



UNIVERSITY OF MISSOURI EXTENSION

## Cedar County

2019 ANNUAL REPORT



**Extension**  
*University of Missouri*

University of Missouri Extension provides equal opportunity to all participants in extension programs and activities, and for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of race, color, national origin, ancestry, religion, sex, sexual orientation, gender identity, gender expression, age, genetic information, disability, or protected veteran status. Contact us immediately if you need accommodations because of a disability, need to relay emergency medical information or need special arrangements if the building is evacuated.



## TABLE OF CONTENTS

<b>WHO WE ARE</b> .....	3
<b>LETTER FROM THE CEDAR COUNTY MU EXTENSION COUNCIL</b> .....	4
<b>LETTER FROM VICE CHANCELLOR OF EXTENSION AND ENGAGEMENT</b> .....	5
<b>CEDAR COUNTY STATE FAIR FARM FAMILY / CENTURY FARM FAMILY</b> .....	6
<b>BARN QUILT WORKSHOPS</b> .....	7

## PROGRAMS OF DISTINCTION

### YOUTH DEVELOPMENT

Cedar County 4-H Clubs .....	8-9
Rural Youth Safety Workshop .....	10
Missouri Show Me Quality Assurance .....	10

### HEALTH AND ENVIRONMENTAL SCIENCES

Food Nutrition Education Program .....	11
Cooking Matters for Families .....	12
Food Preservation .....	12
Matter of Balance .....	13

### AGRICULTURE AND NATURAL RESOURCES

Beef Cattle Producers Meeting .....	14
Pasture and Forage Management Workshop .....	14
Reprogene Conference .....	15
Southwest Missouri All Breeds Performance Tested Bull Sale .....	16
Bull Breeding Soundness Exam Clinics .....	16
Partners in Pasture Tour .....	17
Show Me Select Replacement Heifer Program .....	18
Private Pesticide Applicator Training .....	19
Missouri Complex Fence Law Workshop .....	20
Calving 101 .....	21
Warm Season Grass Cattle Grazing Workshop .....	22
Winter Cattle Feeding and Health Management Workshop .....	23
Regional Grazing Schools .....	24

### BUSINESS AND WORKFORCE DEVELOPMENT

MU Extension Business Development Programs .....	25
MU Extension Tax Schools .....	26
Rural Strong: Powering Rural Small Businesses .....	26

<b><u>2019 CEDAR COUNTY FINANCIAL SUMMARY</u></b> .....	27
---	----

<b><u>2020 CEDAR COUNTY IMPACT DATA</u></b> .....	28-29
---	-------

## WHO WE ARE

Cedar County MU Extension Center and its programs are funded by county, state and federal appropriations. Cedar County Commission as well as revenue generated from local programs provides the support for the Cedar County MU Extension. These funds are used to fund office space and expenses, support staff salary, 25% of a .50 FTE Youth Program Assistant salary and travel expenses for staff and specialist that conduct educational programs in Cedar County. A special thank you, to the Cedar County Commission for their financial assistance.

<p><b>Cedar County Extension Council</b></p> <p><u><b>Elected Members</b></u>  <b>Council Chairman</b>                  Randy Langsten – El Dorado Springs  <b>Vice Chairwoman</b>                  Kelly Hendricks—Jerico Springs  <b>Secretary</b>                  Maranda Spangler—Stockton  <b>Treasurer</b>                  Amy Hedrick—El Dorado Springs</p> <p><b>Other Elected Members</b>                  Mark Beason—El Dorado Springs                  Scott Casey – El Dorado Springs                  Victoria Ford – Stockton                  Amy French—Jericho Springs                  Michele Pate – Stockton                  Jim Phillips—Fair Play                  Joy Rutledge—Stockton                  Rachel Stauffer—El Dorado Springs</p> <p><u><b>Appointed Members</b></u>                  Marlon Collins—County Commissioner                  Jordan Richner—Farm Bureau                  Jeff Stacy – Cedar County Cattlemen                  Anna Haselhuhn—City of Stockton                  Vacant—City of El Dorado Springs</p> <p><b>About us</b>  <b>Location:</b>                  Cedar County Courthouse                  113 South Street                  Stockton, Mo. 65785  <b>Hours:</b>                  Mon – Fri                  8:00 a. m. to 12:30 p. m.                  1:00 p. m. to 4:30 p. m.  <b>Contact info:</b>                  Phone: 417 – 276 – 3313                  Email: cedarco@missouri.edu</p>	<p><b>Cedar County Faculty and Staff</b></p> <p><b>Tammy Ikerd</b>                  County Engagement Specialist for 4-H Youth Development</p> <p><b>Patrick Davis</b>                  Regional Livestock Specialist</p> <p><b>Janet Fox</b>                  Nutrition Program Associate</p> <p><b>Mikayla Fox</b>                  4-H Youth Development Associate</p> <p><b>Heather Burns</b>                  Office Support Staff</p> <p><b>Wayne Prewitt</b>                  West Central Regional Director</p>	<p><b>Staff serving Cedar County, (based in other counties)</b></p> <p><b>Patricia Miller</b>                  Regional Agronomy Specialist</p> <p><b>David Black</b>                  Regional Community Engagement Specialist</p> <p><b>Wesley Tucker</b>                  Regional Agricultural Business Specialist</p> <p><b>Sara Bridgewater</b>                  Regional Nutrition and Health Education Specialist</p> <p><b>Kyleigh Sullivan</b>                  Regional Human Development Specialist</p> <p><b>Sarah Havens</b>                  Regional Natural Resources Specialist</p> <p><b>Ramon Arancibia</b>                  Regional Commercial Horticulture Specialist</p> <p><b>Ken Surbrugg</b>                  Business Development</p>	<p><b>Cedar County Commissioners</b></p> <p><b>Marlon Collins</b>                  Presiding Commissioner</p> <p><b>Don Boultinghouse</b>                  Northern District Commissioner</p> <p><b>Robert Foster</b>                  Southern District Commissioner</p> <p><b>State Legislator</b></p> <p><b>Ann Kelley</b>                  State Representative                  127th District</p> <p><b>Mike Stephens</b>                  State Representative                  128th District</p> <p><b>Warren Love</b>                  State Representative                  125th District</p> <p><b>Sandy Crawford</b>                  State Senator                  28th District</p>
<p><b>During 2019 the Cedar County MU Extension Center:</b></p> <ul style="list-style-type: none"> <li>• processed 63 soil tests</li> <li>• checked 5 pressure canner gauges for accuracy and safety</li> <li>• assisted one student with correspondence testing during the spring and fall semesters</li> <li>• rented testing tools to 20 residents</li> </ul>		<ul style="list-style-type: none"> <li>• sold 14 books and manuals</li> <li>• Mailed 678 Ag In Focus newsletters</li> <li>• Served over 300 individuals with E-News announcements</li> <li>• Provided pesticide applicator testing to 9 people</li> <li>• Over 75 articles published in local papers</li> </ul>	



**CEDAR COUNTY MU EXTENSION CENTER**  
113 South Street  
Stockton, Mo. 65785  
Phone: (417) 276—3313  
Email: cedarco@missouri.edu  
Website: extension.missouri.edu /cedar

December 31, 2019

Dear Cedar County Commissioners, Stakeholders and Friends,

Thank you for continuing to make University of Missouri Extension relevant and successful in providing educational programs for the citizens of Cedar County. This annual report outlines the success MU Extension has had in Cedar County during 2019.

