



UNIVERSITY OF MISSOURI EXTENSION

Cole County

2024

Annual Report



**SERVE
MISSOURI.**

**DELIVER
MIZZOU.**

2436 Tanner Bridge Rd
Jefferson City, MO 65101
573-634-2824

colecto@missouri.edu



Extension
University of Missouri

an equal opportunity/ADA institution



Office of Extension
and Engagement
University of Missouri

Vice Chancellor's Office
108 Whitten Hall
Columbia, MO 65211
PHONE 573-882-2394
EMAIL cchiggins@missouri.edu

December 2024

Dear county commissioners, elected leaders and friends of MU Extension and Engagement,

As we reflect on the past year, I want to express my deep gratitude for your support of MU Extension and for your partnership in enhancing the lives of Missourians.

Your support for MU Extension fuels Missouri's agriculture, strengthens families, prepares our youth and promotes the health, well-being and vitality of our communities. Over the past year, our programs have focused on addressing key needs throughout the state:

- **Expanding access to 4-H:** To make 4-H more accessible, we've introduced more in-school and after-school clubs, reducing barriers and creating opportunities for young Missourians to develop essential skills and leadership abilities.
- **Supporting agriculture and land stewardship:** We're addressing critical issues such as succession planning for family farms, rural mental health, agricultural business management and land stewardship. These initiatives are helping Missouri's farmers plan for the future and preserve the health of our land for future generations.
- **Advancing health initiatives:** Our team of community health field specialists, covering every region of the state, works directly with local leaders to assess health needs and bring UM System resources and expertise to these communities, supporting healthier lives and stronger communities.
- **Promoting economic development:** MU Extension is helping to create economic opportunities by working with individuals, supporting businesses in their growth and collaborating with communities to enhance local vibrancy. Through these efforts, we help bring new jobs, skills and possibilities to Missourians across the state.
- **Providing essential training:** Our continuing education programs prepare Missouri's firefighters and health care workers to meet the demands of their roles with the latest skills and knowledge, ensuring they are well-prepared to serve our communities.

As you read through this annual report, I hope you feel as proud as I do of the accomplishments we've achieved together. The dedication and professionalism of MU Extension's faculty and staff are inspiring, and I am grateful to work alongside them—and each of you—as we make Missouri a stronger, healthier and more vibrant place. Thank you for your continued support and partnership. Together, we are serving Missouri by delivering the University *for* Missouri.

Warm regards,

Chad Higgins, PhD
Vice Chancellor, MU Extension and Engagement
Chief Engagement Officer, UM System

Who we are

Faculty and staff



Elizabeth Anderson
Extension Engagement Specialist

Dakota Souders
Youth Program Associate

Dawn Sebion
Nutrition Program Associate

Dhruba Dhakal
Horticulture Specialist

Sean Eberle
Youth Program Associate

Becky Layton
Administrative Assistant IV

Eleanor Bax (not shown)
P/T Administrative Assistant

Council members

Josh Dunne, Chairman
Cindy Hassler, Vice-chairman
Robin Garrison, Secretary
Janice Webb, Treasurer
Julie Allen
Donna Kennison-Otto
Jeff Suthoff
Shirley Seabaugh
Dennis Bening
Enjoli Dixon
Sharon Gulick
John Haselhorst
Vic Rickers
Terry Heiman
Gregory Popp
Donna Mehrle-Elliott
Daryl Raithel-Farm Bureau



County executives

Sam Bushman,
Presiding Commissioner

Jeff Hoelscher,
Easter District Commissioner

Harry Otto,
Western District Commissioner

Budget and more

Appropriations budget

Income	
County Appropriations	\$107,144
Expenses	
Office Support Wages/Benefits	\$54,608
Youth Program Associate	\$28,678
Travel	\$1,896
Telephone	\$4,400
Office Supplies/Service	\$2,000
Utilities	\$3,900
Insurance	\$4,595
Contract Services	\$7,067
Total Expenses	\$107,144

County partners



Follow us on
Facebook



MU Extension is a unique funding partnership.

Extension funding is a three-way partnership of federal, state and county government. Federal and state money, through the University of Missouri system, pay professional staff salaries, training costs, computers and communication equipment. Cole County funds support the local office, secretarial and youth assistant salaries, staff mileage and council expenses.

The Cole County Extension Council, faculty and staff would like to express our appreciation to the Cole County Commissioners for their continued support of extension programs.



Local Support

Did you know you can donate directly to Cole County Extension with a gift to be used immediately or as an endowment contribution for long term efforts. Monies put into the endowment are left forever to earn interest with the county office benefiting each year. You can also direct your donation to a specific program such as 4-H or Master Gardeners.

Cole County



UM System Footprint in the county in 2024



FY24 county students

862 students

- 661 Undergraduates
- 201 Graduate and professional students
- 667 Full-time students
- 195 Part-time students
- 129 Pell grant recipients (aid year 2024)



County employees and retirees

1,442 people employed by UM

- 434 Campuses
- 981 MU Health Care (includes additional employees gained via the recent integration of Capital Region Medical Center)
- 27 UM System

194 UM retirees and beneficiaries

UM salary and retirement income: \$88.6 million

UM state tax revenue: \$3.0 million

UM federal tax revenue: \$16.0 million



County alumni

Selected school alumni

- 142 Medicine
- 226 Nursing
- 435 Health Professions
- 37 Dentistry
- 34 Pharmacy
- 6 Optometry
- 27 Veterinary Medicine
- 574 Agriculture
- 790 Engineering
- 343 Law

Alumni teaching K-12

- 167 teachers
- 19.2% of all district teachers
- 13 principals and administrators
- 27.7% of all district principals and administrators



County breakdown

MU

- 700 students
- 4,278 alumni
- 410 employees

UMKC

- 42 students
- 302 alumni
- 7 employees

Missouri S&T

- 92 students
- 559 alumni
- 11 employees

UMSL

- 28 students
- 188 alumni
- 6 employees



County population: 76,924



County services provided

Health care (FY24)

- 35,619 in-state patients seen at MU Health Care, with \$9.9 million of uncompensated care
- 2 in-state patients seen at UMSL Center for Eye Care with a statewide average of \$32.18 per patient in uncompensated care
- 41 in-state patients seen at UMKC School of Dentistry with a statewide average of \$52.57 per patient in uncompensated care
- MU Health Care's Missouri Telehealth Network recorded 3,604 visits to 1,993 patients having ZIP codes associated with the county

Extension (2023)

- 5,185 Total educational contacts from MU Extension to residents of the county, including:
 - 1,500 contacts related to productive farming, better gardening, and managing natural resources
 - 1,517 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development
 - 1,042 contacts related to starting businesses, developing community leaders, or renewing the local economy



Construction projects

- \$66.7 million remitted to 31 county vendors, for 100 projects



County properties and offices

MU Extension in: Cole County

Cole County



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

UM System Statewide Footprint

Economic and Community Development Highlights

- In FY23, Business Development Specialists worked with small businesses and entrepreneurs statewide to create or retain 98,527 jobs.

\$3.1 billion

For every dollar invested from 2019 to 2021, the MU Extension Business Development Program has returned \$133 in economic impact for its clients by increasing sales more than \$1.6 billion. For a total impact of \$3.1 billion, the program has generated more than 37,000 jobs and attracted nearly \$451 million in capital investments and \$1.5 billion in government contracts.

- Between FY18 and FY23, UM System brought Missouri more than \$1.58 billion in federal and private research funds, funded primarily from outside the state, but spent within the state.



In FY24, UM System was issued 29 patents and filed 69 new U.S. patent applications.

- In FY24, the UM System awarded 707 design and construction project contracts throughout Missouri, for a total investment of \$287.3 million in the state.



In FY24, to improve access to medical and health related services, MU Health Care's Missouri Telehealth Network's Show-Me ECHO program provided 16,687 hrs of case-based instruction to 3,113 learners located in 105 of 114 Missouri counties and the city of St. Louis.

