



Extension



Quarterly Report

To: Board of County Commissioners

**Your front door
to research,
information,
and expertise of
your land-grant
university.**

This quarterly report summarizes major educational programming in the second quarter of 2016 from Southeast Area Extension. The mission of CSU Extension is to provide information and education, and encourage the application of research-based knowledge in response to local, state, and national issues affecting individuals, youth, families, agricultural enterprises, and communities of Colorado.

We are grateful for the continued support of the counties. If you have any questions, suggestions or would like more specific information about these or other Extension programs, feel free to meet with any member of our staff.

New 4-H Agent for Crowley and Otero Counties

Marlena Griesse is very excited to be the 4-H Agent for Crowley and Otero Counties and am looking forward to meeting lots of new people! Since graduating from the University of Wyoming in 2010 I have lived on my family's ranch in Northwestern Nebraska. For the last 5 years, I had worked in the Nebraska Extension Sioux County Office as the Office Manager and later as the 4-H Assistant.

I love the diversity of programming that 4-H has to offer ALL youth! My priority is offering a wide range of programs that utilize STEAM (science, technology, engineering, art, and math) and career readiness concepts and also recognize the tradition of 4-H.

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Agriculture and Natural Resources

Welcome Kelly Roesch - New Southeast Area Agronomist

One year ago, in May 2015, I received the news that the farmland I had been managing for the past twelve years was under contract to be sold and my position would be ending in December of that year. It was a time of uncertainty for me and my family; I wasn't sure what the future was going to hold. Prior to my farm management job, I spent seven years as an agriculture lender. As my job search progressed, I was hoping to find a career opportunity that would keep me closely tied to production agriculture. I was excited to learn that Colorado State University Extension had an Agronomy position open, based less than 20 miles from my life-long home, and was pleased when I was offered the position a few months later.

I still consider my student years at CSU as some of the best years of my life and am a die-hard Rams fan. While at CSU, I obtained a Bachelor of Science Degree in Agriculture Education in 1995, a Master of Agriculture Degree in 1996 and best of all, met and married my wife. Having the opportunity to work for my Alma Mater, in conjunction with Southeast Colorado farmers, feels like the perfect fit for my future.

I live west of McClave with my wife and two teenage sons. The irrigated farm that we live on has been owned by my family for nearly 100 years. We have a small Angus cow/calf operation and have enjoyed traveling throughout the Caribbean and Central America when we can fit it into our busy schedule.

The learning curve has been steep, but I have thoroughly enjoyed my first two months as the Southeast Area Agronomist and hope that I can be a useful resource to area producers.



Focus on Climate Smart Agriculture

My fourth day on the job as the Southeast Area Agronomy Agent found me traveling with fellow agent Bruce Fickenscher to the Colorado State University Lory Center for a daylong in-depth conversation about climate impacts on agriculture.

Although I am new to this position, I have lived nearly my entire life in Southeast Colora-

do and have experienced first-hand the fluctuating climate conditions and resulting effects on area producers, from the wet 1990's to the seemingly never-ending drought that began in 2002. As a result of drought conditions in 2013, I experienced the pain of being forced to sell half of the cattle herd I had been working to establish for 18 years. Recently, many areas have benefitted from much needed rainfall and above average snowpack in 2015 and 2016 and the severe drought conditions have eased significantly. However, long-term weather trends predict drier and warmer than normal conditions over the next several years.

The causes of climate change are, and will continue to be, a controversial subject. Setting aside the debate of climate change causes, it is important to acknowledge that in the future Southeast Colorado farmers and ranchers will almost certainly face climate-related challenges and possibly opportunities. Colorado's most complete and consistently monitored weather stations have experienced about a 2°F upward trend in mean annual temperature over the last 30 years (Figure1).

