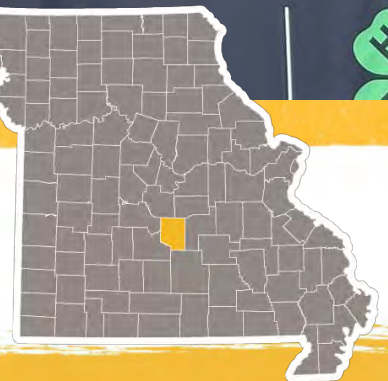




UNIVERSITY OF MISSOURI EXTENSION

Pulaski County

2024 Annual Report



**SERVE
MISSOURI.**

**DELIVER
MIZZOU.**

300 Historic Rt. 66E
STE 208F
Waynesville, MO 65583
573-774-4766

MU Extension
University of Missouri

an equal opportunity/ADA institution



Office of Extension
and Engagement
University of Missouri

Vice Chancellor's Office

108 Whitten Hall
Columbia, MO 65211

PHONE 573-882-2394

EMAIL cchiggins@missouri.edu

December 2024

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

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

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

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

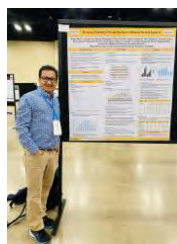
As you read through this annual report, I hope you feel as proud as I do of the accomplishments we've achieved together. The dedication and professionalism of MU Extension's faculty and staff are inspiring, and I am grateful to work alongside them—and each of you—as we make Missouri a stronger, healthier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

Warm regards,

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

Who we are

Faculty and staff



Extension Engagement Specialist: Brandi Richardson-East Central Region

Field Specialists:

Rudra Baral-Agronomy
Kevin Crider-Cooperative Feral Hog
Outreach Educator
Dhruba Dhakal-Horticulture
Charles Ellis-Agricultural Systems
Technology
Kevin Faulk-Nutrition Program Associate
Sarah Higgins-Natural Resources
Rachel Hopkins-Agricultural Business
Eric Meusch-Livestock
Emily Poncher-Community Health
Bethany Prenger-4-H Youth Development
Ray Walden-Community Development
Allen Waldo-Missouri APEX Accelerator
Specialist

Office Support Staff: Sharon Swenson



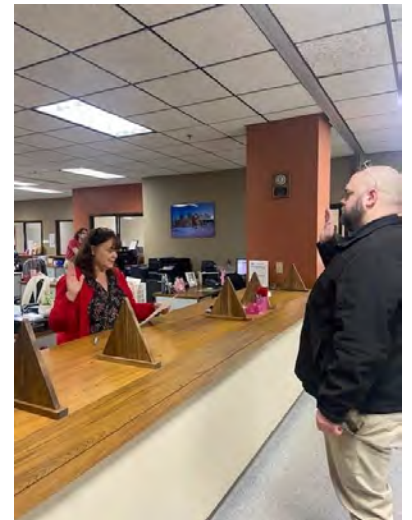
Council members

Council Officers:

Stacy Amick-Kramer-Council Chair
MaryFran Mier-Co-Chair
Kay Powell-Treasurer
Linda Gifford-Secretary

Council Members:

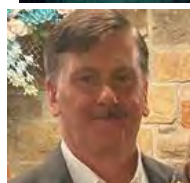
Ronda Cortesini
Jim Dack
Courtney Manfred
Doug Potts
Bonnie Wilson



County commissioners



Gene Newkirk-
Presiding Commissioner



Andy Helms-
Western District



Charles
Bassett
Eastern
District

Budget and more

Appropriations budget

Income

County Appropriations	20,000
Total Income	25,000

Expenses

Salaries/Benefits	11,900
Travel	1,700
Postage	180
Office Supplies/Service	2,500
Insurance	1,900
Advertising/Printing	290
Misc./other expenses	2,100
Total Expenses	20,600

Return on investment

University System	100,000
Donations	3,900
Program Revenue	840

Pulaski County partners

2024 Golf Tournament Fundraiser Sponsors



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



Local Support

Did you know you can donate directly to Pulaski 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.