Education and Training Provided



40,542 police, fire fighters, and medical professionals attending continuing education (2023)



Agriculture and natural resource programs served 369,077 farmers and related businesses (2023)

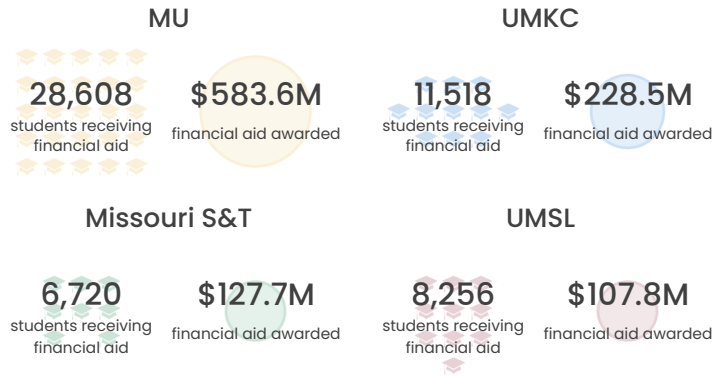


210,577 youth and stakeholder educational contacts in 4-H clubs, schools, camps and other programs (2023)

Education Highlights

FY24 Financial Aid Awards

In FY24, 69.7% of the UM System's 79,014 students received financial aid totaling \$1.048 billion



UM System's MOREnet (Missouri Research and Education Network) provides internet connectivity, access, support and training to 58 higher education institutions (230,000 students), 484 K-12 school districts (830,000 students) and 134 public libraries (serving nearly 3 million Missourians) in 2023.

- UM System awarded 50.5% of the 31,689 Bachelor's or higher degrees awarded by Missouri four-year public institutions in 2023-24.
- UM System awarded 35.0% of the 1,776 research doctorates and 26.8% of the 3,796 professional doctorates awarded by Missouri public and not-for-profit private institutions in 2023-24.
- In FY24, UM System's \$30.7 million in National Science Foundation (NSF) grants represented 96.9% of all NSF grants made to Missouri public colleges and universities.
- In 2024, over 12,400 Missourians accessed mobroadband.org, part of the UM System Broadband Initiative which helped the statewide build-out of high-speed internet infrastructure.

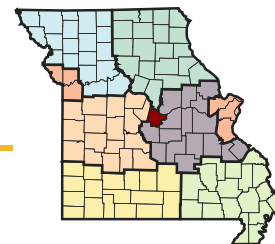
Supporting the University of Missouri is an investment in the future of Missouri.

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 2024, based on the best available and most recent data. Data Sources include: Missouri Office of Administration • UM IR • MU Institute for Public Policy • 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



Missouri Grand Challenges: Local Solutions



COLE COUNTY

Knowing Missouri's Needs

MU Extension asked Missourians to share the greatest challenges they and their communities face.

We heard that feedback and made big changes in the way we work with council and local partners to improve lives. Locally, a network of county engagement and subject matter specialists now share MU's knowledge, research and engagement, targeting programs, information and assistance in:

- agriculture and environment
- youth and family
- business and community
- health and safety

For each grand challenge, MU Extension and Engagement targets a specific gain by 2023:



Economic opportunity

Increase MU Extension and Engagement's economic impact to the State of Missouri from \$1 billion to \$1.5 billion overall, and from \$88 billion to \$100 billion in agriculture, the top economic sector



Educational access and excellence

Increase participation in postsecondary education from 66% to 70%



Health and well-being

Improve Missouri's health ranking from 40th to 35th in the nation

Knowing Local Challenges



CHALLENGE 1: Economic Opportunity: *Business Dynamics*

Business Growth/Change

The rate of business change reflects the net gain or loss in total establishments. The report area saw a net loss of 3 businesses between 2011 and 2021. There were 1,873 establishment "births" and 1,876 "deaths" contributing to the change. The rate of change was -0.15% over the ten year period, which is lower than the state average of 9.32%.

Establishment Net Change Rate

-0.15%

Cole

Missouri

9.32%

Data Source: US Census Bureau, [US Census Business Dynamics Statistics](https://www.census.gov/economic-surveys/business-dynamics-statistics). 2011-2022.

Largest Job Sectors

Understanding the local economy is vital to describing a community. In this region, the largest sector by employment size is Government and government enterprises, which employs 19,189 people. The average wage for the industry is \$70,194. Retail trade and Health care and social assistance are the next largest sectors, and they employ 7,891 and 6,406 workers, respectively.

Job Sector	Total Employment	Average Wage
Government and government enterprises	19,189	\$70,194
Retail trade	7,891	\$38,494
Health care and social assistance	6,406	\$66,534

Data Source: US Department of Commerce, [US Bureau of Economic Analysis](https://www.bea.gov/). 2022.



CHALLENGE 2: Educational Access and Excellence: *Early Childhood Education*

Access to Early Childhood Education

Head Start is an early childhood education program for at-risk children through age 5. Families utilizing Head Start have better success meeting developmental goals and achieving economic stability. In 2018, there were 2 Head Start programs in the report area, or 4.68 per 10,000 population. Access to head start is lower in this area than in the state.

Head Start Programs, Rate (Per 10,000 Children Under Age 5)

4.68

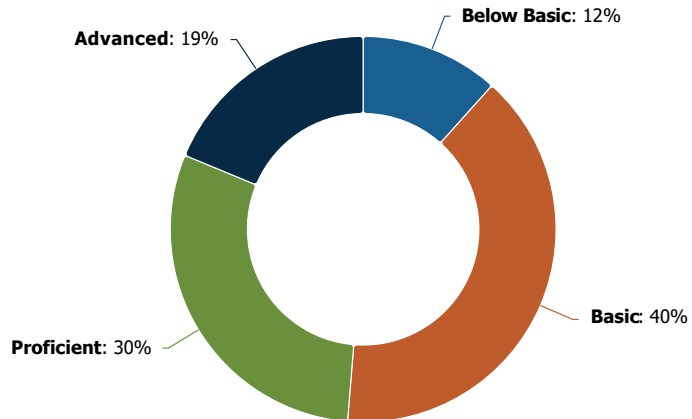
Cole

Missouri 13.13

Data Source: US Department of Health & Human Services, [HRSA - Administration for Children and Families](#). 2024.

English Language Arts Proficiency

Starting in the 4th grade, public schools emphasize proficiency in reading and reading comprehension. The ability to comprehend becomes the foundation to find and process information in later years and it is important to prevent children from falling behind. Of the 788.00 fourth graders tested in 2018, the known total number of students who had a basic level of English Language Arts was 290.00. The number tested as below basic was 85.00, basic was 290.00, proficient was 219.00, and advanced was 137.00.



Data Source: [Missouri Department of Elementary & Secondary Education](#). 2022.



CHALLENGE 3: Healthy Futures: *Healthy Aging*

Fall Injuries

Falls are the leading cause of injury-related fatality and hospitalization among older adults in the United States. Between 2013 and 2015, adults over age 65 in the report area had 2,411 hospital or emergency room admissions for fall and jump-related injuries. The rate of these injuries was 5,938 per 100,000 population, which is higher than the state rate of 5,396. Falls hospitalizations have increased since the 2001-03 time period when the rate was 5,807.

Rate per 100,000, 2019-2021

5,938

Cole



Missouri 5,396 😞

Data Source: US Department of Health & Human Services, [Missouri Department of Health & Senior Services](#). 2019-2021.

Primary Care Providers

Older adults make up a historically large percentage of the U.S. population, and meeting the healthcare needs of an aging population can be challenging. In the report area, there are approximately 54 primary care physicians (MDs and DOs) to serve the area's 13,778 residents over the age of 65. The patient-provider ratio in the report area is 255:1, which means there is 1 provider for every 255 older adults. The ratio of adults to providers in the report area is higher than the state average of 250:1, which means there are fewer providers per person in this area.

