



UNIVERSITY OF MISSOURI EXTENSION

# Ray County

## 2023 ANNUAL REPORT

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Richmond, MO 64085

**(816)776-6961**

The Ray County Extension Center is located in  
the Thomas Eagleton Civic Center.



Office of Extension  
and Engagement  
*University of Missouri*

OFFICE OF THE VICE CHANCELLOR  
FOR EXTENSION AND ENGAGEMENT  
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December 2023

Dear county commissioners and friends of MU Extension and Engagement,

Thank you for your important partnership with the University of Missouri Extension this past year.

I want to highlight three areas that address needs you helped us identify.

You may recall that the FY 23 state budget provided a one-time \$5 million infusion to MU Extension for growth. Of that, we allocated about \$3 million for field faculty in the areas of agriculture, 4-H, health/human development and business and community development.

Through a dedicated hiring effort, and thanks to that allocation, we have hired 168 new employees since November 2022. That includes 72 academic/faculty members, most of whom are field specialists in a priority area noted above, and 96 staff members (e.g., office administrators, youth and food and nutrition associates, etc.).

We also returned more faculty to local program delivery that best serves your county's needs, while preserving the partnership and relationship building work you value. Our extension and engagement specialists focus full-time on that work as they serve their assigned multi-county groups. Currently, 19 have been hired, with two more in the pipeline.

Finally, we are prioritizing our work with county extension councils. In the new role of partnership and council development director, Lorin Fahrmeier focuses on strengthening council representation and governance. This role will build stronger links with regional, educational and campus leadership to better identify and address local priorities.

At the UM System level, our engagement work across four universities and with leaders across the state makes a difference in areas of greatest need: broadband, workforce development, health access, food security and healthy futures for our youth.

Your county annual report shows what we are accomplishing together as we Serve Missouri and Deliver Mizzou. We look forward to strengthening that partnership with county commissioners and community stakeholders in the coming year.

Sincerely,

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

# Who we are

## Faculty and staff



### **Shelby Bargfrede**

Youth Program Associate – 4-H Development

### **Emily Bergsieker**

Field Specialist in 4-H Development

### **Chelsea Corkins**

Extension Engagement Specialist

### **Travis Harper**

Field Specialist in Agronomy

### **Jim Humphrey**

Field Specialist in Livestock

### **Kathi Mecham**

Field Specialist in Horticulture

### **Katie Neuner**

Field Specialist in Agricultural Business



### **Jim Crawford**

Field Specialist in Agri Systems Technology

### **Sue Robison**

Field Specialist in Nutrition and Health

### **Carla Wayland-White**

Nutrition Program Associate

### **Jessica Trussell**

Field Specialist in Human Development

### **Not Pictured:**

### **Pam Bullock**

Office Support Staff

## County commissioners



Billy Gaines, Presiding Commissioner

Dave Powell, Eastern Commissioner

Gary Wilhite, Western Commissioner

## Council members

Allen Dale – Member

Kaitlyn Rowan, Secretary

Erin Sisco - Member

Grant Wheeler, Chairperson/Treasurer

Andrea Wierzbicki - Member

Clayton Wierzbicki - Member



# Budget and more

## Appropriations budget

### Income

County Appropriations	30,000
Gifts	5,000
Soil Test Fees	1,425
Ray County Senior Services Board	4,800
<b>Total Income</b>	<b>41,225</b>

### Expenses

Office Admin Salary	24,615
YPA Salary	9,350
Travel	2,145
Postage	120
Election Notice	75
PO Box Rental	95
Office Supplies/Copy Services	1,120
Insurance (Work Comp)	275
Soil Test Lab	85
<b>Total Expenses</b>	<b>38,645</b>

**NET INCOME** 2,580

## Key Outcomes

- 657 (256 in office) contacts made in Ray County in 2023 thru events held in and out of county.
- 956 people were affected indirectly thru MU Extension activities.
- Programming emphasized nutrition, youth and agriculture.



Extension services could be found at various farmer's market events throughout the season.

**Serve** **Deliver**  
**MISSOURI** **MIZZOU**

## 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. County funds support the local office, secretarial and youth assistant salaries, staff mileage and council expenses.