Pulaski County



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

UM System Footprint in the county in 2024



FY24 county students

- 327 students**
- 179 Undergraduates
 - 148 Graduate and professional students
 - 251 Full-time students
 - 76 Part-time students
 - 62 Pell grant recipients (aid year 2024)



County employees and retirees

- 87 people employed by UM**
- 77 Campuses
 - 9 MU Health Care (includes additional employees gained via the recent integration of Capital Region Medical Center)
 - 1 UM System
- 25 UM retirees and beneficiaries
UM salary and retirement income: \$3.6 million
UM state tax revenue: \$85,202
UM federal tax revenue: \$489,366



County alumni

- Selected school alumni**
- 8 Medicine
 - 32 Nursing
 - 30 Health Professions
 - 7 Dentistry
 - 4 Pharmacy
 - 1 Optometry
 - 3 Veterinary Medicine
 - 41 Agriculture
 - 241 Engineering
 - 11 Law
- Alumni teaching K-12**
- 46 teachers
 - 7.6% of all district teachers



County breakdown

MU
• 110 students • 286 alumni • 14 employees
UMKC
• 10 students • 41 alumni • 0 employees
Missouri S&T
• 189 students • 303 alumni • 63 employees
UMSL
• 18 students • 39 alumni • 0 employees



Construction projects

- \$384,560 remitted to 1 county vendor, for 1 project



County properties and offices

MU Extension in: Pulaski County



County population: 53,850



County services provided

- Health care (FY24)**
- 2,682 in-state patients seen at MU Health Care, with \$1.3 million of uncompensated care
 - 1 in-state patient seen at UMKC School of Dentistry with a statewide average of \$52.57 per patient in uncompensated care
 - MU Health Care's Missouri Telehealth Network recorded 827 visits to 448 patients having ZIP codes associated with the county
- Extension (2023)**
- 1,466 Total educational contacts from MU Extension to residents of the county, including:
 - 191 contacts related to productive farming, better gardening, and managing natural resources
 - 837 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development
 - 252 contacts related to starting businesses, developing community leaders, or renewing the local economy

Pulaski County



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

UM System Statewide Footprint

Economic and Community Development Highlights

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

For every dollar invested from 2019 to 2021, the MU Extension Business Development Program has returned \$133 in economic impact for its clients by increasing sales more than \$1.6 billion. For a total impact of \$3.1 billion, the program has generated more than 37,000 jobs and attracted nearly \$451 million in capital investments and \$1.5 billion in government contracts.
- Between FY18 and FY23, UM System brought Missouri more than \$1.58 billion in federal and private research funds, funded primarily from outside the state, but spent within the state.
- In FY24, UM System was issued 29 patents and filed 69 new U.S. patent applications.
- In FY24, the UM System awarded 707 design and construction project contracts throughout Missouri, for a total investment of \$287.3 million in the state.



Education and Training Provided

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



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



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

Education Highlights

FY24 Financial Aid Awards

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

MU		UMKC	
28,608	\$583.6M	11,518	\$228.5M
students receiving financial aid	financial aid awarded	students receiving financial aid	financial aid awarded

Missouri S&T		UMSL	
6,720	\$127.7M	8,256	\$107.8M
students receiving financial aid	financial aid awarded	students receiving financial aid	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), 484 K-12 school districts (830,000 students) and 134 public libraries (serving nearly 3 million Missourians) in 2023.
- UM System awarded 50.5% of the 31,689 Bachelor's or higher degrees awarded by Missouri four-year public institutions in 2023-24.
- UM System awarded 35.0% of the 1,776 research doctorates and 26.8% of the 3,796 professional doctorates awarded by Missouri public and not-for-profit private institutions in 2023-24.
- In FY24, UM System's \$30.7 million in National Science Foundation (NSF) grants represented 96.9% of all NSF grants made to Missouri public colleges and universities.
- In 2024, over 12,400 Missourians accessed mobroadband.org, part of the UM System Broadband Initiative which helped the statewide build-out of high-speed internet infrastructure.