The success of University of Missouri Extension in Cedar County depends upon the dedication and support of members of the County Extension Council. The council assists staff with planning and implementing programs by communicating the interests and concerns of local citizens. Programming efforts require the best efforts of our partnerships in the state to maximize and apply our resources where the greatest impact can be made.

We want to extend a special thank you to the Cedar County Commission for their continued support of the Cedar County MU Extension Center.

We would also like to thank all of our volunteers, partners, and stakeholders who continue to support our efforts in extension.

When you support University of Missouri Extension, Cedar County benefits as well as the state of Missouri.

Sincerely,

*Maranda Spangler*

**MARANDA SPANGLER**  
CEDAR COUNTY EXTENSION  
COUNCIL SECRETARY

*David Black*

**David Black**  
INTERIM COUNTY ENGAGEMENT  
SPECIALIST

*Randy Langsten*

**RANDY LANGSTEN**  
CEDAR COUNTY EXTENSION  
COUNCIL CHAIRMAN



OFFICE OF THE VICE CHANCELLOR  
FOR EXTENSION AND ENGAGEMENT  
108 Whitten Hall  
Columbia, MO 65211  
PHONE 573-882-2394  
EMAIL [stewartmars@missouri.edu](mailto:stewartmars@missouri.edu)

December 5, 2019

Dear county commissioners and friends of MU Extension,

I had the good fortune to catch up with some of you this past fall as I traveled the state to share the University of Missouri's Extension and Engagement vision and plan for the coming years. What a pleasure it is to serve this state we call home.

As you know, we've listened closely to Missourians' needs, restructuring our faculty and program delivery to better serve people and communities. With this reset nearly complete, we're better positioned to work together to strengthen our state's economy, increase Missourians' access to meaningful education and workforce development options, and improve our citizens' health and well-being.

MU Chancellor Alex Cartwright often calls us the University *for* Missouri. In very real terms this means that MU Extension is leading efforts to connect the university's powerful research, knowledge and science-based information with our state's diverse needs and local efforts to address them.

Whether you're a farmer researching the latest profitable grazing practices, a 4-H leader developing after-school robotics programs with local schools, or a community leader helping people formerly addicted to opioids return to productive work, you deserve the very best MU Extension and university engagement efforts have to give. As a comprehensive university, we can be uniquely responsive. We have schools of medicine, nursing and health professions, for instance, to support health care in rural communities, a law school clinic that helps veterans qualify for the benefits they deserve. MU education students become the teachers who enrich children's lives in nearly every school district in the state. We are here for you and with you.

Together, we can make lasting impacts. That's why in this new year we are focused on growing and leveraging local partnerships, expertise and resources. With 110 of 115 county engagement specialist positions filled — and renewed focus on responsive program development — we are ready to go.

As the first public university west of the Mississippi River, our land-grant roots run deep through Missouri's heritage and history. They help chart our future, too: What can we do to make our state better? How can we think and do different?

I know you will be proud to see your own communities' successes in the pages of this year's county annual report. On behalf of all of us at MU Extension, I look forward to your thoughts on how we can best lead, serve and grow through the year ahead.

Sincerely,

A handwritten signature in black ink that reads 'Marshall Stewart'.

Marshall Stewart



### Cedar County 2019 State Fair Farm Family The Abercrombies



**Josh and Chelsea Abercrombie (Children: Henry, Melaney, Jacob)**

### Cedar County Century Farm Family Beaches of Cedar Creek Cross Farm



**Livestock Specialist, Patrick Davis, awards Gaila and Steve Beach with the Missouri Century Farm honors.**

## BARN QUILT WORKSHOPS

*Tammy Ikerd, Community Engagement Specialist in Youth Development*



### Number of Cedar County residents served

- 23 people

A unique community enrichment project, three barn quilt workshops were held in 2019. Barn quilts are a traditional, iconic piece of ornamental farm décor, which also serves as a practical purpose, on countless barns throughout America's farmlands. The first of its kind held in Cedar County, this program reached a different demographic than other Extension programs. The goal of the project is to highlight Extension in Cedar County, create community togetherness, and to promote agritourism by starting a barn quilt map. The classes were taught by retired Stockton High School art teacher, Cheryl Sloan. We thank her tremendously for her skills and time providing this class.

### What did they learn?

- the history of barn quilts
- techniques required to create a pattern on the wood
- how to tape and backpaint for clean lines
- ways that barn quilts may be displayed or utilized
- barn quilts are a form of agritourism

### What did participants say about the workshops?

- Very interesting, enjoyed it tremendously.
- Need more things offered like this.
- Well done, so pleased to see so many seniors here!
- Fantastic class!
- Loved it!
- Great community event.

### How will participants use the skills learned?

- Will create more barn quilts
- Will aid in bringing more barn quilts to my county by using barn quilts as a 4-H project
- Make more barn quilts with my kids at school
- Will make more barn quilts for my daughters



Images above and below:  
Barn Quilts created by  
participants of the 2019  
workshops.





*Tammy Ikerd*  
4-H Youth Development  
Specialist

## CEDAR COUNTY 4-H CLUBS



Cedar County 4-H creates environments in which young people are valued, contributing members of their community. 4-H provides Cedar County youth with hands-on learning opportunities in a safe environment where they can experiment, innovate and think independently with the help of caring volunteers.