Rate per 100,000 Seniors

391.90

Cole

Missouri 399.40

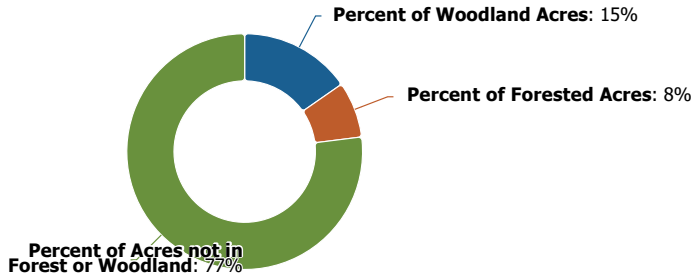
Data Source: US Department of Health & Human Services, Health Resources and Services Administration, [HRSA - Area Health Resource File](#). 2021.



CHALLENGE 4: Agricultural Growth & Stewardship: Resource Management

Forested, Woodland & Non-forested Acres

Sustainable management of forests and woodlands and harvesting of mature trees support the state's \$10.3 billion forest products industries. Forests have a closed canopy (>80% cover) permitting little light to penetrate to the ground below. They consist of several overlapping layers of trees, with a mid-story and understory comprising a variety of shade-tolerant shrubs and a sparse layer of soft-stemmed plants. Woodlands have a more open canopy (30-80% cover), and their sparse, woody mid-story allows more sunlight to reach the ground. This light permits the growth of a dense ground cover containing a variety of wildflowers, grasses and sedges. Fire plays a large role in maintaining woodland habitats.

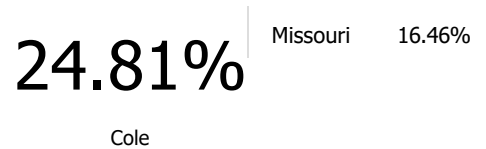


Data Source: Multi-Resolution Land Characteristics Consortium, [National Land Cover Database](#).

Rotational Grazing

A planned rotational grazing system allows time for vegetation to rest and recover before being grazed again. In 2017, nearly 16,000 Missouri farms reported practicing rotational or management-intensive grazing. With 11 million acres of row crops and nearly 2 million grazing livestock animals (mainly cattle), Missouri is well suited to capitalize on the grazing potential of cover crops. In addition to generating more income, grazing cover crops can have a positive impact on soil health. Manure, hoof action and the root responses that grazing elicits stimulate soil biological activity and lead to healthier soil and healthier crops.

Percent of Operations Utilizing Rotational Grazing



Data Source: US Department of Agriculture, National Agricultural Statistics Service, [Census of Agriculture](#). 2022.



MU EXTENSION **Serves MISSOURI and Delivers MIZZOU** through credible statewide programs

Missouri 4-H for ages 8 – 18



Community clubs are organized by volunteer club leaders and teams of recognized volunteers. Members attend club meetings, elect officers, enroll in projects and plan learning and community service activities. Some clubs opt to be single-project clubs, where all members focus on the same project.



Missouri 4-H Agriculture and STEM programs

employ hands-on activities that foster problem-solving, creativity, critical thinking and exploration in engineering and technology. Agriculture programming emphasizes biology, environmental science, agri-science, veterinary science and engaging activities such as animal care and agronomy. STEM programs delve into computer science, robotics, aerospace, physics, chemistry and veterinary science.



4-H Natural Resources programs

employ hands-on activities in climate science, environmental sustainability, renewable energy, sportfishing and wildlife conservation. The **Shooting Sports program**, which teaches marksmanship, safe firearm use, hunting and archery principles, is a prime illustration of how 4-H programs promote holistic youth development and responsible citizenship. Supported by caring adult leaders, these programs offer opportunities to cultivate life skills, self-worth and conservation ethics.



Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

Cole County

Missouri 4-H

Local Impact



Cole County 4-H volunteers lead youth and their families in projects and other activities. Without volunteers our 4-H program would not be the quality program Missouri families need.

Cole 4-H hosted a barn Dance at Barn Three at the Fairground this fall. 4-H collected canned goods for 4-H Feeding Missouri as a service component.



Cole County

Missouri 4-H

Profiles and Stories



Check out some photos of other 4-H programs from this 2024!

Profiles and Stories

A community of 268 Club members and 2229 participants building life skills, contributing to their community, and becoming college and career ready.

Common Measures

Findings from a 2021-22 evaluation study shows that Missouri 4-H:

Missouri 4-H Inspires Kids to Do

98% said they are willing to work hard on something difficult.

91% set personal goals.

97% said they try to learn from their mistakes.

98% said they treat others the way they want to be treated.

Missouri 4-H Grows True Leaders

97% said they like to learn about people who are different from them.

93% said they think about others feelings before they say something.

75% reported feeling comfortable being a leader.

4-H Builds Leadership and Communication Skills

95% help others reach their goals.

86% comfortable speaking in a group.

99% said they show respect for other's ideas.

85% Can work with someone who made them upset.

95% Look for ways to involve all members of a group.

4-H Builds Social and Emotional Skills

94% said they keep trying until they reach their goals.

89% Stop to think about their choices when making a decision.

97% reported that they like to learn new things.



MU EXTENSION **Serves MISSOURI and Delivers MIZZOU**

through credible statewide programs

Missouri 4-H for ages 8 – 18



4-H Natural Resources programs employ hands-on activities in climate science, environmental sustainability, renewable energy, sportfishing and wildlife conservation. The **Shooting Sports program**, which teaches marksmanship, safe firearm use, hunting and archery principles, is a prime illustration of how 4-H programs promote holistic youth development and responsible citizenship. Supported by caring adult leaders, these programs offer opportunities to cultivate life skills, self-worth and conservation ethics.



Missouri 4-H Agriculture and STEM programs employ hands-on activities that foster problem-solving, creativity, critical thinking and exploration in engineering and technology. Agriculture programming emphasizes biology, environmental science, agri-science, veterinary science and engaging activities such as animal care and agronomy. STEM programs delve into computer science, robotics, aerospace, physics, chemistry and veterinary science.



4-H's Healthy Living programming teaches skills for healthy choices and lifestyles, enhancing overall well-being and equipping youths to tackle life's challenges. Emphasizing social-emotional health, 4-H fitness, health, nutrition and safety programs cultivate confident, caring young leaders who prioritize mental and physical well-being.

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being



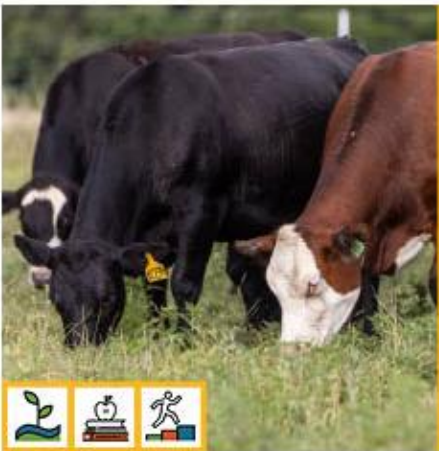
MU EXTENSION **Serves MISSOURI and Delivers MIZZOU**

through credible statewide programs

Agriculture and Environment



The Agricultural Business and Policy (ABP) program drives the growth of Missouri's agriculture economy by equipping farmers, ranchers, landowners and agribusinesses with the knowledge and tools to make sound farm management decisions. ABP provides interactive programming and tailored resources such as enterprise budgets and farm accounting tools and valuable executive education through its annual Agricultural Lenders School and seminars. These programs deliver key insights, market outlooks, policy updates and practical tools to help lenders and their clientele navigate volatile farm economies. ABP conducts unbiased comprehensive surveys on farmland values, custom farming rates and cash rental rates. These surveys for farm operators, ag lenders, government agencies and industry stakeholders provide valuable insights into trends and indicators of farm financial health.



Missouri Grazing Schools teach management-intensive grazing by dividing large fields into smaller paddocks and systematically rotating livestock among them. Producers who attend the grazing schools learn how to reduce costs through improved livestock grazing and pasture management while getting insights into fencing, watering systems and grazing system design.



The annual impact of management-intensive grazing is estimated to be \$125 MILLION per year in Missouri.