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

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

Prepared in December 2024, based on the best available and most recent data. Data Sources include: Missouri Office of Administration • UM IR • MU Institute for Public Policy • Center for Applied Research and Engagement Systems (CARES) • MU • UMKC • Missouri S&T • UMSL • UM System • UM Health Care • MU Extension • US Census Bureau • US Dept. of Health and Human Services • National Science Foundation



Missouri Grand Challenges: Local Solutions



PULASKI 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: *Economic Mobility*

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 (\$)

\$65,429

Pulaski



Missouri

\$62,528 🙄

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

Cost-Burdened Households (30%)

Cost-burdened households, where housing costs exceed 30% of total annual household income, is one measure of the relationship between cost of living and income. Households with high housing costs have fewer dollars remaining for other expenditures and are more likely to live paycheck-to-paycheck. The 26.75% of households in the report area are considered cost-burdened. This exceeds the state average of 25.15%.

Cost-Burdened Households, Percent

26.75%

Pulaski

Missouri

25.15%

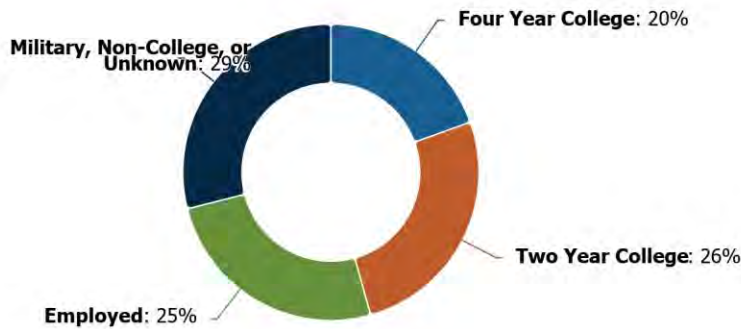
Data Source: US Census Bureau, [American Community Survey](#). 2018-22.



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

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 497 graduates surveyed in the report area, 97 went to a four-year college, 130 to a two-year college, 126 directly entered the job market. The remaining 144 are reported as in the military, not in college, or unknown.



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



CHALLENGE 3: Healthy Futures: *Healthy Aging*

Fall Injuries

Falls are the leading cause of injury-related fatality and hospitalization among older adults in the United States. Between 2013 and 2015, adults over age 65 in the report area had 717 hospital or emergency room admissions for fall and jump-related injuries. The rate of these injuries was 4,835 per 100,000 population, which is lower than the state rate of 5,396. Falls hospitalizations have increased since the 2001-03 time period when the rate was 4,547.

Rate per 100,000, 2019-2021

4,835

Missouri

5,396 🙄

Pulaski



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

Primary Care Providers

Older adults make up a historically large percentage of the U.S. population, and meeting the healthcare needs of an aging population can be challenging. In the report area, there are approximately 15 primary care physicians (MDs and DOs) to serve the area's 5,022 residents over the age of 65. The patient-provider ratio in the report area is 335:1, which means there is 1 provider for every 335 older adults. The ratio of adults to providers in the report area is higher than the state average of 250:1, which means there are fewer providers per person in this area.

Rate per 100,000 Seniors

298.70

Missouri

399.40

Pulaski

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



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
Pulaski	143	10	10	0	163
Missouri	13,742	4,773	421	6,406	25,342

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**



4-H In-school clubs meet during the school day. Members participate in projects that supplement their existing lessons. Clubs may meet for short periods or span the full 4-H program year. Members can elect officers and plan learning activities with options of public speaking, community service and links to career readiness.



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



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



Legend



Agricultural Growth
& Stewardship



Economic
Opportunity



Educational
Access &
Excellence



Health
& Well-Being

Pulaski County

Missouri 4-H

Profiles and Stories

Pulaski County 4-H Stats:

89 participants
6 chartered clubs
22 volunteers

2024 Highlights:

- Move Across Missouri Winner:
- Pulaski: Nirvana Benoschek
- Crocker Hosted a Progressive Ag Safety Day that had an enrollment of over 350 kids!





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

"A lot of veterans come right out of the service and may feel disconnected and may be struggling with finding job opportunities. The Heroes to Hives program offers a diversion as well as opportunities."

Eric Work, Heroes to Hives participant



Heroes to Hives offers free professional training in beekeeping to veterans, promoting financial and personal wellness through community development. Missouri's Heroes to Hives group has trained more than 1,200 veterans since 2021. It is the nation's largest agriculture training program for U.S. military service members.



The Missouri Master Gardener program

enables people of all ages to get in-depth horticultural training and then apply what they've learned to improve their communities and educate others about gardening.