*Mikayla Fox*  
4-H Youth  
Program  
Associate

### Number of Cedar County residents served

- 137 4-H Members
- 39 Trained Adult Volunteers

### Accomplishments

Cedar County 4-H serves youth through 6 organized clubs. The youth of Cedar County have demonstrated learning through the following activities:

#### County

- 35 Club Officers
- 4 County Council Officers
- 500 Projects registered by members
- 166 Projects registered by leaders
- 4-Hers also participate in many local events such as county 4-H council meetings, county-wide fundraiser, Clover Kid's Camp, Cedar County Youth Fair, Land O'Lakes Youth Fair, recognition celebration and community service activities.
- \$3549.49 raised during the county-wide fundraiser
- 113 project records completed by 57 members
- 9 Missouri Report Forms were completed and judged at the regional level

#### Regional and State Events

- One member represented on State 4-H Council
- One member attended a zoology camp at Sea World - Busch Gardens, Orlando, Florida
- One member attended State 4-H Congress
- One member attended Kids and K-9 Camp
- Two Cedar County members participated in Missouri Teen Conference
- Five Cedar County members participated in the Missouri State 4-H Equine Tour
- Five members attended 4-H Camp at Windermere
- Several members competed at regional and state shooting sports competition
- Non-livestock projects submitted to Ozark Empire Fair
- Non-livestock projects submitted to Missouri State Fair

#### Missouri 4-H Members

- Spend more of their leisure time than peers engaged in projects of interest anchored in science (Khan, 1989)
- Three times more likely to go into science related careers than similar peers (Lerner and Lerner, 2008)
- 4-H youth are nearly twice as likely to expect to go to college (Lerner and Lerner, 2011)
- Being on campus is a predictor of youth going onto higher education (Hoover, 2006).

#### How does this make Cedar County and Missouri Better?

- Youth who earn their bachelor's degree, increase annual earnings by \$2 million over their lifetime (NACUBO, 2012).
- If 50% of the Cedar County members participating in 4-H events on the MU Campus go on to earn their bachelor's degree, 4-H would help young people earn \$143.7 million more of lifetime earnings.
- Volunteers create, support and are a part of the 4-H community. Missouri 4-H volunteers who responded to a survey report they contribute on aver 100 hours per year. Valuing their time at \$24.14/hour (Independent Sector, 2017), the contribution of the 54 Cedar County volunteers was worth more than \$130,356 in 2018. More importantly, these individuals serve as role models and mentors for youth, helping them transition to adulthood.
- More likely to contribute to their community (Lerner, 2009; Zaff et al, 2003).



### 4-H PROGRAMING HIGHLIGHTS

These are just a few of the activities Cedar County 4-H members attended in 2019



LEFT: 4-H Regional Archery Contest



RIGHT: Cedar County Clover Kids Camp



LEFT: Grand and Reserve Non-Livestock Winners at the Cedar County Youth Fair



RIGHT: Missouri 4-H Equine Tour



LEFT: Missouri 4-H Summer Camp



RIGHT: Zoo Apprentice Camp 2019



LEFT: Missouri 4-H K-9 Camp



RIGHT: 4-H Teen Conference

## RURAL YOUTH SAFETY WORKSHOP

*Mikayla Fox, Youth Program Associate  
Tammy Ikerd, 4-H Youth Specialist  
Patrick Davis, Livestock Specialist*

### Number of Cedar County residents served

- 79 Youth
- 20 Volunteers

This program is a partnership with Community Safety Net, a national organization, who seeks donations from Cedar County businesses, organizations, and citizens to provide educational materials to youth on rural safety. These programs were presented with the help of the El Dorado Springs High School and its agricultural students to educate 4<sup>th</sup> graders in the El Dorado Springs public school.

### What did they learn?

- Youth volunteers were educated, then taught the youth on:
  - animal safety, personal protection equipment, pesticide safety, welding safety, water/dehydration/first aid and human safety, tractor safety, fire safety and ATV safety
- Youth received an education DVD and book that will educate them on other things related to safety

### What action did they take?

- The kids took home a book, DVD, and knowledge gained and went through the information with their parents to improve understanding of rural safety

### How does this make Cedar County and Missouri better?

#### Cedar County

- This developed relationships with local businesses and organizations to provide funding for books and DVDs for youth that were involved with the program
- Improved rural safety should lead to less rural activity injuries and less costs associated with those injuries.

#### Statewide

- As these people are safer with rural activities throughout the state there should be less rural injuries and cost associated with injuries

## MISSOURI SHOW – ME QUALITY ASSURANCE

*Patrick Davis, Livestock Specialist  
Tammy Ikerd, 4-H Youth Specialist  
Velynda Cameron, 4-H Youth Specialist*

This program is designed to provide education regarding best management practices to youth and their parents so that their meat and milk producing livestock projects are raised in a way that they are successful and at slaughter will be safe for human consumption.

### Number of Cedar County residents served

- 10 Youth

### What did they learn?

- This program educates youth on proper care, and management of their youth livestock projects
- This education allows them to produce a healthy and safe meat or milk product for human consumption

### What action did they take?

- Youth take a test that certifies them so that they are current in their 4-H livestock project
- Allows 4-H youth to exhibit their livestock at local, regional and state exhibitions

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Through education these youth are more likely to produce healthy animals and milk that when slaughtered and processed are safe for human consumption
- Increase perception that county youth livestock meat or milk products are high quality and safe for human consumption

#### Statewide

- This increases the perception that meat and milk from Missouri youth livestock projects are high quality and safe for human consumption





## FAMILY NUTRITION EDUCATION PROGRAM

Janet Fox, Nutrition Program Associate



The Family Nutrition Program (FNP) brought \$9,595,006.00 federal funds to the state of Missouri. These funds were used to provide nutrition education to 897,375 Supplemental Nutrition Assistance Program recipients and eligible citizens of Missouri. There were 3,283,220 educational contacts. This year we had 2,578,418 indirect educational contacts. Indirect contacts are reached through newsletters, health fairs, food pantries and the Show Me Nutrition help line. 3,789 of these participants reside in Vernon County.

Participants in FNP become more aware of nutrition, make healthier meal and snack choices, eat breakfast more often, are more willing to try new foods, increase their physical activity and in general make healthier food choices. Those who practice healthy eating and activity behaviors are more likely to enjoy a high quality of life as an adult and into old age. A healthy labor force is critical to attracting and keeping jobs in Missouri. In addition, this important programming effort serves to reduce healthcare costs over the participant's lifetime, saving taxpayers money in reduced public healthcare benefits and insurance premiums.

In Cedar County, 834 Youth and 1,979 Adults contacts were made for a total of 2,813 contacts.