The Missouri Agriculture, Food and Forestry Innovation Center (MAFFIC) provides dedicated technical assistance to help value-added agricultural producers launch or expand their businesses. Through personalized support in marketing, product development, business planning and financial analysis, MAFFIC business counselors equip producers with the knowledge and tools needed for success. Each year, these free services reach more than 150 producers, driving innovation and growth in Missouri agriculture.



Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

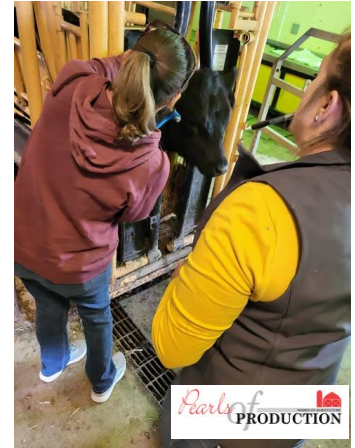
Callaway County

Chrisee Brandl – Livestock Specialist

Agriculture and Environment

Local Impact

Pixels and Pearls of Production – This is a hands-on educational opportunity for women in agriculture. The Pixels session was held via Zoom on topics including estate planning, backyard layers, enhancing value added meat marketing, and beekeeping. The keynote presentation was given by a Professor at the University of Arkansas, Janeal Yancey, who writes about the meat industry from the view as a mom and producer. The Pearls session was held in person at MU Beef Research and Teaching Farm in Columbia, MO. Topics included genetics, forage and pasture, backyard layers, and farm headaches. Youth were able to participate in the Pearls session by interacting hands-on with Missouri agriculture products. They made their own lunch and gained knowledge about the agriculture industry. The program for 2024 had approximately 61 participants.



Show-Me-Select (SMS) Heifer Replacement Program –

The SMS program showed increased adoption rate by farmers in Missouri of management practices that offer potential to improve long term reproductive efficiency of their herds resulting in profitability. The 2024 SMS sale for the Central Region was held in Vienna, MO. Chrisee Brandl is the Regional Coordinator for the Central Region. Chrisee completed 12 farm visits to gather pre-breeding, breeding, pregnancy data along with tagging heifers before the sale. There were 7 consignors that sold 43 heifers at the sale. The sale average was \$3,036. Heifers that were bred artificial insemination averaged \$3,173 and heifers that were bred natural service averaged \$2,946.

Grassland Partnership – This partnership is an USDA-NRCS funded program being led by the University of Tennessee and Extension service partners across nine states, including MU Extension. The partnership invited producers with grazing livestock to enroll in the program and implement specific grasslands management practices on their farms. These practices are known to improve grasslands productivity and provide environmental benefits including greenhouse gas reductions, that may offer an alternative source of income through developing carbon and environmental benefit markets. Chrisee Brandl is an agent for this partnership. Chrisee enrolled one producer that will implement native warm season grasses, amending soil with biochar, and planting legumes. This is a five-year project. Chrisee and Rusty Lee offered an event for producers to learn more about the program prior to enrollment closing. 11 participants attended the event.



Chrisee Brandl presented on the topic of extending the grazing season for livestock producers at various events. She reached approximately 725 youth and 50 producers on this topic.



County highlights

Heather Conrow
Livestock Specialist
State 4-H Animal Science Educator

Ge • net • ics (/jə'nediks/) the science of genes and how traits are passed on from one generation to the next

Genetic Lockbox

Objectives: "Obtain a basic understanding of genetics. Distinguish genotype and phenotype. Define dominant and recessive alleles and how they are represented."

Genetic Lockboxes are an innovative and interactive means to educate the public about genetics. Participants exercise communication techniques as they work together to solve the puzzles. The puzzles are designed to make participants think through and apply problem-solving skills to genetic concepts. Participants will struggle, make mistakes, and rely on teammates.

Through a partnership with Ellis Fischel Cancer Center, the Genetic Lockbox has gone statewide with **64 boxes** located across the state. Teachers, 4-H volunteers, FFA advisors, Boy and Girl Scout leaders, etc. can reserve box(s) free of charge. It comes with all the puzzles, hint cards, answer sheets, and a 25-page Facilitator's Guide.

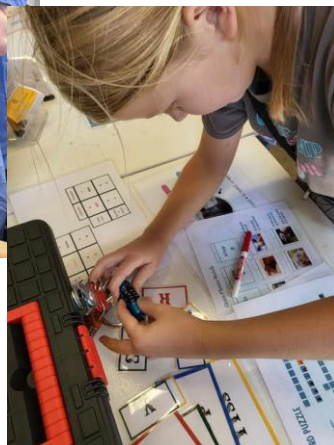


Crack the codes to open the locks to get the *prize* in the box.

*Prize not included

Fun Facts

- ❖ If all DNA strands in all the cells of **ONE** person were stretched out, it would reach to the sun and back more than **600** times
- ❖ Scientists can never clone a dinosaur because DNA has a half-life of **521** years
- ❖ Humans are **80%** genetically similar to cows
- ❖ Bone marrow transplant patients end up with **2** different DNA profiles
- ❖ All humans receive **3** feet of DNA from Dad and **3** feet from Mom
- ❖ Heart, eye, and brain cells never replicate; therefore, they can never be replaced if damaged
- ❖ Less than **2%** of our DNA codes for proteins - the rest is called "junk DNA," but is still useful
- ❖ A mouse uses more DNA from its father than its mother
- ❖ Almost all tortoiseshell cats are female, only **ONE** in **3,000** calico cats is male



Learn More





County highlights

Heather Conrow
Livestock Specialist
State 4-H Animal Science Educator

Pixels & Pearls of Production

Objective: "To provide a leadership and hands-on training opportunity for women in Missouri involved in livestock production."

Women in agriculture have long played a pivotal role, particularly in the management and care of livestock. Their contributions are often undervalued, yet their expertise and knowledge are indispensable to the sustainability and productivity of agricultural systems worldwide.

Women in agriculture not only tend to the daily needs of livestock, ensuring their health and well-being, but also bring innovation and resilience to farming practices. Their involvement is crucial in advancing food security, enhancing biodiversity, and fostering sustainable development.

By empowering women through access to resources, education, and equal opportunities, we can bolster the agricultural sector, leading to a more equitable and prosperous future for all.



Program Outcomes & Impacts

Participants increased their knowledge on the following topics with the percent increase following:

- ❖ Beef genetics on the farm: **107%**
- ❖ Backyard laying hen management: **55%**
- ❖ Forages and pasture management: **73%**
- ❖ Farm headaches: **52%**



Cole County

Agriculture and Environment

Local Impact

Cole County had 5 citizens participate in Tax School.



Extension Tax Schools

University of Missouri Extension ag economics department and ag business specialists worked together to coordinate one summer and three fall tax schools. The summer school was in person and live online. Fall schools were in Columbia and Springfield and one online school. The schools were designed for those who prepare taxes including enrolled agents, tax preparers, CPAs, individuals, and attorneys.

The training included updates on legislation, rulings and cases, individual taxpayer issues, agricultural and natural resources topics, ethics, trusts and estates, agriculture and natural resource tax issues, business tax issues, business entity tax issues, IRS issues, related party issues, real estate rental activity issues, limited liability company issues, and international tax issues. The schools were approved for 8 and 16 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 3,776 hours.

The teaching teams included CPAs, a former IRS stakeholder liaison, an IRS certified retired ag economics professor, an attorney, a certified financial planner, Missouri Department of Revenue and extension ag business specialists.

The evaluations had many positive comments and helpful suggestions. Planning is underway to offer trainings in 2025. Local county residents benefit when local tax preparers have the opportunity to gain knowledge, which benefits their clients and communities. The tax schools are a program of the ag business and policy program of MU Extension, coordinated by Mary Sobba with help from a team of ag business specialists throughout the state.

The resources for the schools included the IRS, the National Income Tax Workbook from the Land Grant University Tax Education Foundation, and materials written by the instructors.

The 2024 school attendance totaled **three hundred fifty people**. The participants were from throughout Missouri.