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



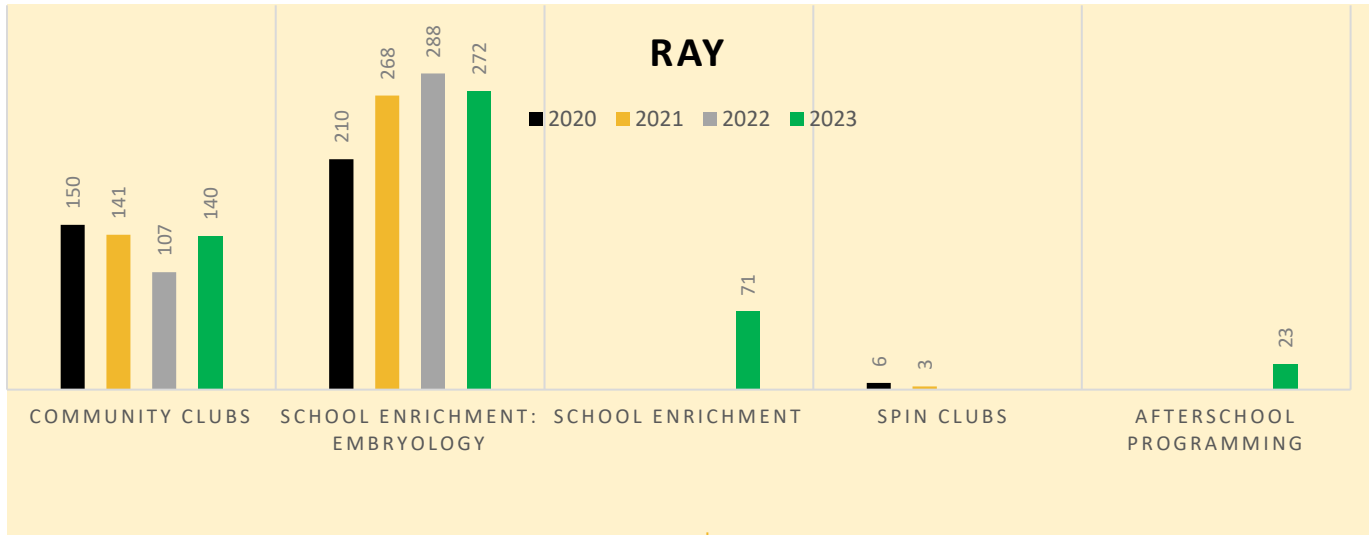
## Local Support

Did you know you can donate directly to Ray 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.



# Missouri 4-H Positive Youth Development

## 2022-23 Ray County Overview



### Ray County 4-H

Ray County 4-H served more than 500 youth through six community clubs, embryology school enrichment, SNAC clubs, Richmond Afterschool, 4-H and Clover Kid Camp and STEM Kits for summer school.

Volunteers are the core of the 4-H program. They help create, support and deliver educational programs and experiences. Through dedicated volunteers, our top programs include Clover Kids, Arts & Crafts and County Cured Hams. Ray County is proud to have 60 volunteers help youth “Learn by Doing.” Ted Perry was honored by receiving the Frank Graham Volunteer Award and Alan Dreves was inducted into the 4-H Hall of Fame.

Staff interacted with 250+ people during back-to-school nights at every Ray County elementary school.

### Key Highlights

- 7 youth & adults participated in the 2nd 4-H Showcase in Warrensburg.
- 6 youth participated in the Missouri 4-H Equine Tour.
- 1 youth attended Teen Conference
- 2 youth & 1 chaperone attended State Congress
- 9 campers, 1 counselor and 2 volunteer attended 4-H Camp at Knob Noster State Park.
- 4-H Council successfully hosted a 4-H Barn Dance at the conclusion of the fair with 50+ in attendance.
- 1 youth, Dantin McBee, participated State Shooting Sports. He received 1st in Archery 300 and 2<sup>nd</sup> in Archery 3D



# Missouri 4-H Positive Youth Development

## Chick it out Embryology Project

15 classrooms in Ray county participated in the Spring Embryology sessions for a total of 285 youth.

Classroom presentations on chick development and egg dissection were completed for all classrooms. Chick-it Out Embryology Ray County Youth learned about all the anatomy of an egg by cracking an egg in a tray and looking at all the different parts. Older youth were able to dissect the eggs to see each part and learn what its function is for chick development.

A special thanks to our partners Tyson's Food for donating the fertilized eggs for this program.