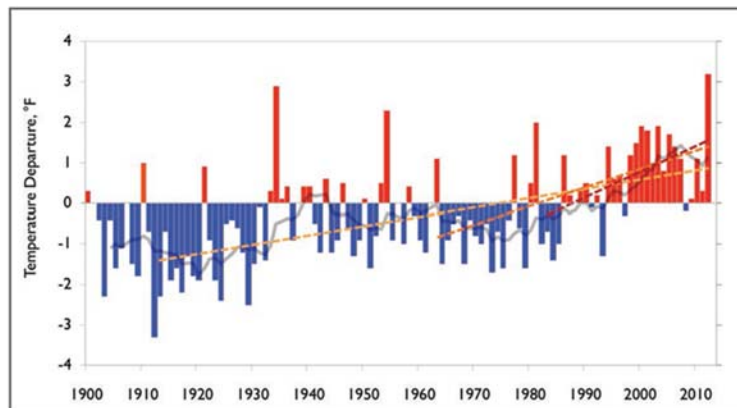


Figure 1. Annually-averaged statewide temperature for the state of Colorado, in °F, shows 100-year, 50-year, and 30-year trends in light-orange, orange, and red lines, all of which are statistically significant. The gray line shows the 10-year running average. Source: Lukas et al., 2014, Climate Change in Colorado: A Synthesis to Support Water Resources Management and Adaptation

Results from this warming trend could, in some years, bring benefits including: a longer growing season, earlier green-up of forage for livestock, and milder winters. However, challenges from this trend likely include: warmer temperature throughout the growing season, increased pest and disease issues, variation in snowmelt timing, and increased drought intensity.

As Southeast Colorado farmers and ranchers, you have no doubt been faced with management decisions to most effectively adapt to current climate conditions. Often the producer's primary concern is how to keep their operation economically viable in the present year. Colorado State University is committed to understanding the effects of climate change on agriculture and providing resources to Colorado farmers and ranchers to aide them in keeping their operations sustainable and profitable. Additional information on Climate Smart Agriculture can be found by visiting the CSU Extension web page at <http://extension.colostate.edu/> and clicking the "Read More" button under Climate Smart Agriculture.



2016 Colorado Wheat Field Days

Colorado Wheat Field Days kicked off in the Southeast area on June 9th. The first stop was the Plainsman Research Center in Walsh. CSU Extension Agronomist, Dr. Jerry Johnson gave a review of the results from the 2015 testing program followed by a walk-through of the 2016 variety trials with CSU Wheat Breeder Dr. Scott Haley. Dr. Haley gave a brief overview of each variety in the trial and emphasized that the principal goal of his breeding program is producer profitability, achieved by focusing on yield improvement, quality improvement and disease and insect resistance. He noted that the Hatcher variety has shown to have a 10% yield increase over the baseline varieties of Prairie Red and Akron and added that the Byrd variety has shown a 10% yield increase over Hatcher. CSU's newest variety Avery will likely out yield Byrd in this year's variety test. Dr. Haley has developed an extensive database that farmers can utilize to view side by side variety comparisons. The database can be accessed at: <http://ramwheatdb.com/database.php>

The same program was presented at Stulp Farms south of Lamar in the early afternoon and at Burl Scherler's farm north of Brandon in the early evening. A video of Dr. Haley's presentation on the wheat varieties can be viewed at: <http://livestream.com/BarnMedia/events/5597638>

And Crowley County Begins to Bloom!!!

Since being de-watered in the mid-1980s, landowners in Crowley County have struggled to find some way to re-vegetate the de-watered lands with something other than noxious weeds ~ kochia and Russian thistle. For many years, with limited success, native perennial grasses were planted to begin to cover the ground, decrease erosion, and provide an economic return to landowners. Then in 2008, a devastating fire burnt many of the acres, affectively sterilizing much of the soil again because of the heat created. Add to that the continued impact of drought and the outlook was dim ~ at best.