The following is a list of the locations where participants were served in Cedar County:

### Schools

### Agencies

El Dorado Springs Elementary	Wee Care Preschool DCC
El Dorado Springs Middle	Church of Christ Food Pantry
Stockton Elementary	Cedar County Public Library- El Dorado Springs
Stockton Middle School	First Baptist Church
	Stockton Head Start (WCMCAA)
	Korth Senior Center
	SAMA Food Pantry
	Woods Supermarket

In addition to the numbers, Janet shared this success story demonstrating local impact:

***“A teacher at the El Dorado Springs Middle School came up to me after I completed a class, and wanted me to know that her son came home and asked her to buy the ingredients to make a snack like we had in Nutrition Class. It happened to be the Bean Salsa and how much he really liked it.”***

In summary, it has been a successful year in Cedar County for FNP. We look forward in 2020 to more programming opportunities and continued progress in helping to improve the lives of Missouri families.

*Michelle Chapman*

Michelle Chapman  
West Central FNEP Coordinator





## COOKING MATTERS FOR ADULTS & COOKING MATTERS AT THE STORE

*Sarah Bridgewater, Nutrition and Health Education Specialist & County Engagement Specialist*



### Number of Cedar County Residents Served: 24

Two sessions of Cooking Matters for Adults were held in 2019, with 6 classes in each session. The classes were conducted in partnership with Compass Health in El Dorado Springs and Maplewoods in Stockton. There were a total of 24 participants in Cedar County who participated in the Cooking Matters classes. Cooking Matters at the Store Tour was offered at Woods in El Dorado Springs, where there were three participants.

### What did they learn?

After attending a Cooking Matters six-week course, participant reported improved knowledge, skills, and understanding on maintaining a healthier dietary intake, using skills and recipes learned to improve their families diet, and using the skills and knowledge to shop healthier and reduce food costs.

After attending Cooking Matters at the Store Tour participant learned how to shop on a budget, what to look for on food labels, and understand how to convert unit prices to see what is the most budget friendly/

### What action did they take?

*Participants reported that they made recipes with their take home groceries each week. One participant reported,*

*“The class gave me a lot more knowledge about making a healthier plate while still tasting good.”*



### How does this work make Cedar County and Missouri Better?

Cooking Matters is a series of six hands-on cooking classes that are designed to empower families at risk of hunger with the skills, knowledge and confidence to make healthy and affordable meals. Course participants learn how to select nutritious and low-cost ingredients and prepare them in ways that provide the best nourishment possible to their families. This curriculum can be modified for adults, families, teens, or kids.

---

## FOOD PRESERVATION

---

### Number of Cedar County Residents Served: 3

One workshop on Quality for Keeps: Home Food Preservation on the topic Sweet Spreads was offered at Maplewoods Housing. Three participants attended the workshop.

### What did they learn?

Following the workshop three participants reported they were Very Confident in the following:

- Ability to share safe food preservation methods with friends, family, and online communities.



- Know where to go for safe, research-tested recipes for preserving food at home.
- Ability to follow safe home food preservation practices.
- Knowledge of safe home food preservation practices.

All participants reported they would recommend this class.

### What action did they take?

Participants were able to learn about freezer jams and were excited to learn a new skill. Some comments they made after the class included:

“Our gal did an awesome job!”

“I believe she knows everything well and relates well with all age groups!”

“Learned new way to can.”

“It was great!”



### How does this work make Cedar County and Missouri Better?

MU Extension provides up-to-date, research-based procedural recommendations, tested recipes, and hands-on workshops that assist the consumer in safely preserving produce and other products. Workshops focus on pressure and boiling water canning basics, vegetables and other low-acid products, pickling, salsas, fruits, sweet spreads, dehydration, freezing, and storage of produce. This can be offered as a single-session program or a series.

---

## MATTER OF BALANCE

---

### Number of Cedar County Residents Served: 24

There were two sessions of Matter of Balance offered in Cedar County. Each session consisted of 8 classes. Twenty-four participants in Cedar County partook in Matter of Balance in 2019.

### What did they learn?

The participants grew their confidence and learned about how to handle a situation if he/she does fall. Participants learned exercises that help improve balance and flexibility, participants really enjoyed this aspect of the class.

### How does this work make Cedar County and Missouri Better?

A Matter of Balance is an award winning program designed to reduce the fear of falling and increase the activity levels of older adults who have concerns about falls. This program consists of eight, two-hour sessions. The sessions help participants learn how to view falls and the fear of falling as something controllable. There will also be information on how to set realistic goals for increasing activity, as well as how to change their environment to reduce fall risk factors. The program also promotes exercise to increase strength and balance to help reduce the risk of falls in older adults.



## BEEF CATTLE PRODUCERS MEETING

*Patrick Davis, Livestock Specialist*

*Andy McCorkill, Livestock Specialist*



### Number of Cedar County residents served

- 5 people

### Topics covered:

- Bull development
- Heifer development

### What did they learn?

Workshop attendees were asked through workshop evaluation their knowledge before and after the workshop on a 5 point scale with 1 being low and 5 being high. 10 of 11 participants answered the evaluation. They reported an average of 20% improvement in knowledge gained. Some of the specific knowledge gained included:

- how to handle young bulls, how to feed young bulls, importance of breeding exam

### What action did they take?

Workshop attendees were asked how they plan to implement the knowledge gained and responses are below

- increase nutrition water quality, breed heifers at 14 to 15 months of age
- look at records, keep better records
- keep in good condition, feed soybean hulls alfalfa & prairie stockpile good

## PASTURE AND FORAGE MANAGEMENT WORKSHOP

*Patrick Davis, Livestock Specialist*

*Pat Miller, Agronomy Specialist*

### Number of Cedar County residents served

- 6 people

### Topics covered:

- pasture weed control and improvements
- forage alternatives to extend the grazing season

### What did they learn?

Participants were asked before and after the event to rate knowledge on topic discussed on a 1 to 5 scale with 1 being low and 5 being high. 5 of the 9 participants answered the evaluation and prior knowledge averaged 3 will post knowledge averaged a 4.4 which shows a 28% improvement in knowledge gained. A couple of people mentioned overall knowledge was specifically gained.

### What action did they take?

Workshop attendees were asked how they plan to implement the knowledge gained and responses are below

- plant for our grazing
- add brassicas to rotational grazing, continue to monitor soil fertility and treat, and control dewberries
- increase variety of forages to extend grazing options
- if weather will cooperate I hope to extend the grazing season



## REPROGENE CONFERENCE – TAKING THE NEXT STEPS IN BEEF CATTLE REPRODUCTION AND GENETICS

*Patrick Davis, Livestock Specialist*

*Eldon Cole, Livestock Specialist*

*Andrew McCorkill, Livestock Specialist*

Presentations were provided by MU Extension State Specialists David Patterson, Jared Decker, and Jordan Thomas.

Local cattle producers Josh Worthington and Norman Garton answered questions and educated participants as part of a producer panel.

---

### Number of Cedar County residents served

- 8 people

There is remarkable technology available to beef producers. Participants learned how to you use these tools on their farms to increase profits.