**Some students connected the similarities of a seed and an egg**



**Shelby Bargfrede, Youth Programming Associate, presents a lesson to Lawson Elementary youth.**

## Student Nutrition Advocacy Clubs (SNAC)

The SNAC program utilizes in-school curriculum to highlight program areas such as nutrition, physical activity and how to start plants from seeds. Students learned the importance of making healthier meals and snack choices, eating breakfast more often, trying new foods, increasing their physical activity, and making healthier food choices

In one example, students grew “plant people” inside using a grow light. Their plant person consisted of them decorating a plastic cup and then planting grass seed. When the grass grew, it looked like hair. The students learned how important water is for things to grow.

**16 Ray County youth participated in this program.**



**Hardin-Central SNAC Club posing for a group picture after presenting their growing plants.**





# Agriculture & Environment

## Ray County Grazing School

The Ray County Grazing School was held in May in Richmond, MO. The school introduced the concept of management intensive grazing to producers. 13 producers attended.

The program was team taught by MU Livestock specialist Jim Humphrey, MU Agronomist Travis Harper and MU Agricultural Business specialist Katie Neuner along with retired NRCS guest speaker Mark Kennedy. Topics included soil health, forage quality, livestock nutrition, and the economics of management intensive grazing.

Attendees received the tools and resources to begin or improve their rotational grazing systems. They also are qualified for state cost-share on system designs by Soil and Water districts.



***“Quite informative!”***

***“Gave me a lot to think about!”***

***“Great folks!”***



**Soil testing provides forage and row crop producers with an accurate analysis of exactly what is in their soil**

## Soil Testing in Ray County

More than 65 Agricultural and 24 Horticulture soil samples representing more than 2,200 acres were submitted through the Ray County Extension office for analysis at University of Missouri Extension’s soil testing laboratory in 2023.

Soil sampling provides Ray County’s forage and row crop producers with an accurate analysis of exactly what is in their soil and provides them with recommended fertilizer application rates for the crop they are trying to grow.

Ray County’s agronomist reviews the soil sample results with the producers, fine-tuning the recommendations for their particular situation and needs. Soil sampling and

accurate fertilizer application increases crop production, reduces input cost, maximizes profit, and reduces the environmental impact of fertilizer loss from fields through leaching and runoff.



# Agriculture & Environment

## State-wide Horticulture Programs

### HORTICULTURE TOWN HALL

In 2023, MU Extension specialists including Kathi Mecham addressed lawn, garden, disease and insect questions during the free hour-long virtual sessions every week. Listeners submit questions and hear brief sessions on timely gardening topics.

### GARDEN SPADE NEWSLETTER

Over a 1000 residents receive the monthly horticulture newsletter. MU specialist contribute timely articles addressing topics pertaining to the home gardener.



Horticulture Specialist Kathi Mecham with Terry Durham of River Hills Harvest sampling organic elderberry juice at the Great Plains Growers conference.

## Missouri Extension Master Gardener Training

This course was open to all counties across Missouri, including Ray. Graduating interns learned about soils, insects, vegetable & fruit production, lawn care, and more. They will become active in local chapters and contribute to the program's mission, "Teaching Other to Grow"

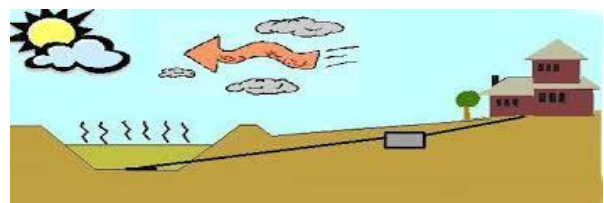
## Great Plains Growers Conference

Small fruit and vegetable growers conference held in St Joseph. For over 25 years MU Extension specialist have teamed with five other states to bring participants the most up-to-date research and practical knowledge from experienced growers. Participants and exhibitors return every year to see old friends and make new ones. There were over 250 attendees in 2023. Topics included:

- |                       |                       |
|-----------------------|-----------------------|
| Tree and Small Fruits | Cut-flower Production |
| Organic Production    | High Tunnels          |
| Business Development  | Pest Management       |

## On site septic systems

The most common question 2023 for Ag Engineering Specialist, Jim Crawford, was septic lagoons going dry from the drought and what should they do. Each is slightly different, but the general recommendation is to add water to maintain its function and to keep the bottom seal from cracking and causing leaks in the future.



