



UNIVERSITY OF MISSOURI EXTENSION

# Boone County

# 2023

## Annual Report



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Phone 573-445-9792



# Extension

*University of Missouri*

an equal opportunity/ADA institution



Office of Extension  
and Engagement  
*University of Missouri*

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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



**Jawad Al Juboori**  
Field Specialist in Livestock



**Kris Bockting**  
Missouri APEX Accelerator  
Counselor



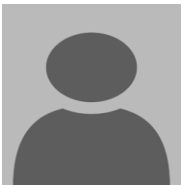
**Mark Christian**  
Small Business  
Development Center  
Business Specialist



**Heather Conrow**  
Field Specialist in Livestock



**Christina Edholm**  
Field Specialist in Human  
Development



**Allicyn Freyer**  
Nutrition Program  
Associate



**Liz Harrison**  
FIELD SPECIALIST IN  
NUTRITION AND HEALTH  
EDUCATION



**Charles Holland**  
DIRECTOR OF JEFFERSON  
FARM & GARDENS EEC,  
MU FAMILY IMPACT  
CENTER & BOONE CTY  
EXTENSION OPERATIONS



**Letitia (Tish) Johnson**  
FIELD SPECIALIST IN  
COMMUNITY ECONOMIC  
DEVELOPMENT



**Todd Lorenz**  
FIELD SPECIALIST  
IN Agronomy



**Marsha Moore**  
Small Business  
Development Center  
Business Counselor



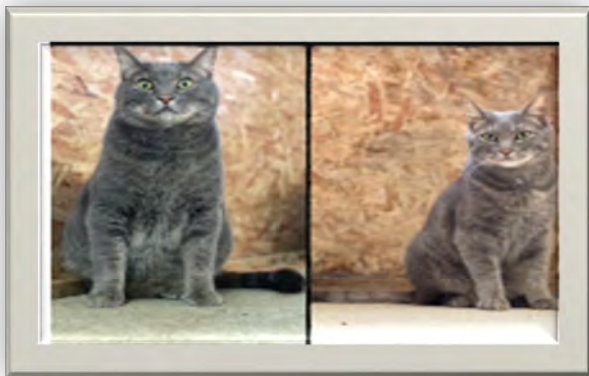
**Kelly Rich**  
NUTRITION PROGRAM  
ASSOCIATE



**Elizabeth Rush**  
YOUTH PROGRAM  
ASSOCIATE

# Who we are

## Our Jefferson Farms Ambassadors Ham & Beans



**Brian Schweiss**  
STATE EXT.  
SPECIALIST,  
SUSTAINABLE  
FORESTRY



**Kent Shannon**  
Field Specialist in  
Agricultural  
Engineering



**Mary Sobba**  
FIELD SPECIALIST IN  
AGRICULTURAL  
BUSINESS



**Jana Weitkemper**  
MISSOURI  
APEX ACCELERATOR STATE  
DIRECTOR



**Sandra Zapata Arias**  
NUTRITION PROGRAM  
ASSOCIATE

**Abby Land**  
STUDENT SERVICE COOR I

Lindsey Oliver  
Office Support Staff

Damon Kempker  
Volunteer

## Boone County Extension Council

Mark Ohrenberg, Chairman  
Jessica Porter, Secretary  
Jayne Young, Treasurer  
Ethan Miller  
Nancy Shikles  
Dustin Stanton  
James Quinn

### Appointed Members

Theresa Shettlesworth, 4-H Senior Council  
Glenda DeShon, Farm Bureau  
Charles Paxton, HMMG  
Dean Larkin, City of Columbia  
Justin Aldred, County Commission



## Boone County Commissioners



**Kip Kendrick**  
Presiding  
Commissioner



**Justin Aldred**  
District I  
Commissioner



**Janet M. Thompson**  
District II  
Commissioner

# UM System County Impacts

2024 UM Systemwide Impact Data Sheets

## Boone County



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

### UM System Footprint in the county in 2023



#### FY23 county students

##### 4,931 students

- 2,646 Undergraduates
- 2,285 Graduate and professional students
- 3,462 Full-time students
- 1,469 Part-time students
- 623 Pell grant recipients (aid year 2023)



#### County employees and retirees

##### 17,579 people employed by UM

- 11,613 Campuses
- 5,600 MU Health Care
- 366 UM System

4,468 UM retirees and beneficiaries  
UM salary and retirement income: \$1.2 billion  
UM state tax revenue: \$39.7 million  
UM federal tax revenue: \$200.8 million



#### County alumni

##### Selected school alumni

- 865 Medicine
- 1,715 Nursing
- 3,223 Health Professions
- 127 Dentistry
- 144 Pharmacy
- 24 Optometry
- 431 Veterinary Medicine
- 4,596 Agriculture
- 3,336 Engineering
- 975 Law

##### Alumni teaching K-12

- 909 teachers
- 48.5% of all district teachers
- 66 principals and administrators
- 64.1% of all district principals and administrators



#### County breakdown

##### MU

- 4,521 students
- 32,116 alumni
- 11,572 employees

##### UMKC

- 231 students
- 760 alumni
- 23 employees

##### Missouri S&T

- 93 students
- 474 alumni
- 16 employees

##### UMSL

- 86 students
- 486 alumni
- 2 employees



#### Construction projects

- \$26.8 million remitted to 62 county vendors, for 205 projects



#### County properties and offices

MU Campus, Baskett Wildlife Area, Battle Avenue Medical Building, Bradford Farm, Fairview General Internal Medicine and Pediatrics Clinic, Foremost Dairy, Foremost Dairy - Kirby Tract (Leased), KOMU TV, Lemone Industrial Complex, Middlebush Farm and 9 more  
MU Extension in: Boone County



County population: 182,170



#### County services provided

##### Health care (FY23)

- 114,667 in-state patients seen at MU Health Care, with \$38.1 million of uncompensated care
- 3 in-state patients seen at UMSL Center for Eye Care with a statewide average of \$34.82 per patient in uncompensated care
- 68 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 14,517 visits to 9,141 patients having ZIP codes associated with the county

##### Extension (2022)

- 18,709 Total educational contacts from MU Extension to residents of the county, including:
- 11,927 contacts related to productive farming, better gardening, and managing natural resources
- 3,878 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development
- 409 contacts related to starting businesses, developing community leaders, or renewing the local economy



# Boone County UM System County Impacts

## 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)

### 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.**



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

Prepared in December 2023, 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

# Grand Challenges Missouri Grand Challenges: Local Solutions



BOONE 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: Labor Market

### Average Earnings per Job

Average earnings per job can reflect the type of economy, skill of employees, and availability of jobs and workers in an area. Average earnings is calculated by dividing total full-time and part-time employment by total earnings. Earnings is the sum of three components of personal income--wages and salaries, supplements to wages and salaries, and proprietors' income. Full-time and part-time jobs are counted at equal weight. Both employment for wages and salaries and proprietors employment are included, but the employment of unpaid family workers and volunteers is not included. Average earnings per job is a measure of the wages paid at jobs in the county not the earnings of people who live in the county. The dollar figures shown are not adjusted for inflation.