Cole County Horticulture Report- 2024

Dhruba Dhakal, Field Specialist in Horticulture

Spring Garden Seminar - Cole County

University of Missouri Extension in Cole County in collaboration with Central Missouri Master Gardeners (CMMG) organized a full-day Spring Garden Seminar. The seminar had five sessions. Seventy-five participants attended the seminar. The seminar provided education to the gardeners about various horticultural topics including proven winners- new annuals and perennials, resilient ornamental small trees & shrubs, and trends in vegetable gardening. Participants also learned about irrigation system in the garden such as selection, design and set up. There was a panel discussion among Central Missouri Master Gardeners about their favorite garden tools and their reviews.



Picture 1. Participants attended the spring garden seminar in Cole County Extension Center, Jefferson City, MO.

Extension Master Gardener Core Training- Mid-Missouri

University of Missouri Extension in Cole County organized a 12-weeks long extension master gardener core training in fall, 2024. Thirteen participants attended the training. The training had 12 lectures and 6 field sessions. Participants learned about various topics in horticulture. The lectures provided in the training were plants and their environment, plant health and disease, herbaceous ornamentals, landscape design, soil and nutrient management, home lawn care, home fruit production, and vegetable gardening. Participants also learned about woody ornamentals, pruning ornamental trees and shrubs, plant propagation, insects, integrated pest management and environmental stewardship. The participants toured around Governor's mansion to look different types of ornamental plants and flower. They also visited CMMG green house and propagation room and learned techniques used in plant propagation. In the field sessions, participants learn about lawn management and soil sample collection techniques from garden and lawn. They also visited a fruit and veggie garden in Columbia to learn about

various techniques about fruit and vegetable production. Participants also did a neighborhood landscape tour and learned about various aspects in landscape design. They also learned about integrated pest management and plant disease diagnosis during field sessions.



Picture 2. Participants attended on a field session for Master Gardener Training in Columbia, MO. MO.

University of Missouri Extension Master Gardener Program – Cole County

The Missouri Master Gardener program is a partnership between the University of Missouri Extension and Volunteers. The program’s mission is to train volunteers to educate the public on horticultural practices, help other learn to grow horticultural crops and promote the University of Missouri Extension as a source of gardening information.

Central Missouri Master Gardeners (CMMG) are a group of gardeners in central Missouri who organize various gardening programs and volunteer in the local community to maintain, grow and protect outdoor spaces such as maintaining flower beds, green spaces, and plant health in the local public areas. The Central Missouri Master Gardeners volunteered on various gardening projects in 2024. Some of the projects in which the gardeners involved were Central Missouri Master Gardeners’ greenhouse work. The CMMG has three medium size green houses. In these greenhouses, the gardeners prepare seedlings of ornamental plants, vegetables, annual flowers, and few perennial plants. They also prepare hanging baskets of flowers inside the green house. The CMMG members volunteer many hours in the

greenhouse from preparing the plucks until sale and cleaning afterwards. The members also prepare perennial plants cuttings/saplings in their home garden and donate to CMMG green house and sell them. There is plant sale on first weekend in May each year in the CMMG green house, located in Jefferson City. In 2024, the CMMG spent \$21,765.00 and have net profit of \$25,745.00.

The members of Central Missouri Master Gardener volunteer on different projects including the Cole County Extension Center grounds, butterfly garden, Missouri river regional library, McKay Park entrance, Greenhouse flower beds, riverside botanical garden, and Osage county library. The gardeners prepare thousands of flowers and ornamental plant seedlings and plant in the park and recreation center in Jefferson City as per the contract between the CMMG and City of Jefferson City.

The Central Missouri Master Gardeners also prepare a monthly newsletter about the upcoming programs, events and articles and send to all members each month.

The Central Missouri Master Gardener has 229 active members. In 2024, 15 members volunteered more than 100 hours. Seventy-three members entered their volunteered hours in the system. The members volunteered 5405 hours and engaged 733 hours on educational activities with total 6138 hours. With the rate of \$33.49 per volunteer hour in Missouri, the economic contribution from Central Missouri Master Gardeners was \$181, 013.00 plus \$25,745.00 profit from annual plant sale.

Workshop on Tomato Production in Home Garden– Cole County

This workshop provided education to the gardeners and horticulture crop producers about the importance of tomato among the gardeners in Missouri. They learned about the nutritional and medical importance. In the workshop, the participants learned about the suitable environment, soil preparation, seedling transplanting, nutrient, water, insect-pest and disease management. They also learned about physiological problems, harvesting and post-harvest handling of tomato in this workshop. There were 15 participants in the 2-hour workshop.



Picture 3. Participants attended on tomato production workshop in Cole County Extension Center, Jefferson City, MO.

Garden 'n Grow Program – Cole County

The Central Missouri Master Gardener organized a Garden 'n Grow Program in 2024. It is a 16-week long program in summer. The Missouri Garden 'n Grow program is a summer volunteer gardening program for 9- to 13-year-olds. Participating youths not only learn vegetable gardening, but also “cultivate” other science, math and language arts skills — and have fun! The goals of Garden 'n Grow are to experience the fun of gardening, enjoy a feeling of success, and have the satisfaction of sharing harvested food with others in need. Vegetables harvested from the gardens are for home use and donations to local food agencies. There were 9 kids participated in the program and facilitated by 5 adults (master gardeners).

Guided by adult volunteers, development of the whole child is emphasized as well as team building as each youth gardens with a partner. Adult leaders use cooperative teaching skills to educate youths about seeds, transplants, garden planning and design, site preparation, soils, plant growth and development, costs of production, garden pests, plant health care, human nutrition, food value, food needs in the local community, and horticultural career opportunities. Each adult volunteer is trained by a University of Missouri Extension specialist. A Garden 'n Grow Leader handbook, including lesson plans, and Garden 'n Grow notebooks for youth are provided.

Garden 'n Grow groups meet twice a week for an hour and a half to discuss educational subjects and to cultivate their gardens. Although Garden 'n Grow is designed as a 10-week summer program, enthusiastic gardeners often tend their garden plot until frost.



Picture 4. Participants attended the Garden 'n Grow program in Jefferson City, MO.

Soil and Plant Sample Test, On-site Farm Visit

Cole County Extension Center receives soil and plant samples from local people and send to soil testing lab. Field specialist in horticulture receives the test report and provide recommendation and interpretation to the clients. In 2024, Cole County Extension Center received 108 soil samples for testing from gardens and horticulture crop fields. Specialists also visit garden, lawn, fruit, and vegetable production farms to identify or diagnose the issues and provide research-based management options to the client. Timely diagnosis of issues in the farm helps farmers to save their crops, increase farmer's knowledge and awareness to adopt good agricultural practices (GAP). This helps to increase net farm income by increasing crop productivity and reducing production cost. The increased local economy in Cole County contributes to the better Missouri state's economy.

Radio Talks and Newsletter Articles

In 2024, horticulture specialist prepared 14 radio talks and aired through local radio stations. The radio talks were about MU Extension programs and Ag and horticulture. The horticulture specialist also prepared a weekly garden column and published through News Tribune in Jefferson City. The garden column provided education and update about local horticulture programming in the county and region.



RUDRA BARAL, AGRONOMY SPECIALIST

Serving Counties: Cole, Miller, Pulaski, Maries, Osage and Gasconade County

2024 Annual Report

This report summarizes the accomplishments and contributions made by me in 2024 to support agricultural producers and community members of Cole, Miller, Pulaski, Osage, Maries and Gasconade County.

Educate

- Conducted 7 **Private Pesticide Applicator Training** sessions across Gasconade, Miller, Pulaski, Maries, Osage, and Cole counties, trained 189 individuals in the safe and effective use of restricted-use pesticides.
- Delivered in-person workshops on **Understanding Your Soil Needs** in Miller County and trained 10 producers on soil texture, plant nutrients, soil pH, soil sampling methods and soil test result interpretation
- Offered free **Nitrate Toxicity Testing** for 37 hay producers and educated them about nitrate poisoning, its causes, and prevention strategies to ensure safe livestock feed.
- Assisted 12 producers for **Hay Quality Test** with lab result interpretation.
- Reviewed 652 **Soil Sample Reports** from multiple counties and provided personalized recommendations to improve soil fertility and productivity.
- Hosted educational programs such as **Smart Pasture Management for Horses** and **Spring Pasture Management**, disseminated through radio interviews, newsletters, and in-person training which reached over 10000 community people in Miller, Pulaski and Maries Counties.
- Attended the **Government Day Program** in Maries County, introduced more than 30 high school students about services and agricultural programs offering by MU Extension.