A diagram of how an on-site septic system works when incorporating a lagoon in place of a leach field.

**The average cost to replace a septic system is approximately \$20,000. MU Extension offered citizens across NW Missouri with resources for simple, preventative steps to maintain their system and to avoid this cost.**





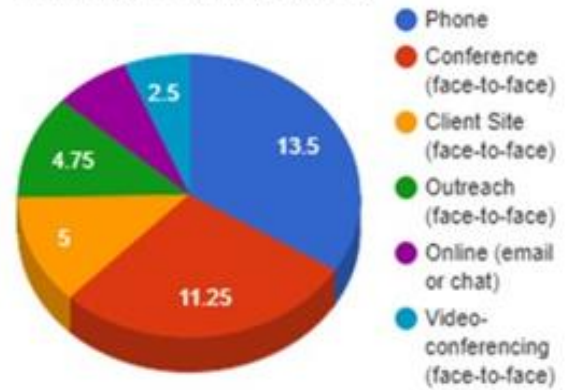
# Business & Community

## Socially Disadvantaged and Veteran Farmers Grant

The Socially Disadvantaged and Veteran Farmers and Ranchers grant submitted the 4<sup>th</sup> quarter report for year two in September. This is a three-year grant that assists socially disadvantaged and veteran farmers and ranchers in owning and operating successful farms.

Katie Neuner is the team lead for Business counseling on the grant. She and her team have worked with 36 clients in 20 Missouri counties. Counseling efforts have resulted in over \$40,000 to producers in services and grants.

Counseling / Contact Type (hours)



**23 Ray County Seniors were enrolled in this growing program!**

## Senior Farmer's Market Program

Several enrollment events were held throughout Ray county to distribute \$50 vouchers good for the purchase of fresh fruits and vegetables from approved Farmer's Markets, Fresh Markets, and road stand sites to SNAP-eligible seniors. Benefits are good May through October 31.

This is the 3<sup>rd</sup> year for enrollment to this growing program and Extension representatives could be found at the Ray County Senior Center, the Lawson Farmer's Market, and the

Ray County Extension office to aid in enrolling eligible seniors in the county.

## Connecting Entrepreneurial Communities

MU Extension's annual Connecting Entrepreneurial Communities (CEC) Conference was held in Benton County, September 19-21, with 114 participants attending, including individuals from northwest Missouri communities. The conference featured over 25 sessions meant to foster, promote, and support entrepreneurship in rural Missouri communities.



*"This has been the best most impactful conference ever! Hosting the seminars in actual businesses was perfect."*





# Health & Human Sciences

## SNAP-Ed in 2023

The Supplemental Nutrition Assistance Program Education (SNAP-Education or SNAP-Ed) brought \$10,874,798 in federal funds to Missouri. During FY2023, Missouri's SNAP-Ed program reached over 78,000 Missourians through direct classroom education. Each person participated in an average of 6 hours of education totaling over 15,000 hours. In addition, an additional 760,135 persons participated in indirect education. Direct and indirect education resulted in over 1.8 million total contacts with Missourians.

A total of 62 participants were from Ray 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.

2023 Agencies
Richmond Head Start
Ray County Fellowship Center
Lawson Farmer's Market

**The Healthy Change Workshop series was taught at the Ray County Fellowship Center in Richmond in 2023. After one of the classes, which was titled Change to Healthy Habits, one of the participants decided to reduce her sodium intake and start using low sodium or sodium free products. It is so exciting when our Family Nutrition Education Program classes can truly make a difference in the lives of Missourians!**

**Right: Carla Wayland White teaching during the Healthy Change Workshop series at the Ray County Senior Center in Richmond.**





# Health & Human Sciences

## Fall Prevention: Stay Strong. Stay Healthy & A Matter of Balance

According to the American Hospital Association, in 2020, the average cost for one day stay in a hospital in Missouri was \$2, 668. By addressing the fall risk through education, MU Extension Fall Prevention programs enhance well-being, reduce medical expenses, preserve quality of life and contributes to supporting the local economic well-being of the community through support of local business and volunteerism.

### A Matter of Balance

- This program promotes fall prevention education with exercise in order for participants to increase their education, awareness, and strength.
- Nine participants started the program and eight attended more than 70% of the sessions.
- 86% of participants said they have discovered how to reduce falls, become steadier on their feet, and that they have made changes in their environment to prevent falls.
- 100% of participants believe than can protect themselves if they fall and will continue exercising.