In 2023, almost 4,000 Missouri Extension Master Gardeners completed over 149,000 VOLUNTEER HOURS throughout the state.



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

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

Legend



Agricultural Growth
& Stewardship



Economic
Opportunity



Educational
Access &
Excellence



Health
& Well-Being



RUDRA BARAL, AGRONOMY SPECIALIST

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

2024 Annual Report

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

Educate

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

Create

In 2024, I created following educational materials and scholarly articles

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



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

Connect

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

Professional Development

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



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

2025 Proposed Program

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



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

Impact Update

Kevin Crider
MFHEP Outreach Educator



Oct-Dec 2024

Serving Dent, Crawford, Phelps, Pulaski, Shannon, & Texas Counties

PRESENTATIONS & PROGRAMS

- Texas County Commissioners MFHEP update
- Presented MFHEP to Plato High School FFA classes
- Presented MFHEP update to Texas County SWCD
- Presented MFHEP to Rolla High School FFA classes
- Presented MFHEP update to Shannon County Extension Council
- Presented MFHEP to Waynesville High School FFA classes
- Met with Eminence High School Principal to schedule MFHEP presentation for FFA classes



TEAMWORK & COMMITTEE MEETINGS

- ✓ Attended MFHEP Outreach Educator Meetings.
- ✓ Educational rack cards placed in all Walmart stores in my assigned area
- ✓ Met with Houston Walmart for MFHEP sign placement
- ✓ Met with Salem Walmart for MFHEP sign placement
- ✓ Met with Rolla Walmart for MFHEP sign placement
- ✓ Met with Houston Bomgarrrs for MFHEP sign placement
- ✓ Met with Rolla Dickey Bubs for MFHEP sign placement
- ✓ MFHEP sign placed at ONSR Round Spring

UPCOMING EVENTS

Winter 2025

Eminence High School

- FFA class presentation on January 13

Willow Springs High School

- Pending FFA class TBD

Mountain View High School

- Pending FFA class TBD

Missouri Cattlemen's Association meeting

- Lake of the Ozarks January 17, 18

West Plains Walmart to post MFHEP sign

Pulaski County Horticulture Report- 2024

Dhruba Dhakal, Field Specialist in Horticulture

Workshop on Soil Health Improvement in the Garden – Pulaski County

This workshop educated gardeners and horticulture crop producers about soil and nutrient management in their gardens. The participants learned about function and composition of soil. They also learned about the role of organic matter in the soil, methods to improve organic matter content in the soil. They learned about the importance of periodic soil testing, method of soil sampling. They also learned about essential plant nutrients, soil test report interpretation and application of recommended amount of fertilizers and lime. There were 31 participants in the 2-hour workshop.



Picture 1. Participants attended the workshop on soil health Improvement in the Garden in Pulaski County Courthouse, Waynesville, MO.

Workshop on Planting Cover Crop in the Garden – Pulaski County

This workshop provided education to the gardeners and horticulture crop producers about planting cover crops in their garden after harvesting their main garden crops or as intercrop during their main horticulture crops. The workshop provided education to the participants about basics of soil, soil composition, healthy soil and indicators of a healthy soil. Participants learned about benefits of cover crops in terms of weed suppression, reduce soil erosion, improve water infiltration, improve water holding capacity and increase organic matter content of soil.

Participants also learned about various options of cover crops such as legume cover crops, brassicas and grass cover crops. They also learned about various seeding option of cover crops in the garden. They learned about varieties of cover crops such as alfalfa, red clover, annual lespedeza, sweet clover, cowpea, garden pea, soybean, buckwheat, turnip, tillage radish, spring oat, hairy vetch, and Austrian winter pea. They also learned about pros and cons of planting annual ryegrass, cereal rye, and winter whet as cover crops. There were 14 participants in the 2-hour workshop.



Picture 2. Participants attended the workshop on planting cover crops in the Garden in Pulaski County Courthouse, Waynesville, MO.

Workshop on Making and Using Compost in the Garden– Pulaski County

This workshop provided education to the gardeners and horticultural crop producers about compost and composting processes. Participants learned about benefits of compost in the soil, source of composting materials, good materials, and materials to avoid during composting. They also learned about the greens and browns materials used during composting. They learned about methods of composting, site selection for compost pile and compost testing in this program. There were 24 participants in the 2-hour workshop.



