



UNIVERSITY OF MISSOURI EXTENSION

# Warren County

2023 ANNUAL REPORT



Office of Extension  
and Engagement  
*University of Missouri*

OFFICE OF THE VICE CHANCELLOR  
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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



# Warren County

## UM System Footprint in the county in 2023



### FY23 county students

#### 271 students

- 240 Undergraduates
- 31 Graduate and professional students
- 176 Full-time students
- 95 Part-time students
- 51 Pell grant recipients (aid year 2023)



### County employees and retirees

#### 52 people employed by UM

- 36 Campuses
- 16 MU Health Care

16 UM retirees and beneficiaries

UM salary and retirement income: \$2.5 million

UM state tax revenue: \$80,853

UM federal tax revenue: \$385,075



### County alumni

#### Selected school alumni

- 5 Medicine
- 102 Nursing
- 43 Health Professions
- 3 Dentistry
- 2 Pharmacy
- 3 Optometry
- 15 Veterinary Medicine
- 177 Agriculture
- 213 Engineering
- 14 Law

#### Alumni teaching K-12

- 87 teachers
- 23.1% of all district teachers
- 7 principals and administrators
- 29.2% of all district principals and administrators



### County breakdown

#### MU

- 113 students
- 675 alumni
- 29 employees

#### UMKC

- 10 students
- 19 alumni
- 1 employee

#### Missouri S&T

- 40 students
- 184 alumni
- 1 employee

#### UMSL

- 108 students
- 613 alumni
- 5 employees



### County properties and offices

MU Extension in: Warren County



County population: 35,033



### County services provided

#### Health care (FY23)

- 263 in-state patients seen at MU Health Care, with \$190,133 of uncompensated care
- 5 in-state patients seen at UMSL Center for Eye Care with a statewide average of \$34.82 per patient in uncompensated care
- 3 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 160 visits to 97 patients having ZIP codes associated with the county

#### Extension (2022)

- 1,045 Total educational contacts from MU Extension to residents of the county, including:
- 58 contacts related to productive farming, better gardening, and managing natural resources
- 987 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development

# Who we are

## Faculty and staff

### Warren County Faculty and Staff

**Elizabeth Anderson**

Extension Engagement Specialist

**Cindy Duckworth**

Administrative Assistant

**Tyler Hall**

Nutrition and Health Specialist

**JoLynn Hambach**

FNP Associate

**Maureen Michel**

4-H Program Associate

### Also Serving Warren County

**Matt Herring**

East Central Regional Director

**Charles Ellis**

Natural Resource Engineering Specialist

**Rusty Lee**

Agronomy Specialist

**Justin Key**

Field Specialist in Horticulture

**Brianna Anderson**

Human Development Specialist

**Chrisee Brandl**

Livestock Specialist

**Rhonda Shafer**

4-H Youth Development Specialist

**Mary Sobba**

Agriculture Business Specialist

**Ed Lahue**

Business Development Specialist

**Colleen Mulvihill**

Business Development Specialist

## Council members

Dennis James, chair

Hubert Kluesner, vice-chair

Anita Brace, secretary

Donna Sherman, treasurer

Abbie Ogborn

Joe Brooks

Laura Zimmer

Madge Flake

Diane Miederhoff

Matt Flake

Leo Sommer

Virgal Woolfolk

Wendy Guss



*(Center) Council member Anita Brace recognized for 29 years of service for Warren County Extension*

## County commissioners

**Joe Gildehaus**

Presiding Commissioner

**Matt Flake**

Associate Commissioner North

**Tom Meyer**

Associate Commissioner South

# Budget and more

## Appropriations budget

### Income (\$)

County Appropriations 87,373

### Expenses (\$)

Salaries/Benefits	67,483
Travel	1,386
Telephone	2,118
Office Supplies/Service	3,510
Utilities	2,877
Insurance	1,691
Contract Services	2,621
Postage	1,233
Miscellaneous	4,454

## Key outcomes and numbers

- ✓ 240 Warren County MU undergraduates
- ✓ 31 Warren County Graduate and professional students
- ✓ 51 Pell Grant recipients
- ✓ 263 in-state patients seen at UM Health Care along with \$190,133 of uncompensated care. Additionally, 90 patients seen through MU Health Care's Telehealth Network
- ✓ \$2,965,928 approximate tax revenue/income generated by 52 UM employees and 16 retirees
- ✓ 1045 total educational contacts from MU Extension, including:
  - 58 contacts related to productive farming, better gardening, and managing natural resources
  - 987 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development

## Return from University of Missouri

Specialist salaries & benefits

Nutrition Program Associate salary & benefits

Youth Program Associate salary & benefits (50%)

A portion of Travel Expense

Computer Equipment

Nutrition Coordinator

PTAC/Small Business Development Council

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

## Local Support

Did you know you can donate directly to Warren 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.