For the past couple of years, we have tried to find annual plant species that could be planted on these acres. These species are usually cheaper in price to purchase than perennial species and grow at a faster rate to cover the ground, and still provide some grazing potential as an economic benefit to landowners. Through soil test, it was found that much of this land is very alkaline and has little, if any, organic matter ~ both are a detriment to the establishment of native, perennial species. We also determined that one of the contributing factors to the lack of water intake by the soil is a hard pan layer three to four inches under the soil surface. A couple of fields have been ripped down to a minimum of twelve



Standing water on contour ripped de-watered field



Runoff from unripped field adjacent to the ripped field

inches on the field contour. When we do get rain, these fields have been not only allowing more moisture into the subsoil, but the ripper lines have been holding water from running off the fields, allowing more time for soil absorption.

Colorado Section of the Society of Range Management Tour

June 16th and 17th, Bruce Fickenschler, CSU Extension/Southeast Area Range and Live-stock agent traveled to the San Luis Valley for a ranch tour sponsored by the Colorado Sec-tion of the Society of Range Management. The first day of the tour was at the historic Zapa-ta Ranch, currently owned by the Nature Conservancy. A pasture, close to the headquar-ters, was previously converted to a none hole golf course. Because of drought and other financial considerations, the current management has been working to convert the land back to pasture using high density grazing practices to control noxious weeds and spread grass species of plants. The ranch uses short, medium, and long-term rangeland monitoring techniques such as photo points, range cages, and transect lines to record and verify the condition of the various pastures from year to year. One very large pasture is dedicated to housing the buffalo (bison) herd of a couple of thousand animals. As well as a tour of the facilities used to work the buffalo, we also had a good discussion about animal handling ~ the differences and similarities with other domestic livestock ~ and the effect on animal performance and end product.

The second day tour was at the Off Ranches on the west side of the San Luis Valley. The Off's are using short duration, high intensity grazing to control noxious weeds such as wild iris and white top. An added result of this management style has been a decrease in the amount of harvested forage that needs to be fed to the cow herd over the winter months. The Off Ranches are a diversified cropping and livestock operation.



Planted cover crop, com-pared an area not planted.



Cover crop cocktail mix - peas, radishes, turnips, rye, canola,



Buffalo herd at the Zapata Ranch



Ag Fest

The week of April 25 - March 3 found CSU Extension Agents from the Peaks and Plains Region, and a representative from the Colorado Department of Agriculture, presenting at the 7th Annual AgFest Program. Over 1800 students learned about agriculture related topics by attending ten stations. Station topics included Bees and Pollination, Microbes and Bacteria, Butter Making, Embryology, Machines, Global Positioning Systems, Plant Biotechnology, Groundwater Quality, Range Plants, and Colorado Agriculture. All stations met the Colorado Standards for Education in relation to Science, Technology, Engineering and Mathematics (STEM). AgFest was held in Lamar, Trinidad, and La Junta. Schools participating in the Southeast Area included Manzanola, Crowley County, Cheraw, Cheyenne Wells, La Junta, Swink, Fowler, Rocky Ford, Pioneer Christian, Las Animas, Lamar, Wiley, Holly, Alta Vista, Park View, McClave, Springfield, and Eads. Southeast Area agents presenting at the 2016 AgFest Program were Amy Kelley, Brittany Bowman, Lacey Mann, and Mallory Sikes.

4-H Horse Project Levels Training

The Southeast Area hosted a 4-H Horse Project Levels Training on May 28th. Nine individuals attended from the Southeast Colorado area as well as from Pueblo, Elbert, El Paso, and Lincoln Counties. Diana Quintana, from the State 4-H Horse Committee, conducted classroom instruction and arena demonstrations on the various Horse Levels -- Western Riding 1, 2, 3, 4 and Ranch Horse 1, 2, 3, 4. The Levels program is used to demonstrate an increasing level of knowledge and proficiency of 4-H members as they advance in the program. Raters must recertify every five years. A huge thank you goes to Wil Stites, Savannah Stites, and Lisa Jordan, for demonstrating and certifying (written and riding tests) in the Levels program. Riders must be certified Level 2 to participate in the Colorado State Fair Horse Shows. Also, thank you to the Stites family for supplying cattle for the Ranch Horse portion of the program. Members enrolled in the 4-H Horse program are encouraged to proceed through the Levels. For more information or to begin the process, please contact your local CSU Extension office. Study guides and other information can be obtained on the state 4-H website at: http://www.colorado4h.org/project_resources/clover_guide/psg-livestock/horse/horse-levelstesting.php