#### 2022 Average Earnings (\$)

\$56,851

Boone



Missouri

\$62,528 📉

Data Source: US Department of Commerce, [US Bureau of Economic Analysis Regional Economic Accounts](#). 2007-2022.

### Labor Force Participation

The labor force participation rate is a measure of an economy's active workforce and includes people who are employed and those seeking employment. According to the 2015 – 2019 American Community Survey, of the 149,127 persons of working age in the report area, 67.38% are included in the labor force. This rate exceeds the Missouri labor force participation rate of 62.82%.

#### Labor Force Participation Rate

67.38%

Boone

Missouri

62.82%

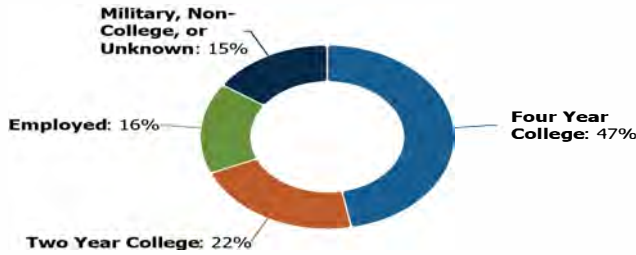
Data Source: US Census Bureau, [American Community Survey](#). 2017-21.



## CHALLENGE 2: Educational Access and Excellence: *College and Career Readiness*

# Grand Challenges Post High School Report

The 12-month post-graduation activity of recent high school graduates can inform communities about postsecondary education, career readiness, and characteristics of the future workforce. In 2022, of 1,668 graduates surveyed in the report area, 783 went to a four-year college, 360 to a two-year college, 268 directly entered the job market. The remaining 257 are reported as in the military, not in college, or unknown.



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



## CHALLENGE 3: Healthy Futures: *Access to Care*

### Mental Health Care Providers

Mental health is a critical public health issue worldwide. Access to mental health services is a challenge across Missouri, which ranks 46 out of 51 states in provider access. In the report area there are approximately 476 credentialed professionals providing mental health care to serve the area's 183,610 residents. The patient-provider ratio in the report area is 386 to 1, which means there is 1 provider for every 386 persons. The ratio of persons to providers in the report area is lower than the state average of 855:1, which means there are more providers per person in this area.

#### Ratio (Population to Providers)

# 386:1

Boone

Missouri

855:1

### 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 201 primary care physicians (MDs and DOs) to serve the area's 22,058 residents over the age of 65. The patient-provider ratio in the report area is 110:1, which means there is 1 provider for every 110 older adults. The ratio of adults to providers in the report area is lower than the state average of 242:1, which means there are more providers per person in this area.

#### Ratio (Population to Providers)

# 110:1

Boone

Missouri

242:1

Data Source: Centers for Medicare and Medicaid Services, [CMS - National Plan and Provider Enumeration System \(NPDES\)](#). December 2023.

Data Source: US Department of Health & Human Services, Health Resources and Services Administration, [HRSA - Area Health Resource File](#). December 2023.



## CHALLENGE 4: Agricultural Growth & Stewardship: *Soils Testing*

Recent public initiatives and USDA programs are putting a focus on producers to improve the health of their soil. The USDA-NRCS defines soil health as the continued capacity of the soil to function as a vital, living ecosystem that sustains plants, animals and humans. A variety of practices can improve soil health, including regular monitoring, sampling and testing protocols. The MU Soil and Plant Testing Laboratory provides testing and unbiased, research-based recommendations for economically viable and environmentally safe nutrient management practices across Missouri.

Report Area	Agriculture	Home and Garden	Community Areas	Research	Total
Boone	479	291	21	2,868	3,659
Missouri	11,785	4,192	315	3,708	20,000

Data Source: [University of Missouri Extension Soil and Plant Testing Laboratory Annual Summary](#). 2022.





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

## Missouri 4-H for ages 8 – 18



### 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.



A **SPIN club** focuses on a specific topic led by an expert in the field. While community clubs may meet over the full 4-H program year, SPIN clubs meet for set periods, typically from several weeks to a couple months. SPIN clubs can elect officers and plan learning activities with options of public speaking, community service and links to career readiness.

## Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

### Local Impact

#### 2023 Annual Report 4-H Youth Development - Northeast Missouri – Boone County

**A community of 660 youth building life skills, contributing to their community, and becoming college and career ready.**

**Over 2 in every 100 for Boone County youth under the age of eighteen participated in a MU Extension 4-H Youth Development program in 2023.**

#### 4-H Members

4-H programs are grounded in the belief that youth learn best by doing. Through firsthand projects like science, health, agriculture, and civic engagement in a positive environment, youth receive guidance from adult mentors and are encouraged to take on initiative-taking leadership roles. Youth could concentrate on one focus area, or they can try a variety of programs throughout their 4-H experience. Boone County served youth through twelve community clubs, two SPIN Clubs, and one In-school 4-H Clubs offering long-term educational experiences in which members learn life skills such as decision making, public speaking, and working with others.

- There were fifty members in the community clubs, SPIN clubs, in-school, and afterschool 4-H clubs in Boone County during the 2022-2023 4-H Year.
- Over 518 4-H members were engaged in science related projects and experiences.
- Collectively youth participated in 4,037 hours of community club work in Boone County.  
4-H members have demonstrated learning through the following activities:
- Four members participated in the Northeast Region Energizer held in the spring of 2023 in Kirksville.
- Members completed two state level recognition forms. These forms provide members with a vital step in the Experiential Learning Model. Members reflect on the things they have done and learned throughout the 4-H year and how they can apply what they have learned in the upcoming year.
- Six members participated in the State 4-H Teen Conference, which offered youth a fantastic opportunity to experience being a teen in 4-H. This event provides a safe and enjoyable campus experience where youth can enhance their skills and forge new friendships.
- Boone County was represented at State 4-H Congress by four delegates. Delegates attended workshops covering diverse areas from science to leadership development that were complemented by experiences at the MU Student Center, social activities, and inspirational speakers. State Congress plays a vital role in helping these teens develop essential life skills, exploring potential career paths, nurturing leadership abilities, and fostering new friendships with peers from across the state.
- Four youth from Boone County participated in skill development contests on the State level including State Meats Contest, State Livestock Judging, State Fashion Revue, State Poultry Day, and State Public Speaking. Participation in these events helps

# Boone County

## Missouri 4-H

### Local Profiles and Stories

- youth to develop confidence and practice their decision making and public speaking skills through competitions tied to project areas they are enthusiastic about.
- Of the Boone County youth participated in the State Shoot events, eleven youth was recognized for their placing in Boone County.

4-H Clubs offer in-depth educational experiences in which members learn life skills such as decision making, public speaking, and working with others. Members learn by doing under this guidance of adult volunteers, who lead a wide variety of projects that support 4-H members in finding their SPARK. Club and project leaders also involve youth and teens in community service, leadership opportunities, and educational trips. 4-H project work and related educational experiences help youth explore interests in citizenship, communication, and leadership.