Create

In 2024, I created following educational materials and scholarly articles

1. Wagle, P., Shayeghi, A., Bhattarai, N., Northup, B. K., Moffet, C., Gunter, S., & **Baral, R.** (2024). Evapotranspiration in Rainfed and Irrigated Alfalfa in the US Southern Great Plains. *AGU24*.
2. **Baral, R.**, Kim, J., Rice, C. W., & Min, D. (2024). Evaluating Agronomic Factors Affecting Forage Yield and Nutritive Value of Winter Wheat. In *ASA, CSSA, SSSA International Annual Meeting*.
3. Guareschi, C.A., Mendes, A.C., Massigoge, I., **Baral, R.**, Helguera, M.P.G., Cominelli, S., Peraza, J., Simão, L.M., Widanagamage, N., Denson, E. & Parajuli, S. (2024). The Effect of Crop Intensification and Diversification on Soil Health Under Rainfed Wheat-Based Cropping Systems. In *ASA, CSSA, SSSA International Annual Meeting*.
4. Yang, S., Mahmood, M., **Baral, R.**, Wu, H., Almloff, M., Stanton, L.E., Min, D., Smiley, B.K., Iiams, J.C., Yu, J. & Im, J. (2024). Forage conservation is a neglected nitrous oxide source. *PNAS nexus*, 3(9), Pp373.
5. **Baral, R.**, Kim, J., Bhattarai, B., Massigoge, I., Denson, E., Guareschi, C., Cominelli, S., Rud, J.P., de Oliveira, J.B., Helguera, P.G., Ciampitti, I.A. & Min, D. (2024). Forage Soybean: Unveiling Its Potential in the Wheat-Based Rainfed Cropping Systems. Published in preprints.org.



6. Massigoge, I., **Baral, R.**, Cominelli, S., Denson, E., Helguera, P.G., Guareschi, C., Simão, L.M., Rud, J.P., Pires, C.B., Dille, J.A. & Lollato, R.P. (2024). Exploring alternative crop rotations to continuous winter wheat for agricultural intensification in the US central great plains. *Agricultural Systems*, 216, 103879.
7. **Baral, R.**, Jagadish, S.K., Hein, N., Lollato, R.P., Shanoyan, A., Giri, A.K., Kim, J., Kim, M. & Min, D. (2023). Exploring the impact of soil water variability and varietal diversity on alfalfa yield, nutritional quality, and farm profitability. *Grassland Research*, 2(4), 266-278.
8. **Baral, R.**, Kim, J., Bhattarai, B., Massigoge, I., Denson, E., Guareschi, C., Cominelli, S., Rud, J.P., de Oliveira, J.B., Helguera, P.G., Ciampitti, I.A. & Min, D. (2024). Cropping Potential of Forage Soybean in the Midwest Rainfed System. In ASA, CSSA, SSSA International Annual Meeting.
9. Created newspaper article on "How to Remove Lily Pads from Ponds".
10. Created article on "**Nitrate Poisoning in Forages**" published in August 2024 newsletter of Missouri Cattlemen's Association.
11. Created article on "**Soil Sampling Techniques-A frequently Asked Questions**"
12. Created article on "**Improved Pasture Management for Horse**" published in local newspaper in Maries County and broadcasted at local FM (KFBD 97.9) in Pulaski County.
13. Developed a comprehensive training manual on "**Alternative Summer Forage for Missouri Producers**".
14. Developed a comprehensive training manual on "**Understanding Your Soil Needs** to support soil health education.

Connect

- Engaged with local farmers and producers through over 40 **farm visits** and numerous phone consultations to provide technical assistance on soil health, pasture management, and weed identification.
- Participated in **county council meetings** and annual dinner events across Miller, Cole, Pulaski, Osage, Maries, and Gasconade counties to share program updates and gather community input.
- Actively engaged in **Grassland Partnership Program** and worked closely with Professors, Extension professional and producers of several states to promote sustainable pasture and forage management.
- Served as Coordinator for the **Lake Area Master Garden Program** and engaged in implementation of Master gardening program activities in Miller and Camden County.
- Served as Secretary for Miller and Pulaski County Soil and Water Conservation District board and actively engaged in decision making process to promote soil and water conservation practices.
- Established connections with numerous researchers, educators, and extension specialists in the fields of agronomy, crop science, and soil science nationwide, through active membership in the **American Society of Agronomy, Crop Science Society of America, Soil Science Society of America, and the University of Missouri Extension Association.**

Professional Development

- Attended several high-impact training programs. Some key trainings including:
 - State Grazing School – Train the Trainer Program
 - Commercial Remote Pilot Training
 - Trulaske Digital Marketing Workshop



- Agricultural Drone Utilization Training
- Private Pesticide Applicator Training for trainer
- Soybean Management Strategy organized by Science for Success
- Generative AI for Extension Professional
- 2024 Crop Management Conference
- Participated in the **Agronomy, Crop, and Soil Science Society of America International Annual Meeting** in San Antonio, presenting a poster on **Cropping Potential of Forage Soybean in Midwest Rainfed Systems**.

2025 Proposed Program

SN	Program/Event	County	Objective	Target group
January	Logistics and Resource Management	Miller	Create training manuals and forms for the training events	Farmers and landowners
February	Understanding Your Soil Needs Workshop	Osage, Maries, Pulaski	Educate participants on soil texture, plant nutrients, soil pH, soil testing and result interpretation	Farmers, gardeners, and landowners
March	Understanding Your Soil Needs Workshop	Cole, Gasconade	Educate participants on soil texture, plant nutrients, soil pH, soil testing and result interpretation	Farmers, gardeners, and landowners
	Warm Season Pasture Management Training	Miller, Pulaski, Maries	Teach summer pasture management including pasture weed management	Livestock producers
	Private Pesticide Applicator Training	Cole	Certify producers for safe and effective pesticide application	Agricultural producers
April	Private Pesticide Applicator Training	Maries, Pulaski	Certify producers for safe and effective pesticide application	Agricultural producers
	Warm Season Pasture Management Training	Miller, Cole, Gasconade, Osage	Teach summer pasture management including pasture weed management	Livestock producers
May	Private Pesticide Applicator Training	Cole, Gasconade, Miller, Maries	Certify producers for safe and effective pesticide application	Agricultural producers



June	Pasture Walk	All counties as per request	Field visit, problem identification and provide technical assistance for improved pasture management	Livestock producers
July	Cool-Season Pasture Management	Miller, Cole, Gasconade	Teach cool season pasture management including extending grazing	Livestock producers
August	Cool-Season Pasture Management	Pulaski, Maries, Osage	Teach cool season pasture management including extending grazing	Livestock producers
September	Hay Quality Testing Workshop	Miller, Osage, Maries	Explain the importance of hay quality, hay quality testing and result interpretation and nitrate testing	Livestock producers
October	Hay Quality Testing Workshop	Miller, Osage, Maries	Explain the importance of hay quality, hay quality testing and result interpretation and nitrate testing	Livestock producers
November	Understanding Your Soil Needs Training	Miller	Educate participants on soil texture, plant nutrients, soil pH, soil testing and result interpretation	Farmers, gardeners, and landowners
	Alternative Summer Forages for Missouri	All counties	Explore alternative summer forages suitable for Missouri climate that are drought resilient and offer high yield and excellent nutritive value	Livestock producers
December	Alternative Summer Forages for Missouri	All counties	Explore alternative summer forages suitable for Missouri climate that are drought resilient and offer high yield and excellent nutritive value	Livestock producers
	Private Pesticide Applicator Training	Cole	Certify producers for safe and effective pesticide application	Agricultural producers



MU EXTENSION **Serves MISSOURI and Delivers MIZZOU** through credible statewide programs **Business and Community**



Missourians from all walks of life celebrated the **2023 Missouri Good Neighbor Week**, Sept. 28 to Oct. 4, by completing and reporting neighboring acts and nominating others as the most engaged neighbors in their counties.