4-H Creative Cooks and Cake Decorating Contests

District VI 4-H members showed off their culinary and cake decorating skills at the annual 4-H Creative Cooks and Cake Decorating Contests held in McClave. As the Cake Decorators smoothed frosting and created artistic designs, the Creative Cooks contestants told the judge about the nutrition and food safety aspects of their menus.

Cake Decorators were required to decorate a cake using the skills learned in their unit within a set time. Creative Cooks contestants planned a nutritious menu and the table setting for that menu, then prepared one food from the menu. While the contests helped members learn project skills, they also learned public speaking and organization skills.

Eight 4-H members from Baca, Bent, Kiowa, Otero and Prowers County competed. While the numbers were small, the quality was high. All eight participants qualified for state competition to be held during the Colorado State Fair.

State 4-H Conference

Eighteen area youth, one adult coach, and three Extension agents made the annual trek to the Colorado State 4-H Conference. Youth competed in horse judging, consumer bowl, livestock quiz bowl, and livestock judging. The livestock judging team placed third and qualified to compete at the 2017 Western National Round-Up held during the National Western Stock Show. The consumer bowl team placed third and dramatically improved from the previous year. District VI president Kylee Holden, completed her year of service and Lexi Mayo is anxious to kick off her presidential year.

Pikes Peak or Bust!

The Southeast Area planned their first area field trip. Sixteen attendees from 6 of the SEA counties traveled to Pikes Peak to ride the cog railway to the summit on Wednesday, June 15th. Adventurers enjoyed a picnic sack lunch in beautiful Manitou Springs, Colorado before boarding the Cog Railway. The train ride took approximately 3 hours to climb to the top of Pikes Peak. Along the way, ticket holders listened to a wonderful Colorado history lesson, witnessed some neat wildlife, and experienced quite a temperature change. At boarding temperatures reached the 90's while temperatures on the summit struggled to top 40! All who attended ended the day with an excellent BBQ at Big Bear Regional Park where a Jazz Festival was underway. Stay tuned for what the next SEA adventure field trip will have in store!

4-H





Caballeros & Clovers 4-H Camp

4-H members gathered June 2nd and 3rd for the fourth annual area 4-H camp, “Caballeros and Clovers”. The Southeast Area along with Las Animas County, Huerfano County, and the 4-H military program participated. The camp was held on the Colorado State Fairgrounds in Pueblo taking advantage of their newly renovated dorms. The theme for this year’s camp was “Going for the Gold”, in honor of the upcoming 2016 Summer Olympic Games.

The main focus of the camp has been to educate youth about several of the ten principles of cowboy ethics, as found in James P. Owen’s book “Cowboy Ethics”. The principles were reinforced with fun activities that allowed the youth to see the principles at work and tied them back to the Olympic theme.



Campers also attended various workshops that highlighted different aspects of the Olympics, teamwork, and cowboy ethics. The workshops offered this year included looking at food as fuel using a basis of healthy lifestyles sportsmanship, a great egg drop STEM activity, and a triathlon focused on teamwork. As an added bonus campers were treated to a visit from the United States Army World Class Athlete Program. Campers got to meet many military personnel headed to Rio this summer for the 2016 Summer Olympics.

Athletes included boxers, wrestlers, and medics. Olympians taught members the basics of boxing, wrestling, and concluded with a fun military style obstacle course. The camp concluded with its own version of the Olympics complete with water games, closing ceremonies, medals, and snow cones.