Boone County members enrolled in a combined total of 1,381 projects in 2023. The top project, areas included:

- Country Cured Hams - 102
- Photography - 82
- Cake Decorating – 79
- Arts and Crafts – 75
- Poultry – 68
- Woodworking - 67
- Archery – 66
- Clover Kids – 65
- Sewing - 41
- Robotics – 34
- Horse Riding – 34

#### Impacts of 4-H Programming

- 4-H members are twice as likely to go to college compared to their non-4-H peers and they tend to pursue careers in STEM fields (Lerner & Lerner, 2011).
- 4-H also prepares youth for the workplace. Youth must be prepared to live and work in a world we cannot completely envision- competing for jobs that do not yet exist, using technologies that have yet to be identified. 4-H is the only youth development program with direct access to technological advances in agriculture, life sciences, and social sciences from the university system. This brings relevant science content and direct learning that helps youth thrive (Arnold, Bourdeau, & Nott, 2013).
- Youth who earn a bachelor's degree increase their annual earnings by \$2 million over their lifetime. (U.S. News and World report, 2011) If 50% of the Boone County youth participating in 4-H events on a college campus receive a bachelor's degree, 4-H would help young people acquire \$21,000,000 more in lifetime earnings.

#### 4-H Volunteers

- Boone County 4-H members were supported by 148 enrolled, screened, and oriented adult volunteers supporting the development of youth in 2023.
- Volunteers contributed 14,800 hours to the Boone County 4-H program valued at \$470,640.

### Local Profiles and Stories

Volunteers participate in development opportunities like project leader training and club leader summits, in addition to ongoing support from MU Extension youth faculty and staff gaining knowledge in how to offer a valuable learning experience for the youth they are working with while maintaining a safe, supportive environment. Volunteers create, support, and are a vital part of the 4-H community. Resolute volunteers help to organize club meetings, fundraisers, and events. They also provide learning opportunities for youth in their projects, teaching life skills and instilling qualities of character like respect and responsibility in members. Adult volunteers serve as mentors for our youth, helping them transition into caring, healthy adults who contribute back to their communities, which is priceless.

Findings from a 2021-2022 evaluation study shows that Missouri 4-H:

<i>Missouri 4-H Inspires Kids to Do</i>	<i>Missouri 4-H Grows True Leaders</i>	<i>4-H Builds Leadership and Communication Skills</i>	<i>4-H Builds Social and Emotional Skills</i>
<ul style="list-style-type: none"><li>• Ninety-eight percent said they are willing to work hard on something difficult.</li><li>• Ninety-one percent set personal goals.</li><li>• Ninety-seven percent said they try to learn from their mistakes.</li><li>• Ninety-eight percent said they treat others the way they want to be treated.</li></ul>	<ul style="list-style-type: none"><li>• Ninety-seven percent said they like to learn about people who are different than them.</li><li>• Ninety-three percent said they think about others' feelings before they say something.</li><li>• Seventy-five percent reported feeling comfortable being a leader.</li></ul>	<ul style="list-style-type: none"><li>• Ninety-five percent help others reach their goals.</li><li>• Eighty-six percent are comfortable speaking in a group.</li><li>• Ninety-nine percent said they show respect for other's ideas.</li><li>• Eighty-five percent can work with someone who made them upset.</li><li>• Ninety-five percent Look for ways to involve all members of a group.</li></ul>	<ul style="list-style-type: none"><li>• Ninety-four percent said they keep trying until they reach their goals.</li><li>• Eighty-nine percent stop to think about their choices when deciding.</li><li>• Ninety-seven percent reported that they like to learn new things.</li><li>• Ninety-one percent of Missouri 4-H'ers surveyed said they are willing to try something they might get wrong.</li></ul>

### Local Profiles and Stories

#### **Boone County 4-H Members: Their Story and Things They Have Learned Through 4-H**

- **One member of Boone County 4-H mentioned about community service, “I have worked over the years to serve meals, pack food, and gather canned food donations. Giving back is what it is all about.” Being a true citizen and caring about one’s local community as they focus on their purpose is not to be served but to serve, it is inspirational to see a kid learning the learning of working together alongside something for the common good.**
- **One member of Boone County 4-H stated, “I have learned to advocate for myself, in speaking with others and sharing my condition.” After this individual had a diagnosis of a medical condition, they continued to put the effort in that they were healthy enough to do their desired passions in life. The setbacks you have in life equip you to come back stronger and as an improved individual.**

#### **4-H School Enrichment- Embryology**

- There were 142 students from nineteen classrooms who participated in the Hatching Chicks in the Classroom program in 2023.
- Students participated in over 2,000 hours of learning with the “Chick It Out” program. During the Embryology program, students learn about the 21-day development occurring within a fertilized, incubated egg that can result in the hatching of a chick. Students identify the parts of an egg and discover what each part provides for the developing chick. Students learn how to tell if an egg is raw or boiled and explore the strength of the egg’s shell providing protection to the developing chicks. Students review the necessity of hand washing due to potential contamination caused by salmonella in poultry and poultry products. Students often gain experience with death and disabilities. Throughout the experience, students are charged with rotating the eggs three times a day and are responsible for checking to make sure the incubator has water and is maintaining the correct temperature. Once the chicks hatch, the students care for them, providing feed, water, warmth, and a calm environment.

#### **Impacts of Programming**

Students practice life skills including decision making and responsibility, helping them to develop qualities that will shape their development into adults. Students are provided with the opportunity for a practical experience that connects with the core subjects of communication arts, math, science, and health. Youth with firsthand experience with science are more likely to pursue science-related careers, which are critical to our county, state, national, and global economy. Students are conscious of the need to practice proper hand washing techniques to prevent the spread of illness and disease. Students also learn compassion and develop an understanding of how to accept individuals with disabilities, as well as how disabilities can be compensated for.

### Local Profiles and Stories



YPA Creates a Networking Opportunity



Family Walking Out with Hams In Hand



Dr. Clarke Giving Curing Presentation

#### Resources

Arnold, M., Bourdeau, V., & Nott, B. (2013). Measuring science inquiry skills in youth development programs: The Science Process Skills Inventory, *Journal of Youth Development*, 8(1).

Independent Sector (2023). Independent sector releases new value of volunteer time \$31.80 per hour. Retrieved from: <https://independentsector.org/blog/independent-sector-releases-new-value-of-volunteer-time-of-31-80-per-hour/>

Lerner, R.M., Lerner, J.V. (2011). The positive development of youth: Report of the findings from the first seven years of the *4-H Study of Positive Youth Development*. Retrieved from <http://www.4-h.org/about/youth-development-research/>.

U.S. News and World Report (2011). How Higher Education Affects Lifetime Salary. Retrieved from <https://www.usnews.com/education/best-colleges/articles/2011/08/05/how-higher-education-affects-lifetime-salary>

# Boone County

Missouri 4-H

## Local Profiles and Stories



Heather Conrow, Livestock Specialist teaches 4-H kids about SMQA

## SMQA

Show Me Quality Assurance (SMQA) program is a youth-focused training emphasizing good livestock management practices in the handling and use of animal health products. This program encourages youth involved in livestock projects to take an active role in the health of their livestock. By completing this program, youth demonstrate their commitment to animal production and producing safe and wholesome food. Completion of this program serves to benefit both the livestock and food industries, by reducing the risk of management-based incidents that could destroy consumer confidence in the food supply.