### Topics covered:

- Overview of AI synchronization protocols for heifers and cows
- Evaluation of protocols for two year old cows
- Split-time AI and use of sex-sorted semen
- EPD & genomic prediction basics
- How to use genetic and genomic predictions for increased profitability

### What did they learn?

Workshop attendees were asked through workshop evaluation their knowledge before and after the workshop on a 5 point scale with 1 being low and 5 being high. 21 of 48 participants answered the evaluation. They reported an average of 19% improvement in knowledge gained. Some of the specific knowledge gained included:

- information on sexed semen timed AI
- improved selection use for bulls
- greater EPD knowledge
- injection site
- that I have a lot to learn
- Best and most efficient way to AI cattle.
- The importance of genetics and genetic testing
- new indexes, genomic info
- concentration rates at timed AI
- when not to AI
- that bos indicus doesn't have the same protocol
- the different protocols

### What action did they take?

Workshop attendees were asked how they plan to implement the knowledge gained and responses are below.

- continue timed breeding, be more specific on timing
- use DNA test for selection
- improve AI conception
- don't use sexed semen ask semen supplier with bulls best for timed AI
- study info received and make a plan
- educate others and use this knowledge at work
- genomics on heifers
- hire a professional to AI my cattle
- go to AI school
- AI more with less natural breeding
- continue our protocol

## SOUTHWEST MISSOURI ALL BREEDS PERFORMANCE TESTED BULL SALE

*Eldon Cole, Livestock Specialist*

*Andy McCorkill, Livestock Specialist*

*Patrick Davis, Livestock Specialist*

### Number of Cedar County residents served

- 3 people

### What did they learn?

- Utilization of EPD's in bull selection to improve genetic deficiencies in their cow herd

### What action did they take?

- Two Cedar County producers sold 12 bulls
- One Cedar County person purchased one bull at the sales

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Cattle producers that attend can use the information when buying bulls and improving sire genetics
- Cattle operations purchase bulls, which improves genetics of their operations resulting in improved profitability and a stronger economy

#### Statewide

- Missouri cattle producers make wiser genetic decisions in sire selection leading to improved calf crop and profitability
- Improved profitability leads to a stronger Missouri economy



## BULL BREEDING SOUNDNESS EXAM CLINICS

*Patrick Davis, Livestock Specialist*

Clinics are done in conjunction with a veterinarian to educate cattle producers on bull physical and reproductive soundness.

### Number of Cedar County residents served

- 8 people

### What did they learn?

Participants were educated on the breeding soundness exam and received handouts that educated them on foot scoring, genetic testing, upcoming bull sales and replacement heifer sales.

### What action did they take?

Cattle producers tested bulls and those found unacceptable were retested in a few weeks to determine reproductive soundness

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Knowledge of bull reproductive soundness improves operation profitability resulting in a stronger county economy

#### Statewide

- Stronger county economy results in a stronger state economy





## PARTNERS IN PASTURE TOUR

*Pat Miller, Agronomy Specialist*

*Patrick Davis, Livestock Specialist*

*Ramon Arancibia, Horticulture Specialist*

MU Extension collaborated with the Department of Conservation to provide a workshop to educate the public and provide hands on demonstration in patch burn grazing management for cattle and wildlife on native pastures.

### Number of Missouri residents served

- 16 people

### What did they learn?

- By evaluation, participants reported they learned how important grass management is for wildlife, new patch burn grazing techniques, and how to establish warm season grasses.

### What action did they take?

- Participants were asked by evaluation to rank knowledge before and after the presentation. Participant evaluations demonstrated a 20% increase in knowledge after the presentation. Here are examples of ways participants plan to implement their new knowledge:
  - Leave 10% of land in taller grass during nesting season for quail
  - Establish warm season grass pastures
  - Implement patch burn grazing technique

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Improved pasture management leads to more forage production, which leads to increased livestock carrying capacity
- Improves wildlife conservation
- Increasing livestock carrying capacity improves farming income, county income and strengthens county economy

#### Statewide

- Stronger county economy will improve state economy



**Wah' Kon-Tah Prairie  
El Dorado Springs, MO**



## SHOW-ME-SELECT REPLACEMENT HEIFER PROGRAM

*Patrick Davis, Livestock Specialist*

*Eldon Cole, Livestock Specialist*

*Andy McCorkill, Livestock Specialist*



### Number of Cedar County residents served

- 1 person

Show—Me—Select Replacement Heifers Inc. is a total heifer development program designed to provide health and management technology to beef heifers. It is an added value approach that includes an opportunity to market heifers privately or through the annual sales. It also gives buyers a source of quality bred replacement heifers.

### What did they learn?

- Producers in the program have learned how to develop heifers that will stay in herd and calve regularly
- One local veterinarian is also learning valuable practices in health and management of developing heifers
- How the Show—Me—Select Heifer Program benefits producers and purchasers
- Reliable source of heifers to be put into local herds

### What action did they take?

- Producers
  - increased the usage of AI, estrous synchronization, and collection of data on replacement heifers
  - Increased the usage of proven genetics in the heifers selling through the sale
- Based on the education one Cedar County person has chosen to purchase heifers at regional sales in 2019.

### How does this work make Cedar County and Missouri better?

#### Cedar County

- One Cedar County cattle producer in the last year purchased 6 head of bred heifers through one sale resulting in \$10,850 in purchases. These heifers should improve the herd, therefore increasing profitability.

#### Statewide

- Show-Me-Select heifer sales from the Joplin Regional Stockyard in 2019 totaled \$730,000 in sales
- Heifers are produced or developed in Missouri and sold to farms throughout the state
- Improves longevity, quality and genetics of Missouri cow herd
- Increase profit potential of Missouri cow herd
- County sales and income from heifers result in a strengthened state economy



## PRIVATE PESTICIDE APPLICATORS TRAINING

Pat Miller, Agronomy Specialist



### Number of Cedar County residents served

- 13 people

People who buy restricted use pesticides and herbicides are required to be current in this training to purchase such chemicals.

### What did they learn?

- The ability to safely apply pesticides according to label recommendations
- The knowledge to correctly calibrate spray equipment
- The ability to measure and spray the correct rate of pesticide
- The ability to compare active ingredients to save money.
- The knowledge on what qualifies as personal protective equipment according to chemical labels
- The knowledge on what adjuvants are and when to use them

### What action did they take?

- Participants met the legal requirements to obtain or renew their private pesticide applicators license.
- This will enable them to purchase restricted use chemicals to control pests in their farming operation.
- They also obtained updated information on new pesticides and their use to control current and emerging pests.