Eighty-one campers ranging in age from eight to thirteen, seven teen counselors, and sixteen adult chaperones and agents attended the camp. Southeast Area counties participating were Baca, Cheyenne, Kiowa, Otero and Prowers.



Baca County Offers New Programming

With the return of full time support staff in Baca County Extension, lots of new, fun, and exciting programming is taking place in Baca County.

For the first time, Baca County Extension offered a multi-event cake decorating series open to all 4-H members. Nine youth ranging in ages from 8-12 took advantage of this great opportunity. In the time frame of three days spread across the month of June, decorators learned the ins and outs of cake decorating and baking. For those enrolled in the cake decorating project, they also were able to complete several of their practice cakes in preparation

for county fair and completion of their projects. The series ended with lots of great take home tips and a fun cake decorating contest where all contestants took home some useful goodies for the cake decorating kits. Due to the success of the event this will be planned as an annual event. Also as a result of the series, an adult learning opportunity about cake decorating has been requested and is in the works for next year as well. The office hopes this is the first of many activities aimed at steering 4-H programming at a county and club level back to project based activities and teaching life skills.

Baca County 4-H also has started offering the first of many county Cloverbud activities. Cloverbuds are 4-H's youngest members (ages 5-7). For the first event, 11 members enjoyed learning about pollinators. Youth explored birds, bees, and bats through a series of fun activities, snacks, crafts, and games. Baca County Cloverbud activities will be scheduled quarterly moving forward with an end of the year all day camp. This year's Dr. Suess themed camp is to be held July 15th.

In addition to new programming, Baca County Extension has also brought back several programs that have been missing for a few years. Through new family orientation, showmanship clinics, record book clinics, and general project work days, over 80 youth have participated in revamped programs Baca County offered in the months of May and June. More new exciting programs are to come.

Robotics Class

A robotics class was held in Cheyenne Wells on Friday, April 8th as part of an ongoing series of STEM related classes. The class was taught by Amy Kelley, Cheyenne County Extension Agent. Sixteen youth attended the camp. Of those, six were currently enrolled in Cheyenne County 4-H and the remaining ten were youth from the community. Class attendees received an overview of 4-H robotics, learned about the parts of the Lego EV3 robotics, had the opportunity to program their robot, and lastly they attempted a robotics challenge. 100% of youth that attended expressed an increase in robotics knowledge. Additional classes are going to be held in hopes of encouraging 4-H members to participate in the state robotics contest.

Embryology

Over the course of five weeks an embryology program was conducted at the Cheyenne Wells Elementary School for 2nd graders. Cheyenne County Extension Agent, Amy Kelley, spent each week instructing the class on various embryology topics, along with successfully incubating twelve chicken eggs. Both the students and teacher expressed an increase in knowledge about embryology, especially the science behind it, and an increased knowledge about poultry. Plans are underway to do another embryology series in the 2nd grade next year.





4-H 101 Meeting

A 4-H 101 meeting for new families was held in May in Cheyenne County. Attendees were able to meet fellow newcomers, learn about the basics of 4-H, go over important information for fair, and most importantly, get their questions answered. This is the third year that Amy Kelley, Cheyenne County Extension Agent, has offered this program and it continually receives high remarks for helping new families prepare.

Gardening Project Workday

The last project workday for the school year was held in Cheyenne County on Friday, April 22nd. This workday focused on the gardening project. Five youth attended the workday. They learned about parts of plants, dissected seeds, completed a soil analysis, and planted their own plants. An increased interest in the 4-H gardening project was observed.

“Crusin’ Into Summer”

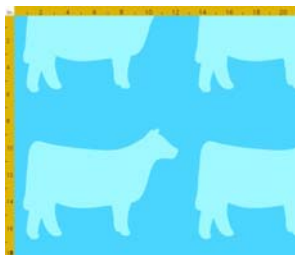
The Tri-County Care Center’s “Crusin’ Into Summer” event was held on June 4th in Rocky Ford. Otero County 4-H staff participated in the event with a promotional booth. At the booth, over 50 youth planted marigold seeds donated by Burrell Seed and learned about the various projects and activities 4-H has to offer. Youth were able to take their marigolds home, as well as information about how to become a 4-H member. Several families expressed interest in joining 4-H and many of the youth were excited to hear about the fun opportunities 4-H has to offer.