All 4-H/FFA members enrolled in animal projects (including beef, sheep, swine, dairy cattle, meat and dairy goats, rabbits, poultry) must complete the appropriate level of the MSMQA certification.

Youth ages 8-13 by Jan 1 of the program year must take for two consecutive years (and then a refresher course when they turn 14); Youth age 14+ must complete one time.



# Boone County

Missouri 4-H

## Local Profiles and Stories



Fishing at the  
Jefferson Farms



Bag of Popcorn Grown at  
Jefferson Farms

4-H Activity  
Day at  
Jefferson  
Farms





# Boone County

Missouri 4-H

## Local Profiles and Stories

The mission of the Missouri Master Gardener Extension Program is “helping others learn to grow.” The Master Gardener program provides in-depth horticultural training to individuals throughout Missouri who then volunteer their time applying what they have learned to help others in their communities to learn about gardening and environmental education.

The Master Gardener program promotes and raises public awareness of the University of Missouri Extension as a source of unbiased, research-based gardening information. Through activities such as MU Extension hotlines or answer services, workshops, speaker’s bureaus, garden show booths, and demonstration projects, Master Gardeners provide gardening information to thousands of Missourians each year.



Controlled burn  
by the  
Heart of Missouri Master  
Gardeners



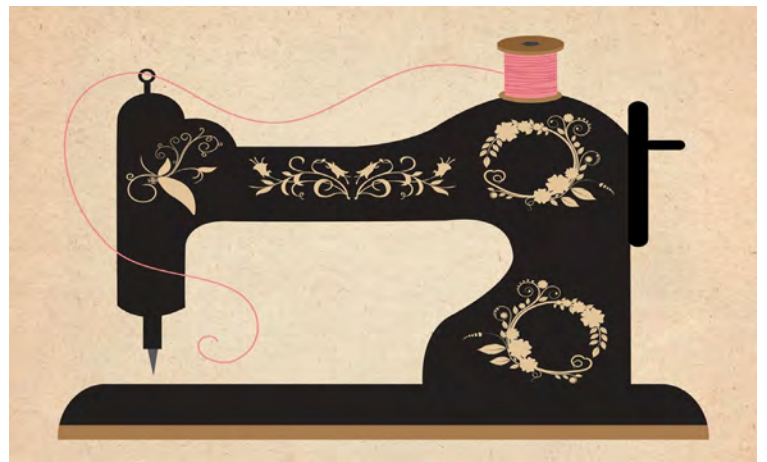
Tending the fire edges



### Local Profiles and Stories



### 4-H Sewing Club



# Boone County

Missouri 4-H

## Local Profiles and Stories



Boone County 4-H meeting

# Boone County

Missouri 4-H

## Local Profiles and Stories



**Clover Kids learning about baking and icing.**



**Making cinnamon rolls for sale**

# Boone County

## Agriculture and Environment

### Local Impact

2023 Annual Report: Boone's Lick Master Naturalist Chapter

Prepared by Letitia Johnson, interim chapter advisor for MU Extension, and Jack Gay, Chapter President

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#### Report Data

- Total volunteer hours: 6679 (second highest ever)
- Total advanced training hours: 1596
- Membership
  - o Active members: 124
  - o Members reporting: 87
  - o Initial certifications: 12 (interns who earned certification status)
- Volunteer hours by type of project
  - o Stewardship projects – 2485.75 hours, 37.22% of all volunteer hours
  - o Citizen science projects – 1814.25 hours, 27.16%
  - o Education and outreach – 1314.50 hours, 19.68%
  - o Program support – 1064.25 hours, 15.93%

#### Highlights

Boone's Lick volunteer activities include:

- Chapter adopt-a-spot
- Information booths at area events and festivals
- Trail building and maintenance
- Habitat restoration and maintenance
- Butterfly and wildlife counts
- Seed collecting
- River and waterway clean-up; park clean-up
- Assisting with household hazardous waste collection
- Compost workshop
- Invasive control
- Public education activities via presentations, children's programs, and social media
- Native plant and pollinator landscaping and maintenance (including at the Boone County Extension office)
- Wildlife rehabilitation
- Youth outreach

#### CORE TRAINING

Becoming a Master Naturalist intern requires completing a 40-hour training course. To become certified, the intern must complete 40 hours of volunteer service and 8 hours of advanced training.

The 2023 training class graduated 25 new interns on May 10, representing Boone, Callaway, Cole and Miller Counties. As with the past two years, the class was a combination of online presentations on Wednesday evenings and in-person field trips on Saturdays in the warmer months. The class capstone project was removing bush honeysuckle and other invasives from the Extension office property. They even discovered a wild turkey nest!

# Boone County

## Agriculture and Environment

### Local Impact

#### OUTREACH

Members of the Boone's Lick chapter participated in public educational events, including Birds and Bees Festival in Arrow Rock, where they offered information about native bees and bumblebees, a young children's feather necklace activity, and an older children's activity on bird migration routes. The event reached 200-300 people from Howard, Boone, and neighboring counties.

In June, volunteers worked with the local Master Gardener chapter on the Butterfly Festival at Jefferson Farm. Two canopy tents were set up for visitors before they entered the butterfly house to see live butterflies. The focus was on the butterfly's lifecycle, which visitors learned by creating a four-point diagram on a paper plate. Children enjoyed making their own model caterpillars to take home. Sunflower seeds were distributed so people could attract butterflies to their own homes. The event reached 1500 people from Boone and surrounding areas.

#### MEETINGS AND ADVANCED TRAINING

The chapter's regular monthly meetings were mostly held in a hybrid format – simultaneously online via Zoom and in-person, which posed some technology challenges at times but allowed us to expand our reach. We averaged 14 members attending in person and 29 attending online, with an average total attendance of 43.

Presenters for advanced training hours covered such topics as the MDC Natural Heritage Program; Hellbender breeding and recovery; morel mushrooms; pollinator conservation; prescribed burns; mussels in Missouri, and more. The chapter has also had several interactions with Zach Miller from the Nature Conservancy about the new Missouri River Center at the former Katfish Katy's site.

Chapter member Jane Haslag presented about her experience converting their 15-acre farm back to native prairie, savannah and woodland. Brenda Peculis, a new volunteer, talked about her first project, creating a bluebird trail in Louisville Park in Columbia.

In June, the chapter held a picnic at Rock Bridge Memorial Park that was attended by about 50 people. The highlight was a scavenger hunt organized by our VP Damon Kempker, with prizes going to the winning team. It was a great way to explore the park, and for our new graduates to get to know some of the chapter members.

In December, we held our holiday party and silent auction at the Boone County Extension office. The silent auction and raffle raised \$750. Cara Coates, the new MDC advisor for the chapter was able to attend and meet everyone.

#### NEWS

A long-time member, Chris Egbert, resigned from the chapter because of health issues. The membership voted to make him an Honorary member. In his years with the chapter, Chris logged 3,456 volunteer hours and 225 advanced training hours. The chapter installed a bluebird house at the MDC Eagle Bluff office in his honor.