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Proper county identification and usage of pesticides
- Decrease pests
- Protects environment
- Prevents resistance
- Minimizes pesticide use and cost

#### Statewide

- Proper county control prevents pest spread to other regions of the state
- Proper county usage helps protect statewide usage rights and environment



## MISSOURI COMPLEX FENCE LAW WORKSHOP

*Joe Koenen, Ag Business Specialist*



---

### Number of Cedar County residents served

- 11 people

Participants learned about the two different Missouri fence laws and what counties acknowledge which law. They also learned what each law requires the landowner to do fence-wise, which portion of a boundary fence each landowner must maintain, and where they can find additional resources and assistance on the fence law in effect in their county

### What did they learn?

Based on the evaluations these are the short-term learning outcomes by the participants:

- 100% would recommend this program to others
- 100% now know there is more than 1 fence law in Missouri
- 91% now know which law is in effect where their land is located
- 91% know where to find additional resources and assistance on fence laws

### What action did they take?

- We have had various interaction with the public asking questions and wanting more information in topics this workshop covered
- Participants said they would recommend this workshop to other people interested in this topic

### How does this work make Cedar County and Missouri better?

- Knowing which fence law is in effect in your county and following that law helps lower conflicts between landowners. This in turn reduces litigation costs. Figuring an average of \$150 per hour for an attorney, this program can potentially save Missouri landowners \$47,250 in legal fees.
- This helps Missouri livestock producers to be more profitable due to lower fencing costs of their own in addition to less legal time and litigation fees.



## CALVING 101

Patrick Davis, Livestock Specialist



### Number of Cedar County residents served

- 9 people

### Topics covered:

- Cattle body condition scoring
- Nutrition and management prior to and after calving

### What did they learn?

Participants were asked to rank their knowledge before and after the workshop on topics presented on a 5-point scale with one being low and 5 being high. There were 30 of 43 participants answering this portion of the evaluation. The average prior workshop score was 3.08 and after workshop score was 4.40 which was an average of 26% improvement in knowledge showing knowledge was gained. Specific knowledge gained was:

- how to hook on OB chains
- use lube
- know a lot more on pulling calves and what to do
- ways to install chains, 2 points
- basic general knowledge
- proper use of chains how long stages of labor normally last
- calving info body condition scoring
- good techniques to pull a calf
- the proper way to pull the calf and when, the proper nutrition
- pulling calves-steps signs of labor/issues to look for
- more on how to manage cattle
- great ideas about nutrition loved calf delivery
- learning about calving
- condition of cow
- how/when to pull or call vet, importance of BC index to calving/production
- specifics of replacers and chain use
- nutrition
- watch cows closer

### What action did they take?

Participants responded through evaluation about how they would implement the knowledge gained and this was the responses:

- hope not to ID problems faster
- buy lube
- do a plan on when cows are due, if I need to call the vet, get a notebook to keep records
- just starting to get some cows so this was a huge help
- control my cows body condition better
- my cows are due in 3+ weeks so will use this very soon, will body score cows tomorrow, will use calving info as soon as possible
- use a good timeline
- help deliver healthy calves
- career farm loans
- management
- will use lube more, will keep better track of cattle scores
- when we have a cow in trouble call the vet
- will be calving soon so good tips
- hopefully I don't have to
- spring calving
- documentation

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Attending this event provides cattle producer's knowledge to improve enterprise profitability resulting in stronger county economy

#### Statewide

- Education leading to better cattle management resulting in better reputation of Missouri cattle entering the market
- Better cattle management leads to improved cattle operation profitability, which improves Missouri state economy

## WARM SEASON GRASS CATTLE GRAZING WORKSHOP

*Patrick Davis, Livestock Specialist*

*Pat Miller, Agronomy Specialist*



### Number of Cedar County residents served

- 2 people

Participants learn about warm season grass development and cattle nutrition and grazing management on warm season grasses

### What did they learn?

Workshop attendees were asked through workshop evaluation their knowledge before and after the workshop on a 5 point scale with 1 being low and 5 being high. 11 of 14 participants answered the evaluation. They reported an average of 13% improvement in knowledge gained. Some of the specific knowledge gained included:

- specific characteristics of individual warm season grasses
- characteristics of specific grasses
- more understanding of all grasses
- learned more about alfalfa
- knowledge gained on nitrates and nitrites
- stocking rates, grazing times
- value of warm season. How to better manage it
- did not know about toxic fescue severity or that cereal rye creates toxins to other plants in the soil

### What action did they take?

Workshop attendees were asked how they plan to implement the knowledge gained and responses are below

- I will take the info and see how to incorporate it in our equipment program
- plant crabgrass this year, big blue and indian grass next year
- yes
- good baseline to share with landowners
- expand grazing knowledge to land owners I work with
- start grazing
- better manage, cut it earlier, last of June to 1st of July or graze it and cut cool season grass instead of grazing
- review with Pat and Patrick regarding our rotational practices with cereal rye

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Attending this event provides cattle producer's knowledge to improve enterprise profitability resulting in stronger county economy

#### Statewide

- Education leading to better cattle management resulting in better reputation of Missouri cattle entering the market
- Better cattle management leads to improved cattle operation profitability, which improves Missouri state economy

## WINTER CATTLE FEEDING AND HEALTH MANAGEMENT WORKSHOP

*Patrick Davis, Livestock Specialist*



### Number of Cedar County residents served

- 7 people

Participants learn proper management in both of these areas, which should lead to optimum cattle performance and operation efficiency during the winter feeding period

### What did they learn?

Participants were asked via evaluation what their knowledge was before and after the workshop on the topics discussed. 29 of 34 participants answered this portion of the evaluation. The average before workshop knowledge was 2.5 and after workshop knowledge average was 3.6 which shows a 21% improvement in knowledge gained. Specific knowledge by the participants included:

- rations
- hay quality and cattle health
- wormer info
- what to look for in forage test results
- hay waste from different forms of feeding and how to analyze manure
- hay should be over 7% crude protein, starches under 0.5% of BWT
- corn starch shouldn't be > 50% of supplement
- nutrient needs and feeding efficiently
- why hay test/nutrition info
- how to pull hay for testing + why to do so
- energy vs protein requirements
- vaccination
- learned definition of terms related to forage
- it pays to test forage
- quality of forage feed

### What action did they take?

Participants were asked via evaluation how they plan to use the knowledge gained and here are the responses:

- better vaccination program
- rotate wormers
- change up feeding
- calculate and adjust cattle rations based on resources
- probably get a hay test to build our supplement more effectively for the winter since we grind our own
- raise better calves
- nutrition management
- do more forage testing
- better vaccination program
- delegate the feeding of forages to other on the ranch
- acquire a hay testing probe
- feed animals better hay

As a result of this workshop more residents sought assistance understanding their hay test and how to development rations for feeding their cattle through the winter.