Picture 3. Participants attended the workshop on making and using compost in the garden in Pulaski County Courthouse, Waynesville, MO.

Workshop on Tomato Production in Home Garden– Pulaski County

This workshop provided education to the gardeners and horticulture crop producers about the importance of tomato among the gardeners in Missouri. They learned about the nutritional and medical importance. In the workshop, the participants learned about the suitable environment, soil preparation, seedling transplanting, nutrient, water, insect-pest and disease management. They also learned about physiological problems, harvesting and post-harvest handling of tomato in this workshop. There were 16 participants in the 2-hour workshop.

2024 Report

Sarah J. Higgins
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Resources
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Covering Bollinger, Butler, Cape Girardeau, Carter, Crawford, Dent, Dunklin, Howell, Iron, Jefferson, Madison, Maries, Mississippi, New Madrid, Oregon, Pemiscot, Perry, Phelps, Pulaski, Reynolds, Ripley, Scott, Shannon, St. Francois, Ste Genevieve, Stoddard, Texas, Washington, and Wayne Counties

2024 In Review

This year saw the expansion of natural resources programming to many of my counties. I'm happy to report some highlights of 2024:

- Forest Health Field Day in the Shoal Creek Watershed in Crawford County
- Invasive Plant Workshops in Dent and Texas Counties
- Revival of Missouri Women Owning Woodlands (WOW) program
 - Monthly virtual Zoom meetings featuring women natural resources professionals connecting with women woodland owners over topics of interest.
- Youth programming: 4-H soil and water experiment and watershed curriculum
- Keep Your Forest in the Family Legacy Workshop

It was great getting to connect with everyone in person and over Zoom. I will continue to offer virtual natural resources programming as it's the best way to reach all my counties. I will also continue to bring in-person programming to more counties as well. Thank you all for your support in 2024.

Stay Up-to-Date on Natural Resources Programming

Follow our newsletters to receive information monthly about our upcoming programs & learn more about Missouri's natural resources:

MU Extension Natural Resources Newsletter



bit.ly/MU-Ext-Natural-Resources

Women Owning Woodlands Newsletter



bit.ly/missouri-wow

Looking at 2025

Here are a few programs to keep an eye out for in 2025.

- Women Owning Woodlands Monthly Zoom meetings
- WOW Chainsaw Safety Courses
- Invasive Plant Workshops
- Tree identification hikes
- Forest Management field days & tours
- Natural Resources youth programming

Let me know what you'd like to see in your county - looking forward to engaging with everyone in conservation next year!

Livestock

Serving Dent, Phelps, Crawford, Pulaski, Shannon Reynolds, Carter, and Texas Counties

Eric Meusch
Livestock Specialist
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2024 AT A GLANCE

- Grazing Schools held in 5 counties taught approximately 110 livestock producers the fundamentals of Management Intensive Grazing. Improved grazing can reduce production costs, provide environmental benefits and improve drought resilience on livestock farms in Missouri.
- Show Me Quality Assurance events held in Dent, Phelps and Crawford Counties trained youth on proper care of livestock. Other youth-oriented activities included Ozark Cattlemen's Beef Day in Salem and the Wurdack Education Day event.
- The Value-Added Meats (VAM) team collaborated with Feedlot School team to develop the Direct Marketing Beef School held in West Plains. VAM also worked through the 2501 Program to conduct a hands-on chicken processing workshop for urban farmers in the St. Louis area.



The Value Added Meats team worked with the 2501 and Beginning Farmers Programs to teach poultry processing.



On-farm visits with producers addressing various issues is a key activity that takes place throughout the year.

KEY SUCCESSSES

- ✓ In the Show Me Select Heifer Development Program the state-wide combined totals for the spring and fall sanctioned sales was 1,352 heifers sold with gross receipts of \$4,490,675.
- ✓ A total of 174 youth in 3 counties received Show Me Quality Assurance training, learning industry standards for food animal care and husbandry. This training is required for youth exhibiting livestock at county fairs and Livestock Expos.
- ✓ Participants in Missouri Grazing schools learned the basics in management intensive grazing, including soil and forage management, grazing system layout, livestock management and infrastructure development..
- ✓ Socially Disadvantaged and Veteran Farmers and Ranchers participated in livestock related programs such small-scale chicken processing and farm walk abouts. This was part of the grant funded 2501 Program.