The chapter will host the 2024 State Master Naturalist Conference on June 7 and 8. Becky Bohlmeier is chairing the planning committee. MDC and MU extension are actively involved.

# Boone County

## Agriculture and Environment

### Local Impact

#### CHAPTER PARTNERS

Local organizations that have a reciprocal relationship with the chapter

Big Muddy National Fish & Wildlife Refuge  
City of Columbia  
Clark's Hill/Norton State Historic Site  
Columbia Audubon Society  
Columbia Center for Urban Agriculture / Columbia Ag Park  
Downtown Urban Butterfly Garden  
Eagle Bluffs Conservation Area  
Greenbelt Land Trust of Missouri  
Lick Creek Conservation Area  
Lincoln University Native Demonstration Garden  
Missouri Bumblebee Atlas  
Missouri Department of Conservation (statewide volunteer opportunities)  
Missouri Department of Transportation  
Missouri Eagle Watch Program  
Missouri Native Plant Society  
Missouri Prairie Foundation  
Missouri River Bird Observatory  
Missouri River Relief  
Missouri Stream Team  
Missourians for Monarchs  
Ozark Trail Association  
Prairie Fork Conservation Area  
Prairie Garden Trust  
Rock Bridge Memorial State Park  
School Outdoor Classrooms  
Shepard to Rollins Trail Restoration  
The Nature Conservancy: Missouri River Center  
University of Missouri Community Collaborative Rain Hail and Snow Network  
University of Missouri Extension (Columbia Office)  
University of Missouri Jefferson Farms & Gardens  
University of Missouri Lakes of Missouri  
University of Missouri Raptor Rehabilitation Project  
University of Missouri Sorenson Estate Natural Area  
Wild Ones

Note: In addition to the above, there are a handful of other entities that are on our volunteer opportunities list for which no one reported any hours in 2023 (like MU Bradford Research and Extension Center) or which are not local (like Project Feeder Watch or International Dark-Sky Places Program).



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



**Legend**



Agricultural Growth  
& Stewardship



Economic  
Opportunity



Educational  
Access &  
Excellence



Health  
& Well-Being



# Boone County

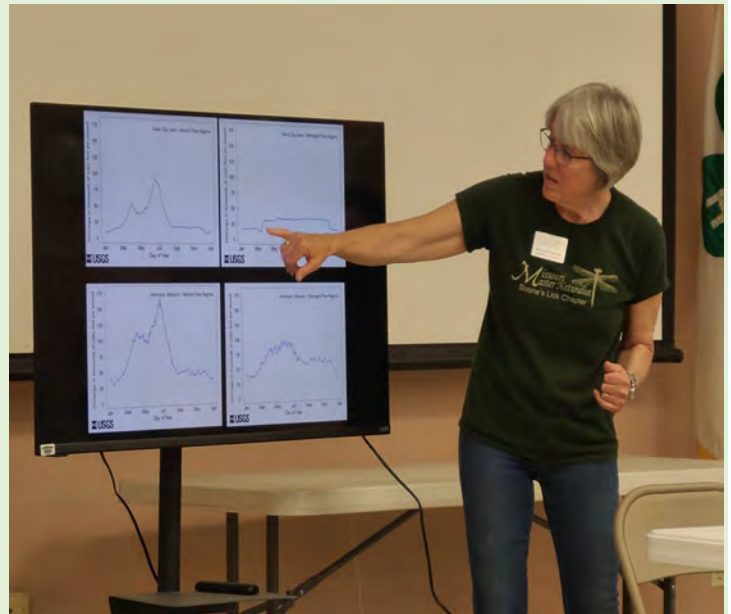
## Agriculture and Environment

### Local Impact

Boones Lick Training Class 2023



Boones Lick Melanie Knocke Teaching



Boones Lick Stream Monitoring Cedar Creek

# Boone County

## Agriculture and Environment

### Local Profiles and Stories



Boones Lick Scavenger Hunt



Boones Lick Butterfly Count

Boones Lick  
Stream Monitoring  
- Cedar Creek



# Boone County

## Agriculture and Environment

### Local Impact



Boones  
Lick  
Training  
Class -  
Burning  
Invasives

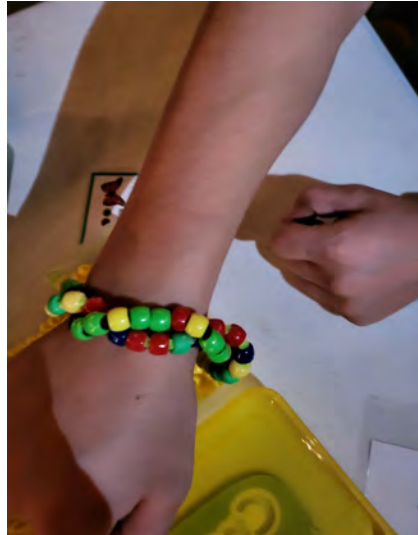
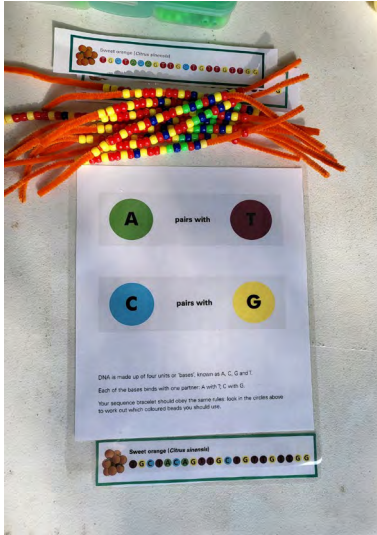
Boones  
Lick First  
Invasive  
Removal  
Crew



# Boone County

## Agriculture and Environment

### Local Profiles and Stories



## Teaching Basic Genetics and Lockbox Genetics Puzzles



# Boone County

## Agriculture and Environment

### Local Profiles and Stories



**2023 Agronomy Report  
Todd Lorenz, Field  
Specialist in Agronomy  
510 Jackson Rd,  
Boonville Mo, 65233  
660-882-5661**

