the basics like food or housing was at 12% (ADHS Health Assessment, 2021). According to John Geldhof, behavioral and health sciences-Oregon University, all parents benefit from evidence-based parenting. Parents who have attended classes and learned effective discipline and parenting techniques report having children with higher grades, fewer behavior problems, less substance abuse issues, better mental health and greater social competence (Geldhof, 2016).

Because of the Cochise County Parenting Program,

- *Parents have improved child rearing attitudes and behaviors.*
- *Parents have improved their parental effectiveness.*
- *Parents are learning skills to be more self-sufficient, mentally stable, healthy and to positively contribute to society.*



2021 – BY THE NUMBERS

- ▶ There was a **20%** increase in the parental ability to see things from their child's perspective and the child's needs.
- ▶ There has been a **13%** decrease of the use of spanking as a discipline tool.
- ▶ There was a **12%** increase in assigning of age-appropriate roles to children.
- ▶ **51%** Of parents have reduced yelling at their child(ren).
- ▶ **47%** Of parents have reduced using bribery or rewards to get children to do what they want to do.
- ▶ **77%** Have increased responding to their child(ren) with kindness and firmness at the same time.

Contact: Evelyn Whitmer
 Area Agent, State Collective Impact / Family & Consumer Health Sciences
 emarkee@arizona.edu

Salem Whalen
 Community Outreach Assistant II
 salemwhalen@arizona.edu

Rangelands are important to society for the goods and services they produce and for the ecological services they provide. There is a need to balance livestock grazing with natural resources. This is especially important as livestock producers have been reducing and managing herds as a result of drought conditions for the last two decades. Workshops are held that teach various subjects relating to rangeland management, monitoring, livestock nutrition, and other identified needs requested by clientele. Work is done collaboratively at both the local and state levels in partnership with ranchers, US Forest Service (USFS), and Natural Resources Conservation Service. Ranches are monitored for long-term soil and vegetation trends.

Because of the Cochise County Rangeland Management Program,

- *Ranchers and land management agency personnel have a better understanding of rangeland management and monitoring.*
- *Long-term rangeland monitoring data is available for USFS permittees and private/state land lessees to use in management decisions, and for federal employees to use in resource analysis.*
- *Healthy rangelands support livestock production, wildlife habitat, and other natural resource benefits for society.*



2021 – BY THE NUMBERS

- ▶ **62** Sites on **15** USFS allotments were monitored. An additional **11** sites on **3** private/state ranches were monitored. Monitoring reports were prepared for each allotment and given to agencies and ranchers.
- ▶ An additional **\$60,000** was obtained in a grant to support the monitoring program.
- ▶ **6** Field trials continued to be conducted to look at the cost-effectiveness of mesquite control using herbicides and mechanical treatments.

Contact: Kim McReynolds
Area Agent, Natural Resources
kimm@arizona.edu

Water availability is one of the most important natural resources and economic issues in Cochise County. The San Pedro River is one of the last large, undammed rivers in the Southwest and supports a rare desert riparian ecosystem. The San Pedro Riparian National Conservation Area (SPRNCA) is the nation’s first Riparian National Conservation Area. Spanning 43 miles along the river and managed by the federal Bureau of Land Management (BLM), the SPRNCA is near the City of Sierra Vista and the U.S. Army post Fort Huachuca. The groundwater that Fort Huachuca and local communities use for homes, businesses, and agriculture is the same water source that keeps the San Pedro River flowing and sustains the riparian area. (Cochise Conservation and Recharge Network) The University of Arizona, Cochise County Cooperative Extension’s **Water Wise Program is a key educational water conservation program in the county by providing solutions that empower citizens to conserve groundwater and helps communities and the economy remain strong.**



Here’s how Water Wise helps:

- *With educational events teaching citizens about drip irrigation, rainwater systems, low water landscape plants and design, good watering practices, septic care, annual Rainwater and Off-the-Grid Tours when in-person events are possible.*
- *With specialized on-site home and business visits providing specific conservation actions and follow-up.*
- *By partnering with Master Gardeners, municipalities, businesses, non-profits, citizens, and schools on conservation projects.*
- *By providing water conservation lessons to youth throughout Cochise County in school classrooms and special presentations for additional youth programs.*
- *Providing water conservation resources through website <https://waterwise.arizona.edu/> and social media channels.*



The Cooperative Extension continued to adapt to changing COVID-19 guidelines with almost all virtual programming. As the pandemic continued, so did our social media and digital presence, and all the webinars were conducted via recorded Zoom sessions, which were then lightly edited and uploaded to our YouTube channel.

2021 – BY THE NUMBERS

- ▶ Water Wise Community Outreach educators had **486** direct adult contacts
- ▶ Water Wise Youth educators had **441** direct youth contacts (schools prohibited visitors during beginning of year due to COVID) over **45** instructional hours.
- ▶ Water Wise increased its Facebook reach **7.7%** over the previous year, and increased Instagram reach by **1,400%** over previous year.
- ▶ Water Wise continued to see traffic on the Water Wise Program YouTube Channel, uploading **14** videos of talks, with the top ranked video receiving **331** views.
- ▶ **5** In-person events, **11** site visits/phone consults, and **15** webinar presentations: **74%** of participants rated workshops/webinars as highly valuable.
- ▶ Approximately **52,960** gallons of water will be saved per year through two rainwater and toilet replacement grants from the Upper San Pedro Partnership Retail Committee grants in 2021, administered by Water Wise

Contact: Ashley Wright
Area Agent, Livestock
awright134@arizona.edu

Alex Kosmider
Community Outreach Professional I
alexkosmider@arizona.edu

Cochise County Cooperative Extension (Main Office)
450 South Haskell Ave, Suite A
Willcox, Arizona 85643
Phone: (520)384-3594
Fax: (520)384-3681

Cochise County Cooperative Extension (Satellite Office)
1140 North Colombo Ave
Sierra Vista, Arizona 85635
Phone: (520)458-8278 extension 2141
Fax: (520)458-5823

Additional Location by Appointment Only
66 Brewery Avenue
Bisbee Arizona 85603
(520)458-8278 x 2139



Make a Donation

We are pleased to offer a variety of ways that you can make your gift to Cooperative Extension and to the Cochise County office. If you have questions or would like to make your gift by telephone, please contact the CALS Development Office at 520-621-7190.

There are a variety of ways to give, including:

Online Giving - All tax-deductible charitable donations are processed through the University of Arizona Foundation. Donations can be made at <https://extension.arizona.edu/give>. Be sure to indicate which program and/or county office should be credited with your donation. You can pick the county and then later in the process have the opportunity to specify what program in the comments section.

Mail – You can give by check. Please make your check payable to: "University of Arizona Foundation." Please note which county and which program, if applicable, you would like your donation to support.

Gifts may be mailed to:
Arizona Cooperative Extension
301 Forbes Building
PO Box 210036
Tucson, Arizona 85721-0036

Estate Gifts, Gifts of Stock, Gifts of Insurance, or other Planned Gifts - If you would like to include Cooperative Extension, or a specific Extension program, in your estate plans, or if you would like information on the benefits and ease of giving gifts of stock, insurance, or other types of planned gifts, please call 520-621-7883 for more information.

Charitable Gift Annuities - Charitable Gift Annuities are an important way to support Arizona Cooperative Extension, particularly county-level Extension programs, while receiving life-long income and significant tax benefits. Please call 520-621-7883 for more information.

Issued in furtherance of Cooperative Extension work, acts of May 8 and June 30, 1914, in cooperation with the U.S. Department of Agriculture, Edward C. Martin, Interim Director of Cooperative Extension, Division of Agriculture, Life and Veterinary Sciences, and Cooperative Extension, 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.

The University of Arizona, U.S. Department of Agriculture, and Cochise County Cooperating.