Pulaski County

Agriculture and Environment

Local Impact

Garden Series presented to Pulaski residents by Field Specialist in Horticulture-Dr. Dhakal



Laughlin family-2024 Pulaski County State Fair Farm Family.





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



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

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



The **Neighborhood Leadership Academy** provides in-depth leadership training that emphasizes community-building principles, project planning, organizational leadership and personal leadership skills.

"The overall knowledge that I have gained through this course has been amazing. From how to engage stakeholders in the community, to planning events and hosting meetings, these are all tools that I will fully utilize going forward."

2022 NLA graduate



"I highly recommend this incredible program to any community looking for focus and direction."

Strategic Doing participant

Strategic Doing is a one-day workshop that guides community stakeholders through an inclusive, problem-solving approach to developing high-impact projects to address local development issues.

The city of Risco, Mo., lacked retail options for food. Risco's Strategic Doing workshop and follow-up activities resulted in a GROCERY STORE OPENING in the community.

Legend



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Health
& Well-Being

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Ag Business

Covering Franklin, Gasconade, Osage, Maries, Miller, Pulas ki, Phelps, Dent, Crawford, Washington, St. Francois and Ste. Genevieve Counties

Rachel Hopkins
Ag Business Specialist
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2024 AT A GLANCE

- **757** direct contacts in Beef Production Systems.
- **42** Lenders attended 'What Lenders Need to Know in 2025' in Jefferson City. Lenders heard from presenters discussing Market Outlooks, Policy Updates, MASBDA and Farmland Values and Rental Rates.
- **115** attendees at the Farm Tax Workshops held in December, both in-person and online. Rachel presented on Conservation Tax Implications for this workshop.
- **97** mid-Missouri farmers and ranchers attended the Central Missouri Forage & Beef Conference in Maries County.
- **22** local producers attended the Wurdack Producer Field Day in October to hear about local applicable topics.
- **6** attendees at the Succession Planning in Ste. Genevieve
- **66** producers attended three Grazing Schools where Financial Aspects of Grazing were taught.



The cannulated bovine is always a memorable time with the FFA students.

1678 DIRECT CONTACTS 3447 INDIRECT CONTACTS



Producer Field Day at Wurdack is a great way to reach local producers. The topic this year was the financial aspects of Native Grass.

KEY SUCCESSES

- ✓ **Monthly emails** out to subscribers letting them know of upcoming Extension programs in the region.
- ✓ Presented at the **Missouri Livestock Symposium** on the Beef Feeding Profitability Tool, G462.
- ✓ **Rural Safety Day** educates 3rd graders in Washington County of hazards they might encounter and thus preventing traumatic injuries.
- ✓ **Tax Workshops** educate participants on timely tax issues and how they can better manage tax liability.
- ✓ **Wurdack FFA Day** provides a learning opportunity for 9th graders on different fields in agriculture and exposes them to new ideas and concepts.

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Community Development

Ray Walden
Community Development Specialist
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Serving Crawford, Dent, Maries, Phelps, Pulaski, and Washington Counties

At a Glance

I serve as a Community Development Specialist out of Salem in Dent County and also cover the counties of Crawford, Maries, Phelps, Pulaski and Washington in the East Central Region.

Some of the projects I supported during 2024 included:

- Continue efforts to identify community development priorities and potential partners in support of community development programs and services
- Providing updates on community development programs and formal presentations to county councils and other stakeholders
- Rural Infrastructure Challenge Grant with Missouri S&T
- Multi-State Housing Survey

Looking at 2025

Plans for 2025 include:

- Continuing efforts with MU Extension's North Central Region Housing Working Group
- Serving as a member of MU Extension's Home Energy Efficiency Contractor Training Grant Team
- Supporting MU Extension's MO Eats initiatives for the HFFI Grant
- Working with communities to identify potential community development related grants

Please contact me with any questions about community development programs or services. I am glad to be serving the East Central Region and look forward to working with your county!