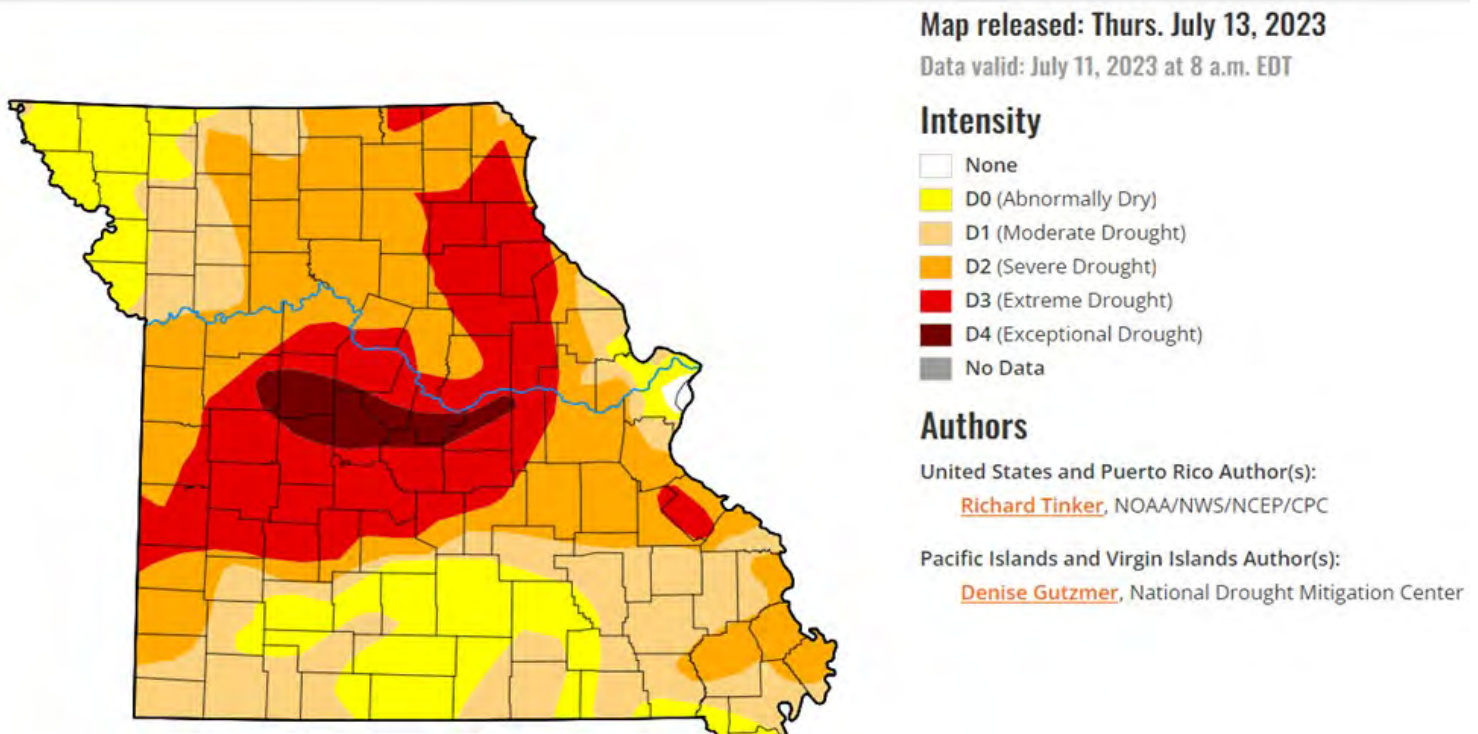
Missouri sets in a transitional climate zone where we can have the same winters as Michigan and the same summers as Georgia. The impact of 2022 weather extremes where both livestock and row crop production sustained challenges for the entire year continued throughout the 2023 growing season. Forage production was down, and livestock producers were still feeding hay into May as a result. Many were already feeding hay by July and looking to purchase additional anywhere they could.

Many forage/livestock producers rely on baling hay in the spring followed by grazing throughout the remainder of the year. Producers reported that hay production was down 60-80% and corresponding reduction in pasture capabilities. Water sources for livestock were extremely stressed as well. By mid-July, the USDA Drought Monitor finally recognized much of central Missouri in an exceptional drought (figure 1).

# Boone County

## Agriculture and Environment

### Local Profiles and Stories



### Figure 1: July 13, 2023, Drought Monitor Report

Livestock producers were faced with the challenge of not having enough forage to get through the winter and thus liquidated some of the herd. After already culling significantly with the 2022 drought, producers were often faced with liquidating some of their genetics that they had been building. Many producers were both baling and green chopping drought-stricken corn to replace forage losses of 2023, especially in central Missouri. Drought stricken corn provides the possibility of high nitrate level that can be detrimental to livestock (Figure 2). Our offices provided producers nitrate quick tests to help determine the viability of the corn as a forage. In many cases, we diverted potentially harmful situations for producers intending to feed livestock without proper handling of the forage. Additionally, water supplies were severely limited in this drought and some producers were forced to haul water (Figure 3).

# Boone County

## Agriculture and Environment

### Local Profiles and Stories



**Figure 2: Drought stricken corn field in central Cooper County**



**Figure 3: 2023 limited water supplies in ponds.**

# Boone County

## Agriculture and Environment

### Local Profiles and Stories

With all those challenges, while still well below average, the row crop yields turned out better than many producers' early predictions. The rainfall total was extremely spotty and hit or miss. It is in years like these that I often reflect on the Paul Harvey speech "So God made a Farmer" at the 1978 Future Farmers of America Convention. It truly takes a great caretaker to survive the ever-changing complexities that production agriculture provides to these stewards of the land.

As a result of our Private Pesticide Applicator Trainings crop producers and their advisers will not only be aware of the latest research related to pest and pesticide management but will also learn appropriate techniques of using that information to build efficient integrated pest management systems. The goal is to sustain an economically viable crop production industry in Missouri while diminishing potential negative impacts of crop production systems on the environment. This will enhance the economic and social viability of rural and urban Missouri while protecting the environment. #2xAg2030; #ExtendMU

Those who chose to fill out a survey at the Private Pesticide Applicator Trainings in counties that I serve represented over 125,000 acres from in and around central Missouri. Of those reporting, 100% believe Extension educational programs are important in their community. Also, 100% stated that the information provided will make them a better applicator. There were 25 of producers from Boone who attended the Pesticide Applicator Program this year.

Soil testing is utilized by both gardeners and homeowners as well as agriculture forage and livestock production. Any production, from back yard gardens and lawn to full scale agriculture, that is attempted with insufficient information may result in crop failure, wasted money, physical injury and environmental degradation from soil erosion or misuse of pesticides. Through our offices, the University of Missouri Soil Testing Laboratory provide accurate analysis of your soil and provides research-based recommendations on the crop that you are producing. There were 3329 submitted soil samples through our laboratory this year.



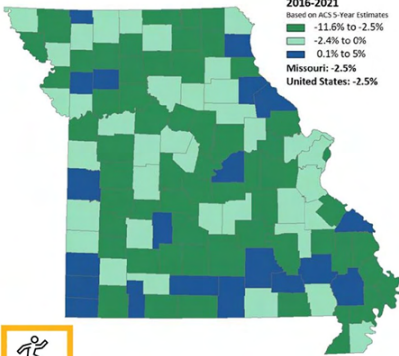


# MU EXTENSION **Serves MISSOURI and Delivers MIZZOU** through credible statewide programs **Business and Community**



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 **Missouri Economy Indicators (MEI)** series explores business, industry and workforce topics that affect Missouri's economy. The data is shared through newsletters and on social media. MU Extension faculty and staff receive talking points and collateral to share with local stakeholders.

**In 2022, MEI published 15 issues, and MEI online resources were accessed MORE THAN 5,000 TIMES. Two out of five MEI newsletter recipients reported using the information to help guide policy or decision-making in their work.**



## **DEMOGRAPHIC, ECONOMIC AND WORKFORCE DATA TRAINING**

**MU Exceed** offers customized data training. Participants learn how to use public data through hands-on exercises and demonstrations.