In 2023, the goal was to document 15,000 acts of neighboring. That goal was surpassed with 19,752 Missourians being positively affected during MISSOURI GOOD NEIGHBOR WEEK.



The **APEX Accelerators** (formerly known as Procurement Technical Assistance Centers) were created in 1984 by the Department of Defense to help businesses navigate the government marketplace. Since 1989, MU Extension has hosted the Missouri APEX Accelerator as a business development partner program. The mission of the program helps businesses learn how to expand their market by selling goods and services to local, state and federal government entities.

From Aug. 1, 2022, to July 31, 2023, the Missouri APEX Accelerators reported over 900 NEW CLIENTS, 4,700 COUNSELING HOURS and OVER 10,000 CONTRACTS AWARDED.



AMERICA'S **SBDC** MISSOURI **CLIENT HIGHLIGHT**



LOGS
— OF —
GLORY

The **Missouri Small Business Development Centers** (SBDC) provide professional training and customized one-on-one counseling to small businesses across the state. Working with the Missouri SBDC helps business owners make confident decisions.

FY2020-2022, Missouri SBDC ASSISTED 878 STARTUPS and helped Missouri small businesses earn more than \$440 MILLION.



Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being



MU EXTENSION **Serves MISSOURI and Delivers MIZZOU** through credible statewide programs **Community and Professional Health Education**



Rural Immersion Program is an opportunity for medical students interested in rural practice to gain experience in the rewards and challenges of working and living in a rural community, examining rural health disparities and quality of life concerns within a specific region. Group activities and meetings with community leaders in business, government, education, health care and natural resources give students a preview of life in a rural area. The 2024 program was hosted by Union, Mo. and the 2025 host city will be Hayti, Mo.

All of the 2024 participants agreed that the Rural Immersion Program significantly contributed to them **FORMING INSIGHTS** on the suitability of living and working in a rural community, both personally and professionally.



Strengthening Families Program: for Parents and Youth 10-14, is a seven-session series for parents or caregivers and their young teens to attend together to improve family communication, resolve conflict and improve parental skills.

A research study conducted by the Partnerships in Prevention Science Institute found a **RETURN OF \$9.60** for every dollar spent implementing the **Strengthening Families Program.**



MU **Continuing Education for Health Professions** (CEHP) provides evidenced-based, relevant and responsive learning activities designed to narrow professional practice gaps with respect to knowledge, competence, and performance of the healthcare team. A commitment to lifelong learning, in partnership with those we serve, contributes to excellence in practice and improved health outcomes.

CEHP provided 169 LEARNING ACTIVITIES which reached over **53,000 PROFESSIONALS** across all Missouri counties.

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being



MU EXTENSION **Serves MISSOURI and Delivers MIZZOU** through credible statewide programs **Continuing Education**



The Law Enforcement Training Institute (LETI) has provided basic and advanced training for law enforcement since 1948. LETI's **Basic Peace Officer Academy** exceeds the 600 hours of training required for licensure in Missouri. From 2019 through 2023, the basic academy has licensed almost 300 peace officers, more than any other academy in the state. During that time, all but one graduate became employed by a law enforcement agency. LETI graduates come from around the state and return to their communities to serve and protect.



The **Fire Service Leadership Enhancement Program** (FSLEP) prepares fire and emergency service leaders for the opportunities and challenges they will face. For 22 years, the MU Fire and Rescue Training Institute has partnered with the Missouri Association of Fire Chiefs and the Missouri Association of Fire Protection Districts on this program.



The **Missouri Extension Disaster Education Network** provides education and technical assistance to individuals and families, local governments, schools and organizations so they can prepare for and respond to natural and man-made disasters. Because of the unique relationship it maintains with each community, MU Extension is a key resource for the public, emergency services and public officials.



Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being



MU EXTENSION **Serves MISSOURI and Delivers MIZZOU**
 through credible statewide programs
Health and Human Sciences



Chronic Disease Self-Management programs offer evidence-based information for individuals and their caregivers to boost self-confidence in managing symptoms, enhancing quality of life and even reducing health care expenses.

These programs have undergone rigorous evaluation and are proven to be effective tools for individuals dealing with chronic conditions like arthritis, fibromyalgia, depression and diabetes.



Home Food Preservation

Preserve the season's bounty - deliciously and safely.

Learn safe techniques for pressure canning, boiling water bath canning, steam canning, dehydration and freezing.

Understand the importance of using safe preservation and storage methods to avoid cross-contamination and foodborne illnesses.

"This course made me more self-sufficient and improved my family's access to quality food."



Mental Health First Aid equips people to recognize and respond to signs of mental illness and substance use challenges.

Youth Mental Health First Aid is primarily designed for adults who regularly interact with young people (ages 12-17) facing mental health or addition challenges while the adult version focuses on adults aged 18 and older. Participants learn how to offer initial assistance and guide individuals toward the care they need.

In Missouri, approximately 1 MILLION ADULTS and 72,000 ADOLESCENTS suffer from MENTAL HEALTH ISSUES.*

*Missouri Department of Mental Health 2020 Status Report

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

Cole County

Health and Human Sciences

Local Impact

Matter of Balance

In Cole County, about 30.83% of households have adults who are 65 or older. It's important for older adults to stay active to keep their health strong, stay independent, and avoid falls. Kathy Deeken offered two A Matter of Balance in Cole. This class helped 26 older adults learn exercises to build strength, balance, and confidence. Kathy also taught ways to lower the risk of falls and make everyday activities easier, supporting those adults' ability to maintain independence in their own homes.

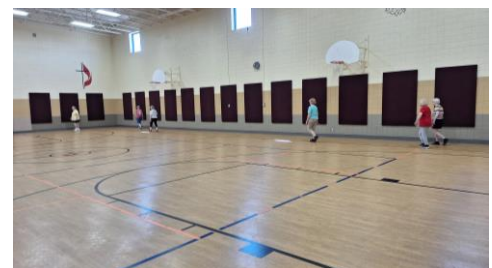


Cooking Matters

The Supplemental Nutrition Assistance Program (SNAP) assists 6.74% of households in Cole County. SNAP funds help support nutrition education for Cole residents. Kathy conducted two Cooking Matters series in Cole County, reaching over 60 adults through education, cooking demonstrations, and hands-on cooking. They learned new budget-friendly recipes, nutrition label-reading skills, MyPlate, and how to make healthier everyday food choices. Attendees reported feeling 33% more confident about cooking healthy meals for their family on a budget. They also look at the Nutrition Facts on food labels 66% more often.

Walk With Ease

Kathy offered a Walk With Ease class in Cole County. Walk With Ease gave 8 participants the opportunity to make exercise a part of their daily lives. In Walk with Ease, 87% walked longer, and 69% improved balance. A few of the participants have continued to meet to walk.



Cole County

Health and Human Sciences

Profiles and Stories

Matter of Balance



All Matter of Balance participants improved in at least one area of measurement, based on pre- and post-surveys and fitness assessments. All Matter of Balance participants also planned to keep exercising and felt more confident about preventing falls; one participant said she is “more aware of my surroundings.” Another said that she “recognizes more fully how important exercise is for better strength and balance.” Yet another commented: “Very good class! The exercise part is great and the things to look for to be safer when walking are great!” It is estimated that these participants will save an estimated \$938 annually in medical costs.

Cooking Matters

After taking Cooking Matters, families say they cook more meals at home and make them healthier and cheaper, even after 6 months. One person stated she “never knew” that liquid and solid measuring cups were different. Another said she had never had a tomato before, and a third said she wanted “to try some healthy things to make for my son.” Plus, annual diet-related health problems cost about \$300 per person. By helping people eat better in Cooking Matters, we could save \$300 per person each year, which adds up to \$15,000 for these families.