Testimonial

"I have learned that my voice is very important, and I am a force to be listened to. I had many ideas but didn't have the courage to pursue all avenues and to make things better for my community, but I now feel that my voice is very important and should be heard."

- Community Development program participant

Programs and Services

Asset Mapping
Community Arts Programming
Community Assessment
Community Engagement
Community Planning Support/Coaching
Community Resource Development
Facilitation
Neighborhood and Leadership Classes
Strategic Doing
Youth Civic Engagement Programs



About us

The University of Missouri Extension and the University of Missouri-St. Louis have a history of successful partnerships building capacity for thriving communities.

Contact us to discuss how we can work with you to build civic capacity for YOUR thriving community.

extension.missouri.edu/topics/community-development

Pulaski County

Business and Community

Local Impact

Ice Cream Social meet and greet at the Pulaski County Regional Fair.



Military Officers Volunteer Group helping man the grill during our annual golf tournament/fundraiser.



Promoting Extension at the Dixon Cow Days Festival.



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



Adverse childhood experiences (ACEs) can lead to trauma and increased risks of substance use disorders, including opioid and alcohol misuse.

Show-Me ACEs:

- In collaboration with Kinship Caregivers and the MU School of Law, developed a trauma-informed legal toolkit to help reduce the impact of ACEs across the state.
- Partnered with the Missouri Community Health Commission to offer Empowerment Workers sessions (17 sessions, 122 participants) and Healing Circles (2 sessions, 15 participants) in southeast Missouri.



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. Upon completing the training, participants can attend a facilitator session, enabling them to deliver the content within their communities and strengthen resilience within their networks.

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



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.**

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



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



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



The programming from the **MU Fire and Rescue Training Institute** (FRTI) is available to all qualified fire and emergency first responders. Seventy percent of courses are held at the local departments or agencies. With most of the state's fire service personnel considered volunteer or part-time, this local access and flexibility assures training opportunities for all firefighters and emergency responders.

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& Well-Being



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



Home Food Preservation

Preserve the season's bounty - deliciously and safely.

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

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

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



Divorcing or separating parents encounter distinct challenges when living apart. **Focus on Kids** guides parents in fostering effective co-parenting strategies to support their children through this process.

"Understanding that divorce doesn't ruin children, but parents can significantly influence positive outcomes through good communication, was invaluable."



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."

Legend



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Health
& Well-Being

2024 SNAP-Ed Annual Report for Pulaski County

The Supplemental Nutrition Assistance Program Education (SNAP-Education or SNAP-Ed) brought \$11,145,237 in federal funds to Missouri. The funds support engagement with 74,864 Supplemental Nutrition Assistance Program (SNAP) recipients and eligible citizens of Missouri who learned about being active and healthy eating on a budget. This year we had 1,164,143 indirect educational contacts through newsletters, health fairs, food pantries, and the Show Me Nutrition helpline. There were 16,052 direct and indirect contacts were made in Pulaski 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.

Nutrition Program Associate who served Pulaski County in 2024



Kevin Faulk



One of several success stories thanks to Kevin's hard work and dedication.

Background-

Adult Direct Programming, Waynesville Good Samaritan, Healthy Change Workshop

Story-

One of the participants in my first Healthy Change Workshop series at the Waynesville Good Samaritan was a career cook for around thirty years. Despite this, she still wanted to attend the program in case she could learn something new. I will call her Miss J. After the first lesson, "Making Healthy Food Choices", she was pleasantly surprised and said, "I actually learned something.". Miss J had several revelations throughout the course of the series. "I didn't look at food labels much until this class." She expressed after the "Reading Food Labels" lesson. After the final session, Miss J also shared that

she used to have bowls of candy around her house for snacking. She had since bought an apple slicer and replaced her candy snacking habit with fruit. The significance of this is that someone who spent three decades operating in professional knowledge of USDA food requirements in food servicing who experienced a life change because of the research-based curriculum shared with her from the University of Missouri. This solidifies my faith in the relevance and effectiveness of the Family Nutrition Education Program.

Pulaski County

Health and Human Sciences

Profiles and Stories

Food preservation series conducted by Field Specialist Rachel O'Halloran



Ag Safety Day-Crocker School District