**In 2022, Exceed provided data training to MORE THAN 200 MISSOURIANS. 95% of the attendees said that the information they learned was useful to their work.**



## Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

# Boone County

## Business and Community

### Local Impact

#### **Agriculture Lenders' Seminars**

*Darla Campbell and Mary Sobba*

Eighty-three lenders from 25 Missouri counties and 1 from Illinois attended this year's seminars held in Mexico and Brookfield. Lenders learned about Crop and Livestock Outlook, Macroeconomics, Rental Rates & Land Values, MU Budgets, Input Costs, Renewable Energy, FSA, and MASBDA Programs. Lenders in attendance managed over 6007 farm loans totaling more than \$105,020,500.

By attending University of Missouri's Agricultural Lenders' seminars, lenders are able to help their clients make better decisions based on risk management tools, budgets, and other resources provided. This benefits their portfolio of producers and landowners by an increased understanding of enterprise budgets, market outlook, and other decision influencing factors affecting families' and businesses' financial health.

(Adair-4; Audrain-8; Boone-4; Callaway-4; Carroll-3; Chariton-4; Clark-6; Cole-1; Grundy-1; Lewis-5; Lincoln-6; Linn-5; Livingston-2; Macon-3; Marion-1; Moniteau-1; Monroe-9; Pike-3; Putnam-1; Randolph-1; Ralls-1; Schuyler-1; Shelby-6; Sullivan-1; Warren-1; and Illinois-1)



Eighty-three lenders attend seminars held in Brookfield and Mexico



Eighty-three lenders attend seminars held in Brookfield and Mexico

# Boone County

## Business and Community

### Local Profiles and Stories

#### Farmers' Markets Provide Price Data to Support New And Existing Producers

*Darla Campbell*

The Missouri Department of Agriculture partnered with University of Missouri Extension to collect farmers' market price data on crops present at Missouri farmers' markets June-October of 2023. Six MU Extension Specialists collected data while providing production, marketing, and financial resources to producers around the state. There was a total of 63 different markets visited in 2023 with 2246 prices collected.

I made 14 market visits to 12 different markets mostly in Northeast Missouri. These markets were in Kirksville, Unionville, Brookfield, Milan, La Plata, Louisiana, Hannibal, Palmyra, Mexio, Booneville, and Columbia.

(Adair-13; Audrain-15; Boone-25; Callaway-3; Cole-9; Cooper-17; Knox-1; Lewis-2; Lincoln-4; Linn-3; Macon-7; Marion-12; Monroe-2; Pike-3; Putnam-13; Ralls-8; Randolph-1; Schuyler-2; St. Charles-2; Sullivan-5; and Illinois-1)



Collecting Farmers' Market Price Data at Hannibal



Collecting Farmers' Market Price Data at Brookfield

# Boone County

## Business and Community

### Local Profiles and Stories



### Local Profiles and Stories

#### Farm Succession Planning Workshops

This past summer MU Extension partnered with Missouri Department of Agriculture (MDA) to offer succession planning for Missouri farm families. MDA received federal funding to perform mediation services for agricultural producers. Farm succession disputes were listed as an eligible category for mediation services. To increase awareness of mediation services and provide families with tools needed to navigate family conflict, MDA partnered with the University of Missouri Extension to host basic farm succession planning workshops for Missouri farm families. The workshops were designed to share tools and resources and to educate participants on the importance of the following four core concepts:

- Navigating family roles and business roles to prevent conflict
- Improving communication within the family farm business
- Sharing farm management decision-making with family during short-term crises
- Organizing a plan to transition farm ownership and management responsibilities to the next generation

A series of five workshops across Missouri reached a total of 177 attendees. There were four in-person workshops (Hannibal, Marshfield, Nevada and St. Joseph) and the fifth class was held online via Zoom. The total number of participants was 177.

#### *Participant Feedback*

A total of 92 evaluations were returned. Participants were satisfied with the program. All respondents said they would recommend the training workshop to others. On a scale of one to four, with four being very satisfied, the workshops were ranked 3.6 or higher across five satisfaction categories. No participant said they were “not satisfied” with any part of the training.

#### *Participants reported gaining new knowledge*

The workshops were successful at helping participants gain new knowledge in the four key subjects. Survey respondents were asked at the end of each session to rate their knowledge on four concepts before the training (pre-test) and after the training (post-test). Participants were offered a 1 to 5 scale and asked to rate their knowledge from 1 (very low) to 5 (very high). After the training, participants offered an assessment of a 3.9 or higher indicating they felt their knowledge on the concept was “high”. This assessment was higher than their perceived level of knowledge before the training began in all four categories.

# Boone County

## Business and Community

### Local Profiles and Stories

One of the most discrete learning topics in the workshop was centered on using the Short-Term Operating Plan to begin a conversation around farm succession planning. Knowledge of this tool increased the most.

*More than half of all respondents indicated the intention to act*

The workshops focused on providing tools to assist farm families in preparing to start farm succession planning. Practical handouts were created for each of the four core concepts and were provided in print to attendees, or electronically to Zoom registrants. In addition, the presentation named a series of suggested next steps to again encourage farm families to act. Through the evaluation summaries, more than half of all respondents indicated they intend to start addressing farm succession planning by taking one of four next steps (1) start a plan to adjust roles on the farm in the next five years, (2) schedule a family council meeting, (3) use a short-term operating plan, (4) tell someone about MDA's ag mediation services.

Farm succession planning benefits individuals and families by increasing the understanding and knowledge, leading to improved communication, and eventually leading to transitioning farm businesses. Succession planning builds stronger families. Farm businesses that successfully transition to the next generation contribute to the local tax base and contribute to vibrant and strong rural economies.

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If you want to include actual numbers from your county, the numbers were: Audrain-3, Boone-27, Callaway-1, Clark-2, Howard-1, Knox-1, Lincoln-4, Linn-4, Marion-6, Monroe-1, Pike-3, Shelby-2, St. Charles-4, Warren,-4, )



# Boone County

## Business and Community

### Local Profiles and Stories

#### 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 in addition a was online. The schools were designed for those who prepare taxes including enrolled agents, tax preparers, CPAs, individuals, and attorneys.