Walk With Ease

Four Cole County Walk With Ease participants later joined a second program. One participant stated that “she learned a lot.” Another talked about really “liking the stretching. We’re going to keep it up.” One participant more than doubled his time walking and continues to walk, stating he was going to go back to the VA for another pair of shoes and a properly-fitted cane.



Cole County

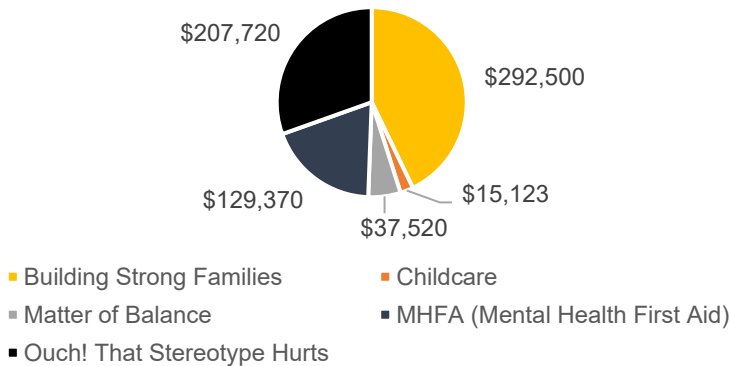
Health and Human Sciences

Local Impact

In 2024, a single Building Strong Families session helped a father reconnect with his teenage son after months of conflict. This is just one of the 3,257 lives impacted across Missouri through programs addressing mental health, youth resilience, and family communication, generating an economic impact of over \$682,232. From Saline County youth learning resilience at summer camp to Boone County families strengthening self-esteem, these programs create lasting positive change in Missouri communities. By fostering mental wellness, strengthening families, and empowering youth, these programs create long-term benefits for Missouri communities. Continued support ensures these efforts grow, transforming even more lives in the year ahead.



Economic Impact by Program 2024

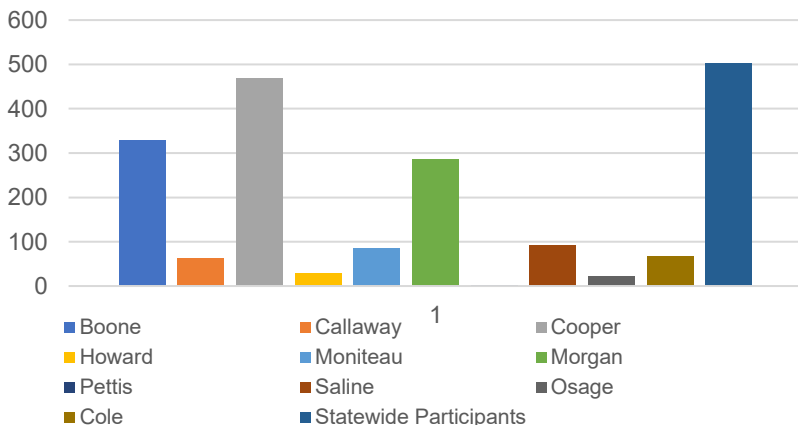


58%

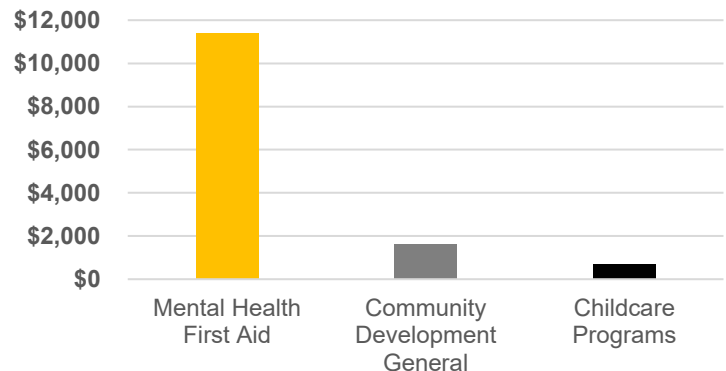
of ag community members accessing teletherapy in 2024 were from Boone, Cooper, Howard, Moniteau, and Morgan counties. Free One-On-One Counseling Build coping skills with confidential counseling from a trusted source who knows ag.

573-882-4677

Participants By County 2024



Economic Impact Cole County



Cole County

Health and Human Sciences

Profiles and Stories

Supporting Families Through Education: Building Strong Families

Tina Edholm delivered the **Building Strong Families** program to **564 participants** statewide, focusing on improving parenting skills. A memorable activity used paper dolls to explore how life experiences, such as bullying or neglect, can harm a child's self-esteem. Participants brainstormed ways to repair self-esteem, such as giving praise and setting achievable goals, symbolized by taping the doll back together.

"This program taught me how to communicate with my teenage son. For the first time in months, we had a calm and meaningful conversation. – *anonymous Building Strong Families Howard County 2024*



"I didn't know I had so many good things about me. This activity made me feel proud of myself."
-third-grader YMCA, Kids and Self-Esteem 2024

Empowering Youth Through Resilience

Across Missouri, **713 youth** developed leadership and life skills through programs like Heit's Point Summer Camp and YMCA activities. A camp counselor noted, *"The kids learned how to work together and express their emotions constructively. It's amazing to see their growth."* These programs not only teach valuable skills but also foster resilience and teamwork, preparing youth for future success.



Promoting Mental Wellness

By equipping 190 participants with skills to recognize and respond to mental health crises, **Mental Health First Aid (MHFA)** strengthened workplaces and community support systems across Missouri. One participant shared, *"This training gave me the confidence to help someone in need."* These efforts created a ripple effect of resilience and well-being, with an estimated economic impact of **\$32,300**, fostering healthier, more connected communities.

"This training gave me the tools to support a colleague during a mental health emergency. I feel more confident in my ability to help."
– anonymous MHFA participant, Callaway County, 2024



A MATTER OF BALANCE

MANAGING CONCERNS ABOUT FALLS

"I didn't realize how much fear of falling was holding me back. Now, I feel ready to enjoy activities I used to avoid."

- anonymous participant, MOB 2024

For older adults, maintaining independence is life-changing. Through A Matter of Balance, participants gained practical tools to reduce fall risks, build strength, and improve confidence. This program not only enhances quality of life but also generates an estimated economic impact of \$37,520 by reducing fall-related medical costs

2024 SNAP-Ed Annual Report for Cole County

The Supplemental Nutrition Assistance Program Education (SNAP-Education or SNAP-Ed) brought \$11,145,237 in federal funds to Missouri. The funds support engagement with 74,864 Supplemental Nutrition Assistance Program (SNAP) recipients and eligible citizens of Missouri who learned about being active and healthy eating on a budget. This year we had 1,164,143 indirect educational contacts through newsletters, health fairs, food pantries, and the Show Me Nutrition helpline. There were 17,089 direct and indirect contacts were made in Cole County.

Participants in SNAP-Ed learn the importance of making healthier meals and snack choices, eating breakfast more often, are more willing to try new foods, increase their physical activity, and make healthier food choices. Those who practice healthy eating and are physically active are more likely to contribute to a healthy labor force and enjoy a high quality of life throughout the lifespan. This vital programming effort also reduces healthcare costs over the participant's lifetime, saving taxpayer money in reduced public healthcare benefits and insurance premiums.

The Nutrition Program Associate who served Cole County in 2024



Dawn Sebion



This is one of many success stories for Cole County, which is the result of Dawn's hard work and dedication.

Story:

After serving JCAC Middle School I received volunteer of the month from HALO. The following is what they wrote and shared in their newsletter as well as on Facebook. "Dawn has been volunteering with the Jefferson City Learning Center by providing her expertise to HALO youth in the HALO Girls Home, Boys Program, and JCAC Middle School. Dawn's programming focuses on the youth's health and well-being. From discussions on food groups to cooking measurements, HALO kids have learned about nutrition in a fun and engaging way, thanks to Dawn. Thank you, Dawn, for your

knowledge and creativity in the variety of programs you've brought to the Jefferson City Learning Center, emphasizing nutrition to HALO kids!"