### Stay Strong, Stay Healthy

- This program includes 10 exercises and continues to use strength training with hand and ankle weights.
- 9 participants for Level 1
- 5 participants for level 2
- A dedicated group of seniors have continued the Stay Strong Stay Healthy program since October.



Ray County Matter of Balance Participants in class facilitated by Jessica Trussell and Sue Robison

### Living Well with Chronic Illness

The Living Well with a Chronic Illness program was co-presented by Sue Robison and Jessica Trussell at the Ray County Senior Center to 6 participants.

Living Well with Chronic Illness assists individuals and caretakers with using strategies to self- help with chronic illness.



Relaxation techniques, healthy eating, the importance of physical activity and medications are a few subjects covered.

**“One thing I’ve learned is not to give up. Also other people have gone on this same journey”.**

- Living Well with Chronic Disease Participant





# County highlights

## Heroes to Hives

Heroes to Hives is a statewide program offered through Michigan Food and Farming Systems (MIFFS) and University of Missouri Extension that seeks to address financial and personal wellness of veterans through professional training and community development centered around beekeeping. It features online training through MIFFS coupled with hands-on training from University of Missouri Extension at our teaching apiaries in Warrensburg and Mt. Vernon.

For 2023, our third year, several veterans from Ray County participated in the Heroes to Hives course and plan to establish new colonies in Ray County in 2023.

**Heroes to Hives addresses financial and personal wellness of veterans through professional training and community development centered around beekeeping.**



## Agr-Ability

In 2023 contact was made through the Heroes to Hives program with a veteran beekeeper and farmer in Ray County. This producer deals with a number of health issues due to service-connected disabilities, making it difficult to manage a farm and business. Ray County agronomist, Travis Harper, along with the Missouri Agr-Ability program and other entities such as the VA, worked closely with the producer to develop a number of strategies and secure equipment to make a farming-based business a reality.

## Private Applicator Training

Private Pesticide Applicator Training teaches producers how to safely store, handle, and use restricted-use pesticides in agricultural production. Proper application of pesticides results in greater safety for both the applicator and their neighbors. Proper application of pesticides results in reduced exposure of pesticides to the environment, ultimately leading to safer living conditions for all Missourians.

7 Ray County residents received or renewed a license in 2023. There are currently 135 active private pesticide applicators in Ray County. These producers manage in excess of 8,500 acres in the county.

**The AgrAbility program helps develop strategies and secure equipment to make farming-based business a reality.**





# County highlights

## Ray County Fair Highlights

### Livestock Shows:

- Goats - 30 class entries (+4)
- Beef - 54 class entries (+15)
- Cats - 1 class entry (+1)
- Dogs - 12 class entries (+2)
- Horse – 19 youth participated (+1)
- Poultry - 29 class entries (+6)
- Rabbits – 31 class entries (+15)
- Sheep - 62 class entries (+21)
- Swine - 77 class entries (+2)
- Ham - 43 class entries (+11)
- Bacon – 3 class entries (+1)
- Clover Kid Pet Show – 3 class entries (-1)
- Pee Wee Shows – 16 entries

### Exhibits Entered:

- 248 4-H projects were exhibited (+10)
- 6 class entry (-5) FFA projects were exhibited.
- Fashion Show: 7 youth participated (+1)
- Demonstration – 4 class entries (+1)
- Public Speaking - 0 class entries (0)
- Rocket Shoot Off – 8 entries held in Lafayette County (0)

### Shooting Sports

- 35 class entries (-6)



## Fun Fair Facts:

- ✓ Ray County had a successful fair with fairly good weather.
- ✓ Auctions in Ray County sold 34 animals for \$59,173.70 and 25 hams for \$1439.75
- ✓ Ray county youth had 2 “Best of Show” exhibits selected at the State Fair and one demonstration selected for 2<sup>nd</sup> place intermediate division







# County highlights

2024 UM Systemwide Impact Data Sheets

## Ray County



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

### UM System Footprint in the county in 2023



#### FY23 county students

##### 112 students

- 93 Undergraduates
- 19 Graduate and professional students
- 69 Full-time students
- 43 Part-time students
- 18 Pell grant recipients (aid year 2023)