Textile Tech

There was no shortage of creativity at Textile Tech on June 17th at the Otero County CSU Extension office. Eleven Southeast Area 4-H members, two volunteers, and two staff participated in the program.

Textile Tech combines technology and creativity as youth explore ways to create their own custom fabric design. Youth learned about and practiced using tech tools like search engines and online design and editing programs. From the STEAM: Beyond the Needle 4-H curriculum, youth also learned about using design elements and principles to create aesthetically appealing designs.

As youth created their fabric, they were asked to consider the tools and principles they had just learned about, as well as what they would be using their fabric for. Most youth created their fabric to be used for pillowcases, but other uses included clothing and quilts. At the end of the program, youth were asked to name careers that would utilize the skills they acquired.



Prowers Hosts Independence Adventure Camp

Prowers County Extension partnered with the Prowers County 4-H Council, Holly NRCS, Prowers Land and Environmental Health, and community members to host the second annual camp with the central theme celebrating America's Independence. Campers were introduced to Orienteering, soil composition, constructing their own aprons, yard art, GPS, a Rockies game, and a trip to the Sand Creek Massacre Site. Community leaders included Amber Freouf, Seth Odette, Berta Downing, Kayla Calvin, Barb Long, Alicia Downing, Amy Kelley, and Mallory Sikes. Campers converged on the Sand & Sage Round-Up Fairgrounds in Lamar. Counselors included Callie Bennett, Miranda Morgan, Makendra Torres, Dom Cardinelli, Angelina Downing, Mallory Morgan, and Ashlyn Crossland. Campers reported that they are excited for the next camp and parents said they were ready to sign their kids up for the next camp.

Quilting Series Featured

Quilting began long before European settlers arrived in the New World. Quilting has a long history and was a skill that was passed down from one generation to the next. Today many have not had the opportunity to learn the skill from a family member. During the 2015 Arkansas Valley Fair the superintendents identified a need for instruction of quilting techniques based on the questions they received from those exhibiting items. Five community volunteers gathered to teach a beginning patchwork quilting class, the response was overwhelming. Due to the interest of those enrolled in the first class a series of three classes were taught, each building on skills learn at a previous session. Today individuals quilt to express creativity; the skills learned will be featured at the 2016 Arkansas Valley Fair.

Common Cents for Colorado/Bent County

Fifteen Bent County youth made piggy banks at the Bent County/Las Animas Public Library under the guidance of Extension Agent Kay Kasza. As they crafted, discussion centered on saving to meet goals. Older kids all shared what they were saving money for, while their parents encouraged them to save for college. First National Bank contributed coins for the youngsters to put in their banks. A Piggybank Primer from the Federal Reserve Bank was given to all participants. In addition, two sessions of "Taking Charge of Your Money" were presented for Head Start parents, and for a Department of Social Services class.

Family & Consumer Science





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The area started out with a cool spring, but it has quickly warmed up. The wheat producers have been busy harvesting in between rain showers, I have enjoyed seeing the beautiful crops. As I write this the farm markets are just beginning to open on the west side of the southeast area, I encourage you to take advantage of the local grown produce.

Included in this report is the introductions of two agents. Marlena Griesse, Otero and Crowley County 4-H Youth Development Agent and Kelly Roesch, Agronomist. I welcome them to CSU in the southeast area, both started on May 1, 2016. The area is saying good bye to Brittany Bowman, Kiowa County Extension Agent. Brittany has decided to go back to graduate school and pursue a master's degree, she will depart in August. Best wishes to Brittany.

As always, call your local agent or myself if there are issues in your community that you feel extension should be involved in or can offer assistance.

Jennifer Wells
Southeast Area Director



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