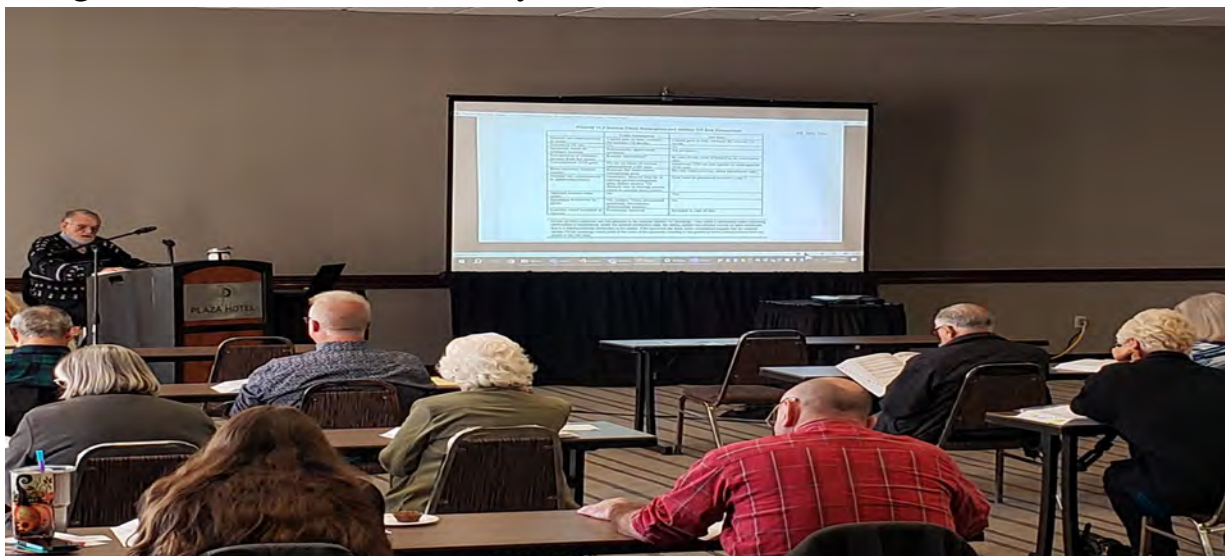
The training included updates on legislation, rulings and cases, individual taxpayer issues, agricultural and natural resources topics, ethics, trusts and estates, agriculture and natural resource tax issues, business tax issues, business entity tax issues, IRS issues, penalties and defenses, form 4797 sales of property, retirement tax issues, like-kind exchange 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 3,336 hours.

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

The trainings received positive evaluations and planning is underway to offer trainings in 2024. 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 2023 school attendance totaled three hundred twenty-seven people. The participants were from throughout Missouri. Boone county had 14 attendees.





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



Resilience is the capacity to adapt when faced with adversity. **WeCanPROSPER Resilience Training** is a 2.5 hour training for participants to evaluate their personal resilience, tap into resources and create an action plan to enhance their resilience.

**100%** of participants indicate that the skills and techniques they learned will help them become **MORE RESILIENT.**



**PROSPER** is a research-supported approach that promotes positive youth development and strong families through lifeskills education that increase protective factors and reduces risky behaviors among teens. Through a campus-community partnership, PROSPER Teams are created to support the implementation of two evidence-based programs with middle school students and their families.

**“They have the old saying it takes a village to raise a child, the more the community comes together the better off the children are going to be in that community.”**

**Peggy Saphian PROSPER Model Participant in Fredericktown, MO**



**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.**

**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**



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

The youth version of the program is designed to support adolescents ages 12-17 facing mental health or addiction challenges, while the adult version focuses on adults age 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



**A Matter of Balance** helps older adults overcome their fear of falling, increase their activity levels and reduce their risk of falls. In eight classes, participants learn fall-prevention strategies, develop personal prevention plans, acquire balance-improving exercises and make lifestyle changes to minimize their fear of falling.

**“I have cleaned my house of clutter for safety, put non-slip stickers on my tub floor, I’m getting much more regular exercise and I’m feeling stronger.”**



Studies show that people with strong family bonds tend to have lower stress levels.

**Building Strong Families** helps families amplify their strengths, tackle challenges and make confident, informed decisions to build resilient family units.

## Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

# Boone County

## Health and Human Sciences

### Local Impact



Through MU Extension's Farm and Ranch Stress programs and five different field-tested workshops, rural participants are equipped with tools to improve their mental health, are connected to valuable mental health resources, and participants gain access to free one-on-one telepsychology sessions.

Tina Edholm taught **Mental Health First Aid** 15 times to 229 participants from 47 counties in Missouri, including Boone, Callaway, Cole, Howard, Pettis, and Saline. She attended multiple community events to share 988 resources and resiliency information.

**Teen Mental Health First Aid (tMHFA)** offered across six 45-minute sessions to 10th graders during Health at Iberia High School during Spring 2022 and 2023. Course outcomes included:

- **18 out of 52** teens requested a mental health check-in from a mental health professional.
- "More people experience mental health challenges than you think. There's nothing to be ashamed of when seeking help." - tMHFA participant, 2023

These results were presented as a poster at Extension and Engagement Week. Tina will be offering tMHFA at Pilot Grove C-4 School District (Cooper County) as well as Iberia High School (Miller County) during the Spring 2024 semester.

### Mental/Behavioral Health & Suicide Prevention

	MHFA Youth and Adult	MHFA Teen
<b>People Served</b>	<b>229</b>	<b>51</b>
<b>Value of Mental &amp; Behavioral Health Programs</b>	<b>\$170</b>	<b>\$170</b>
<b>Total Value of Mental &amp; Behavioral Health Programs</b>	<b>\$38,930</b>	<b>\$8,670</b>



# Boone County

## Health and Human Sciences

### Local Profiles and Stories

#### Childcare Team Highlights: A Year of Impact!

In 2023, our Human Development and Family Science childcare team trained 397 providers, delivering 794 clock hours across Missouri through engaging virtual sessions. "The environment felt very welcoming, and it was exciting," said one participant. Another mentioned, "I thought it was a great training session and very interesting and inclusive." Tina's dedication shone as she engaged with 305 participants on their certification journey across Boone, Callaway, Cole, and beyond.



#### Matter of Balance

In 2023, the Matter of Balance program, a crucial element of the University of Missouri Extension's commitment to healthy aging, achieved significant milestones under Tina's guidance. She conducted three courses in Boone and Saline counties, with 29 participants completing the program. Through goal-setting, fall risk reduction, and basic exercises, participants experienced fewer falls, enhancing their ability to maintain independent lives in the familiarity of their homes. This not only contributes to the active engagement of seniors in work and community life but also markedly reduces the burden on our local healthcare system.

#### Building Stronger Families in Missouri

Human Development and Family Science Specialists virtually extended parenting education across the state in 2023. The team successfully served 91 parents, accumulating a total of 740 hours, directly impacting over 181 Missouri children.

The impact extended beyond knowledge as participants actively applied their learnings:

- **Communication Skills:** 100% worked to improve their communication skills to be more constructive and positive.
- **Relationship Building:** 59% made intentional choices to build or repair relationships.
- **Family Stress Reduction:** 50% made intentional choices that reduced family stress.

Tina Edholm played a vital role by teaching or moderating nine virtual sessions and two eight-hour in-person sessions. In 2023, 22 participants from Cooper, Callaway, and Howard counties attended, earning a total of 160 hours of parenting education.

#### Boost Your Brain & Memory

The program identifies healthy practices that can help you remember things better, be more organized, pay closer attention, and reduce your stress. Boost Your Brain & Memory was offered at the Cooper County Extension office. Eight participants completed the course. Comments from the course included the following:

- "Very positive group - all wanted to achieve and learn additional positive experiences." - Anonymous BYBM participant, Cooper County, 2023
- "This was an excellent course! Well-presented and full of useful ideas and information. Also very much enjoyed this instructor like everyone else who practiced too." - Anonymous BYBM participant, Cooper County, 2023