#### County employees and retirees

##### 12 people employed by UM

- 11 Campuses
- 1 MU Health Care

8 UM retirees and beneficiaries  
UM salary and retirement income: \$382,948

UM state tax revenue: \$12,742

UM federal tax revenue: \$48,255



#### County alumni

##### Selected school alumni

- 3 Medicine
- 19 Nursing
- 26 Health Professions
- 9 Dentistry
- 14 Pharmacy
- 7 Veterinary Medicine
- 72 Agriculture
- 50 Engineering
- 17 Law

##### Alumni teaching K-12

- 29 teachers
- 10.6% of all district teachers
- 2 principals and administrators
- 11.8% of all district principals and administrators



#### County breakdown

##### MU

- 51 students
- 261 alumni
- 6 employees

##### UMKC

- 39 students
- 189 alumni
- 5 employees

##### Missouri S&T

- 8 students
- 31 alumni
- 0 employees

##### UMSL

- 14 students
- 1 alumna or alumnus
- 0 employees



#### County properties and offices

MU Extension in: Ray County



County population: 23,080



#### County services provided

##### Health care (FY23)

- 130 in-state patients seen at MU Health Care, with \$50,572 of uncompensated care
- 51 in-state patients seen at UMKC School of Dentistry with a statewide average of \$43.61 per patient in uncompensated care
- MU Health Care's Missouri Telehealth Network recorded 250 visits to 91 patients having ZIP codes associated with the county

##### Extension (2022)

- 1,011 Total educational contacts from MU Extension to residents of the county, including:
- 26 contacts related to productive farming, better gardening, and managing natural resources
- 985 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development





# County highlights

2024 UM Systemwide Impact Data Sheets

## Ray County

### UM System Statewide Footprint

#### Economic and Community Development Highlights

- In 2022, Business Development Specialists worked with small businesses and entrepreneurs statewide to create or retain 81,645 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 FY17 and FY22, UM System brought Missouri more than \$1.46 billion in federal and private research funds, funded primarily from outside the state, but spent within the state.



In FY23, UM System was issued 33 patents and filed 61 new U.S. patent applications.

- In FY23, the UM System awarded 805 design and construction project contracts throughout Missouri, for a total investment of \$279.2 million in the state.



In FY23, to improve access to medical and health related services, MU Health Care's Missouri Telehealth Network's Show-Me ECHO program provided 18,381 hrs of case-based instruction to 2,938 learners located in 112 of 114 Missouri counties and the city of St. Louis.

#### Education and Training Provided



41,992 police, fire fighters, and medical professionals attending continuing education (2022)



Agriculture and natural resource programs served 174,692 farmers and related businesses (2022)



311,749 youth and stakeholder educational contacts in 4-H clubs, schools, camps and other programs (2022)



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

#### Education Highlights

##### FY23 Financial Aid Awards

In FY23, 67.3% of the UM System's 80,702 students received financial aid totaling \$973.7 million

MU

27,256

students receiving financial aid

\$536.0M

financial aid awarded

UMKC

11,859

students receiving financial aid

\$217.3M

financial aid awarded

Missouri S&T

6,748

students receiving financial aid

\$117.7M

financial aid awarded

UMSL

8,489

students receiving financial aid

\$102.8M

financial aid awarded



UM System's MOREnet (Missouri Research and Education Network) provides internet connectivity, access, support and training to 58 higher education institutions (230,000 students), 485 K-12 school districts (832,000 students) and 132 public libraries (serving nearly 3 million Missourians) in 2022.

- UM System awarded 50.5% of the 32,098 Bachelor's or higher degrees awarded by Missouri four-year public institutions in 2022-23.
- UM System awarded 36.6% of the 1,935 research doctorates and 26.9% of the 3,593 professional doctorates awarded by Missouri public and not-for-profit private institutions in 2022-23.
- In FY23, UM System's \$37.9 million in National Science Foundation (NSF) grants represented 88.3% of all NSF grants made to Missouri public colleges and universities.
- In 2023, over 10,900 Missourians accessed [mobroadband.org](https://mobroadband.org), part of the UM System Broadband Initiative which helped the statewide build-out of high-speed internet infrastructure. MU Extension also supported residents in making individual challenges to the FCC that resulted in \$810,000 in additional funding for the state of Missouri.

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