## Educational Access & Excellence

### Warren County Care Days/Kids in the Kitchen SNAC Spin Club

4-H Student Nutrition Advisory Council (SNAC) clubs are offered in a variety of settings including before school, during school, afterschool, and in other community settings helping youth build knowledge about nutrition and fitness. Youth participate in a leadership project where they are encouraged to become ambassadors of healthy living in their communities by designing and implementing leadership projects that will improve nutrition education and the fitness of others. 71 students in Warren County were served by this program. 30% of the youth reported eating more vegetables at lunch after completing the SNAC program. 61% of the youth improve their physical activity practices or gain knowledge.

In 2023, the Missouri 4-H Foundation collaborated with Healthy Blue to offer mini grants of up to \$500 per county to help 4-H SNAC clubs across the State of Missouri implement leadership projects. 36 counties were awarded a total of \$18,000 through this mini grant. Warren County received \$500 that was used for gardening projects and to make student cookbooks.



### ALPHA Academy Gardening SPIN Club



In 2023, gardening programming began at ALPHA Academy with the installation of two raised bed gardens in the school's outdoor classroom area. The garden beds and soil were granted through the Social Services and Administration For Children and Families Grant. Students grew an assortment of vegetables including zucchini, peppers and tomatoes, some of which were used during a salsa making and water bath canning program provided by 4-H. Students also enjoyed learning about hydroponic gardening by growing an assortment of lettuce and herbs in a tower garden. ALPHA is an alternative school in the Warren R-III School District that focuses on providing students with every opportunity and resource to be successful.



# Educational Access & Excellence



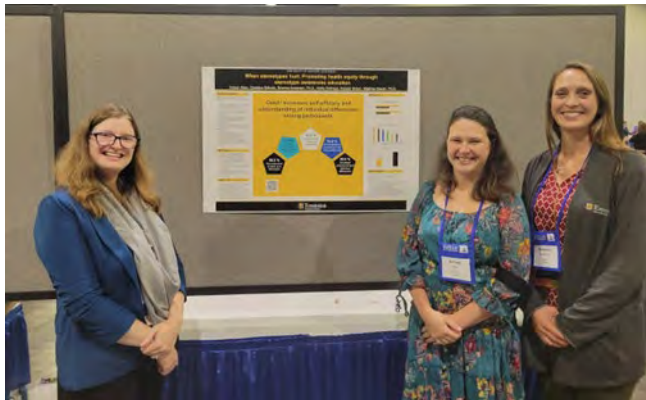
Divorcing or separating parents encounter distinct challenges when living apart. **Focus on Kids** guides parents in fostering effective co-parenting strategies to support their children through this process.

**“Understanding that divorce doesn’t ruin children, but parents can significantly influence positive outcomes through good communication, was invaluable.”**

According to the CDC, the 2021 **Missouri divorce rate was 2.9 per 1,000 inhabitants**, which **exceeds the national average** of 2.5 per 1,000. In Missouri, divorcing or separating parents of minor-aged children are required to participate in a parent education program. MU Extension Specialist in Human Development and Family Science Brianna Anderson facilitated eleven Focus on Kids programs, serving a total of 29 participants. Nine of these participants were residents of Warren County. Additionally, 18 Warren County residents completed Focus on Kids in other counties and 26 completed the program online.

## Other Major Accomplishments

- Co-authored **six research-based posters** on HDFS topics at state and national conferences
- Recognized **with regional and national team awards** from the National Extension Association of Family and Consumer Sciences:
  - 1st place: Excellence in Diversity Programming (National)
  - 2nd place: Excellence in Human Development Programming (Central Region)
  - 3rd place: Excellence in Human Development Programming (National)
- Appointed to a 3-year term on **the University of Missouri Family Friendly Campus Committee**



- Reviewed seven curricula for National 4-H, proposals for three national conferences, and award nominations for two national conferences
- Delivered a **guest lecture** to upper-level undergraduates at Central Michigan University, **promoting Extension careers**
- Revised program material and developed supplemental content including:
  - **Communication strategies** for different developmental stages and **parenting from afar** in the Building Strong Families series
  - **Supporting grieving children** in an approved Child Care Provider training
- Selected for the **2023-2024** National Extension Association of Family & Consumer Sciences **Leadership Experience** for new professionals



# Health & Well-being

## Strength and Balance Training for Falls Prevention

Stay Strong Stay Healthy and Tai Chi for Falls Prevention are strength and balance training programs for middle-aged and older adults. These programs were designed to increase aging adults' access to a safe, structured, and effective balance and lower body training program. Participants are made to feel comfortable regardless of their current fitness level so they can safely participate and gradually build lower body strength and balance.