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Attending this event provides cattle producer's knowledge to improve enterprise profitability resulting in stronger county economy

#### Statewide

- Education leading to better cattle management resulting in better reputation of Missouri cattle entering the market
- Better cattle management leads to improved cattle operation profitability, which improves Missouri state economy

## REGIONAL GRAZING SCHOOLS

*Patrick Davis, Livestock Specialist*

*Jill Scheidt, Agronomy Specialist*

*Terry Halleran, Agronomy Specialist*

*Pat Miller, Agronomy Specialist*



### Number of Cedar County residents served

- 9 people

This workshop is a five-class event where MU Extension collaborates with the Natural Resource Conservation Service and Soil Water Conservation District personnel, to educate the public on various aspects of intensive grazing management.

### What did they learn?

Participants were educated on the following:

- Introduction to Management Intensive Grazing
- Grazers Arithmetic
- Cost Share
- Stockpiling/strip grazing fescue
- Layout and design of a grazing system
- Pasture allocation
- Fencing
- Water
- Forage Stand Evaluation
- Forage Quantity Estimate

### What action did they take?

Based on evaluations participants plan to

- use the grazing stick to figure pasture allocation
- implement rotational grazing
- improve watering systems
- improve soil management practices
- diversify livestock operations
- develop fencing systems

### How does this work make Cedar County and Missouri better?

#### Cedar County

- Improved pasture management leading to more forage production leading to increasing livestock carrying capacity
- Increasing livestock carrying capacity improves farming income, county income and strengthens county economy

#### Statewide

- Stronger county economy will improve state economy



---

**MU EXTENSION -BUSINESS DEVELOPMENT PROGRAMS**

*Lisa Robinson, Director of Small Business and Technology Development  
Missouri Southern State University*



---

Missouri's small businesses are an increasingly diverse group that continue to boost state productivity. There are 507,712 small businesses in Missouri. This is the equivalent of 97.5 percent of all Missouri businesses. Missouri small businesses employ more than 47 percent of the private workforce. In assisting the owners and managers of these businesses, MU Extension contributes to a county's economic development through growth in jobs, sales, innovation, technology development and commercialization, and community growth.

In Cedar County during fiscal year 2019, MU Extension Business Development Program (BDP) served 93 people and their companies with business start-up and management counseling, training, and other assistance. Three PTAC awards were obtained for a total of \$20,646.00. One job was created and 24 jobs were retained.

BDP faculty and staff who contribute to these business successes have regional and statewide assignments. BDP serves all counties in the state.

The BDP Delivery Network includes Field Specialists headquartered at University of Missouri Extension centers; centers located on the University of Missouri campuses at Columbia, Kansas City, St. Louis and Rolla; and centers at most of the state universities across Missouri. The programs delivered through this network include:

- Missouri Small Business & Technology Development Centers
- Technology Development & Commercialization
- Economic Gardening
- International Trade Center
- Missouri Procurement Technical Assistance Centers
- Mid-America Trade Adjustment Assistance Center
- Environmental Assistance Center
- BDP Workforce Program

## MU EXTENSION TAX SCHOOLS

*MU Extension Ag Economic Department and Regional Ag Business Specialists*



### Number of Cedar County Residents Served:

- 4 people

During 2019, University of Missouri Extension ag economics department and regional ag business specialists worked together to coordinate two summer and six fall tax schools. The schools were designed for those who prepare taxes including: enrolled agents, tax preparers, CPA's, individuals and attorneys.

The training included updates on the Tax Cuts and Jobs Act legislation, rulings and cases, individual taxpayer issues, agricultural and natural resources topics, IRS rules and regulations, business issues, retirement issues, cybersecurity, limited liability companies, trusts and estates, religious organization tax issues, and ethics. The schools were approved for 8 hours of continuing education credit by the IRS, Missouri Bar and for CFP continuing education. Total continuing education hours reported to IRS for the schools was 2,955 hours.

The 2019 school attendance totaled four hundred twenty-eight people. The schools were held in Cape Girardeau, Columbia, St. Joseph and Springfield. The participants were from all over Missouri. There were 4 participants from Cedar County.

The teaching teams included a CPA and former IRS employee, an IRS certified retired ag economics professor, an attorney and a regional extension ag business specialist.

The trainings received positive evaluations and planning is underway to offer additional trainings in 2020. Local county residents benefit when local tax preparers have the opportunity to gain knowledge, which benefits their clients and communities. The schools are a program of the ag business and policy program of MU Extension, coordinated by Mary Sobba and a team of ag business specialists help throughout the state.

## RURAL STRONG: POWERING RURAL SMALL BUSINESSES

*David Black, Ag Business Specialist*

*Patrick Davis, Livestock Specialist*



### Number of Cedar County Residents Served:

- 20 People

This workshop was done in cooperation with Stockton Area Chamber of Commerce and Missouri SBDC. Presenters included Makeesha Munro, Business Program Specialist with Rural Development, United States Department of Agriculture Lisa Zimmerman, Lender Relations Specialist, Springfield Missouri Branch Office U.S. Small Business Administration Krista Hinrichs, Trade Manager-Asia Missouri International Trade and Investment Office Kenneth Surbrugg, Consultant Missouri SBDC at Missouri Southern State University

### Topics Covered:

- Business and Industry Guaranteed Loan Program
- Rural Energy of America Program
- SBA Loan Programs
- Credit Building

The Event is designed to inform entrepreneurs, small business owners and community organizations about the federal lending programs and resources powered by the SBA, USDA, and Missouri Small Business Development Center.

The overall rating of the program was on a 1 to 7 scale. 18 of the 20 attendees filled out the evaluation. 10 ranked it as a 7 which was excellent and 8 ranked it as a 6 which was close to excellent. Average is a 6.556.

Participants were asked if they would recommend the program and all 18 people that attended said yes.

## 2019 CEDAR COUNTY FINANCIAL SUMMARY

University of Missouri provides salaries and benefits towards 2 professionals and 2 paraprofessional staff members headquartered in Cedar County. The University provides in-service training expenses, including travel and lodging for staff, and matching funds for computer equipment costs and maintenance. The average cost state wide for these positions are (including benefits): Field Faculty (Specialists & CES, including training, travel and technology requirements) \$82,471; Youth & Nutrition Program Associate salary (benefit eligible) \$38,742; Youth & Nutrition Program Associate salary (non-benefit eligible) \$14,450.