In Warren County, 158 sessions of Stay Strong Stay Healthy and 20 sessions of Tai Chi for Falls Prevention were offered at the Warren County Senior Center and Warren County Health Department Fitness Center. 1,692 direct contacts were made for all falls prevention programming in the county. Of those participants who completed post-fitness testing (n=86), 97% improved or stayed the same in measures of fitness, balance, or strength.

When you support MU Extension's Stay Strong Stay Healthy and Tai Chi for Arthritis programs, participants will increase their physical activity and may improve strength, balance and flexibility, resulting in reduced risk for falls, better overall health and greater independence. These health benefits can prolong the need for long-term care, which costs on average \$51,000 per year in Missouri<sup>1</sup>. The money saved benefits the community by keeping more discretionary income in circulation locally. It also keeps people active, and independently contributing to society longer.



## ServSafe Food Manager Certification



Certified ServSafe Instructor

The Centers for Disease Control (CDC) estimates that each year approximately 1 in 6 Americans (or 48 million people) gets sick, 128,000 are hospitalized, and 3,000 die of foodborne diseases.

The ServSafe® program is a national certification program designed to teach safe handling practices to foodservice employees and others who handle and serve food to the public. ServSafe training enables participants to identify the principles of food safety and methods of preventing contamination and foodborne illness and also to be able to implement proper employee sanitation training. This training can help participants gain or maintain employment in a foodservice operation and should help to improve the safety of food that is served in Missouri food establishments taking the training. Ensuring the safety of food served in Missouri Food Service outlets can reduce the large economic burden of foodborne illness and can also help to ensure that tourists and visitors to Missouri do not get food-borne illnesses when visiting the state, which can also be harmful to the state's reputation.

In Warren County, 37 individuals participated in ServSafe training in 2023 to help improve their employment opportunities and also to improve the health of people eating in Missouri through a reduced likelihood of foodborne illness. All certificates allowed those individuals to continue operating.





# Family Nutrition Education Programs

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

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.

A total of 558 Direct Education participants were from Warren County.

Our Nutrition Program Associates (NPAs) are also continuing to provide information about the SNAP benefits program and offer assistance with SNAP benefits applications.

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

### **Schools**

Daniel Boone Elementary  
Rebecca Boone Elementary  
Warrior Ridge Elementary  
Wright City East Elementary  
Wight City West Elementary

### **Agencies**

Agape Ministry of Warren  
Warren Co Farmers Market  
Warren Co Health Department  
Warren Co Senior Center



**In addition** to the numbers, **JoLynn Hambach** shared this success story demonstrating local impact:

*Sam, an older gentleman, was persuaded to attend my Eating Smart Being Active class at the Warren Co. Fitness Center (Warren Co. Health Department). He made it clear from Day 1 that he really didn't want to be there, and he didn't think he wanted to change anything in his life, even though his children and doctor thought otherwise. During the first class, Sam walked with us for part of the "Leslie Sansone Walking Video". The second class he participated in the whole video but rested a few times. At the beginning of the third class, he came up to me before we started and said that he hated to admit it, but even though he was tired after the last class, he felt like he had more energy the next day! Sam has participated in every class, and is able to walk the whole mile with the class/video!*



## Warren County Highlights

# Warren County 4-H

4-H programs are grounded in the belief that **youth learn best by doing** through hands-on projects in areas such as science, health, agriculture, and civic engagement in a positive environment. Youth receive guidance from adult mentors and are encouraged to take on proactive leadership roles. 4-H youth have the opportunity to concentrate on one focus area, or they can try a variety of programs throughout their 4-H experience.

In 2022-2023, Warren County 4-H had 251 members enrolled in seven community clubs and one SPIN club. Community 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 this under the guidance of adult volunteers, who lead a wide variety of projects that support 4-H members in finding their Spark. SPIN (special interest) clubs, such as our Lucky Horseshoes Horse Club, allow members to choose a specific area of programming in which to concentrate.

Last year we also introduced our first after-school club in Warren County at Daniel Boone Elementary. Twelve group-enrolled members explored several different project areas through 4-H programming twice a month. Regardless of how youth participated, all 4-H programs included mentoring and career readiness as core elements.

## 4-H Volunteers

In 2023, 4-H members were supported by 61 adult volunteers. Volunteers who are the core of the 4-H program, help to create, support, and deliver educational programs and experiences. More importantly, these individuals serve as role models and mentors for youth.

Missouri 4-H volunteers report contributing an average of 100 hours per year to the program, valuing their time at \$31.80 per hour (Independent Sector, 2023). Based on these figures, the contribution of Warren County 4-H volunteers was worth more than \$193,980 in 2023.