<b>Annual Financial Statement for Cedar County</b>	
<b>Beginning Balance (Appropriations)</b>	<b>\$19,061.28</b>
Income:	
County Appropriations	\$43,230.00
<b>Total</b>	<b>\$62,291.28</b>
Expenses:	
Salary – Office Manager	\$26,414.10
Salary – Youth Program Associate (.125 FTE)	\$2,881.58
Council paid benefits	\$6,891.65
Travel	\$2,613.72
Postage	\$74.41
Telephone	\$1,457.01
Advertising	\$78.02
Supplies/Services	\$1,230.64
Membership Fees	\$170.00
Furniture / Equipment	\$381.16
<b>Total</b>	<b>\$42,192.29</b>
<b>Ending Balance (Appropriations)</b>	<b>\$20,098.99</b>
Restricted Funds (Year-end account balances)	
MU Mailing Allotment	\$4,167.80
MU Programming Funds	\$0.00
Education and Services	\$7176.06
Grasslands Project	\$3,120.00
Iron Skillet Award	\$125.00
Restricted Endowment	\$1,500.00
Regional Beef Cattle Conference	\$3,913.49
<u>Hickory County Beef Tour</u>	<u>500.00</u>
<b>Total</b>	<b>\$20,502.35</b>
Cedar County 4-H Council Total Assets	\$24,101.16
Cedar County 4-H Shotgunners Endowment Fund	\$89,953.10
Cedar County MU Extension Endowment Fund	\$17,199.02

2020 UM Systemwide Impact Data Sheets

# Cedar County



University of Missouri System  
COLUMBIA | KANSAS CITY | ROLLA | ST. LOUIS

UM System Footprint in the county in 2019



## FY2019 county students

**17 students**

- 13 Undergraduates
- 4 Graduate and professional students
- 15 Full-time students
- 2 Part-time students



## County employees and retirees

**6 people employed by UM**

- 6 Campuses

4 UM retirees and beneficiaries

UM salary and retirement income: \$261,191

UM state tax revenue: \$6,453

UM federal tax revenue: \$27,995



## County alumni

**Selected school alumni**

- 3 Medicine
- 9 Nursing
- 2 Dentistry
- 4 Pharmacy
- 4 Veterinary Medicine
- 25 Agriculture
- 11 Engineering
- 8 Law

**Alumni teaching K-12**

- 8 teachers
- 4.4% of all district teachers



## County breakdown

**MU**

- 11 students
- 88 alumni
- 6 employees

**UMKC**

- 2 students
- 25 alumni
- 0 employees

**Missouri S&T**

- 4 students
- 10 alumni
- 0 employees

**UMSL**

- 0 students
- 3 alumni
- 0 employees



## County properties and offices

MU Extension in: Cedar County



County population: 13,862



## County services provided

**Health care**

- 67 in-state patients seen at UM Health Care, with \$15,909 of uncompensated care
- 7 in-state patients seen at UMKC School of Dentistry with a statewide average of \$82.27 per patient in uncompensated care
- In FY2018, University of Missouri Health Care's Missouri Telehealth Network provided services to 1 in-state patient at 1 site

**Extension**

- 6,699 Total educational contacts from MU Extension to residents of district counties, including:
- 500 contacts related to productive farming, better gardening, and managing natural resources
- 6,189 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development
- 10 contacts related to starting businesses, developing community leaders, or renewing the local economy



2020 UM Systemwide Impact Data Sheets

# Cedar County



University of Missouri System  
COLUMBIA | KANSAS CITY | ROLLA | ST. LOUIS

UM System Statewide Footprint

## Economic and Community Development Highlights

- Business development specialists worked with small businesses and entrepreneurs statewide to create or retain 20,283 jobs.



For every dollar invested in University of Missouri Extension \$11 of public value is returned; generating \$945 million in direct and economic benefit to Missouri in 2016.

- Between FY2013 and FY2018, UM System brought Missouri more than \$1.08 billion in federal and private research funds, funded primarily from outside the state but spent within the state.



In 2019, the university was issued 59 patents and filed 47 new U.S. patent applications.

- In 2019, the UM System construction projects resulted in a total investment in the state of \$144.9 million.



In FY 2019, Missouri Telehealth Network brought the expertise of University of Missouri Health Care physicians to underserved areas—1,304 patient consults in 103 counties.

## Education and Training Provided



72,581 police, fire fighters, and medical professionals attending continuing education (2018)



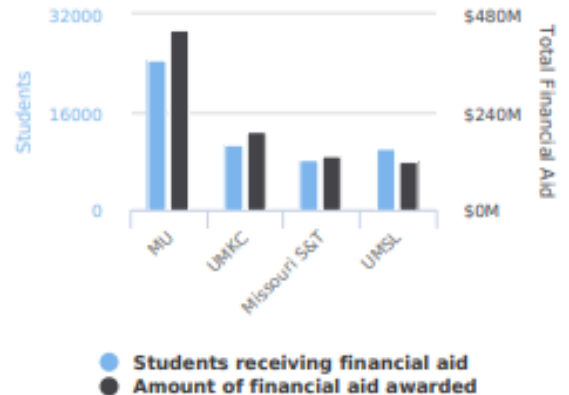
Agriculture and natural resource programs served 138,921 farmers and related businesses



300,807 youth and stakeholder educational contacts in 4-H clubs, schools, camps and other programs

## Education Highlights

Financial Aid Awards



In FY 2019, 65.7% of the UM System's 82,142 students received financial aid totaling \$889.5 million



UM System's MOREnet (Missouri Research and Education Network) provides internet connectivity, access, support and training to 58 higher education institutions (263,000 students), 493 K-12 school districts (862,000 students) and 121 public libraries (serving nearly 3 million Missourians) in 2018

- UM System awarded 53.6% of Missouri's 32,200 bachelor's or higher degrees from four-year public institutions in Academic Year 2017-2018.
- In 2019, UM System's \$22.6 million in National Science Foundation (NSF) grants represented 85.6% of all NSF grants made to Missouri public colleges and universities.

Supporting the University of Missouri is an investment in the future of Missouri.

The university advances Missouri citizens and communities through its mission of teaching, research, public service, and economic development across our four campuses and University of Missouri Extension.

Prepared in December 2019, based on the best available and most recent data. Data Sources include: Missouri Office of Administration - UM IR - Office of Social and Economic Data Analysis (OSED) - Center for Applied Research and Engagement Systems (CARES) - MU - UMKC - Missouri S&T - UMSL - UM System - UM Health Care - MU Extension - US Census Bureau - US Dept. of Health and Human Services - National Science Foundation