# Warren County Highlights

## SERVING OUR COMMUNITY

### 4-H Service

Part of the 4-H pledge is “Hands through larger service” – a commitment to make our communities a better place to live. In 4-H, that means giving back to our town through community service! All 4-H members are encouraged to do community service projects and in Warren County, 4-H members take that seriously. Some of the service projects that 4-H members were involved in this year included the Holy Rosary Planting Project, Fairgrounds Beautification and Plant Donation, First Responder Appreciation Baskets, Tribute to Veterans Work Day, 9/11 Ceremony and Garden Party with the Warren County Historical Society, Assisted with Living Bingo Nights, Salvation Army Bell Ringing, Wreaths Across America, and Countywide Christmas Caroling at multiple locations around the county.





# Warren County Highlights

SERVING OUR COMMUNITY

## Warren County Historical Society Partnership



During the months of August through October, 4-H partnered with the Warren County Historical Society and Museum to bring the history of 4-H in Warren County to the public. Each Warren County 4-H club set up a display of projects and memorabilia for visitors to view. A 4-H open house was held in October, and many of the clubs hosted their monthly meetings at the museum so all members could learn more about 4-H in our county.

## Warren County Blood Drives

In 2023, the Warren County Extension Council and Warren County 4-H Council hosted three blood drives in partnership with the American Red Cross. Over 61 people donated blood across our blood drives. We are proud to have helped save up to 192 lives through these important service events.



## Truesdale Community Garden



Warren County Extension, in partnership with Warren County Master Gardeners, operates the Truesdale Community Garden. Community members grew an estimated 200 pounds of vegetables in 2023.

The Truesdale Community Garden underwent further improvements this year to better serve our mission to increase the consumption of fresh produce, teach the next generation of gardeners, and give back to those in need. Over \$5000 in grant funding was spent on garden materials such as a new shed, raised beds, soil, and a mini-food pantry at the location.



# Economic Opportunity

## Horticulture Programming

22 Warren County residents attended a variety of MU Extension horticulture classes, including classes on: Growing Great Tomatoes, 2023 Tomato School, and an On-farm Produce Safety Field Day. Attendees learned; how to test their soil and fertilize their garden, pest and disease management for tomatoes, commercial tomato production and how to minimize produce safety risks on the farm. Students received research-based information from MU Extension and practical skills to help their gardens thrive and farms grow.

30 Warren County homeowners and fruit/vegetable farmers received 1 on 1 support to help them solve problems in their crops and landscape such as; how to take a soil sample and how to fertilize a vegetable garden, how to deal with pests on flowers and vegetables, weed control in lawns, pricing at the farmers market, how to increase vegetable yields, how to connect with USDA farm programs, herbicide drift diagnosis, and use of cover crops. Students and residents received research-based information from MU Extension to help their gardens, landscapes and lawns thrive, while protecting pollinators by reducing insecticide use and protecting the environment from nutrient pollution caused by fertilizer runoff.

Two Warren County produce farms received agribusiness counseling from the Missouri

Agriculture, Food and Forestry Innovation Center

## Warren County Master Gardeners

The Warren County Master Gardeners volunteer their time to spread gardening knowledge and support community events and activities in Warren County.

Warren County Master Gardeners hosted two succulent plants workshops, one class for 70 adults, and one class for 25 kids, both at the local library. Each student received a rooting succulent. They identified what type, planted it, and decorated the pots as I explained the process of growing succulents.

Master Gardeners assisted with work and updates at the Truesdale community garden, in partnership with MU Extension Nutrition Program Association, JoLynn Hambach. Master Gardeners attended Warren County Farmers Market multiple times to teach gardening topics and answer gardening questions from market attendees.

team to plan for expansion to process and add value to fruit and vegetable crops grown on the farm, and understand regulatory compliance for on-farm processing.

Five Warren County produce growers received site visits and consultation related to infrastructure grants, site preparation, soil fertility and disease management on their farms.

Nine Warren County residents subscribed to MU Horticulture Newsletters (Garden Spade Newsletter, Missouri Produce Growers Bulletin, and the MU Commercial Horticulture Video Newsletter) or attended the Live Garden Hour weekly town hall. Subscribers receive research-based information to help their gardens thrive, while protecting the environment.

42 Warren County gardeners and produce growers had their soil tested and received detailed fertility recommendations, guidance, and support to help their gardens thrive, while protecting our state's waterways from nutrient pollution.

Warren County produce growers at the Lake St. Louis farmers market received horticulture guidance and tips related to produce safety and vegetable production.





# Economic Opportunity

## MU Soil Lab Fertility Test Samples

Warren County submitted or assisted in submission of 83 samples to the MU Soil Lab Testing Services and 10 samples to the Plant Testing Laboratory.

Test results and recommendations for fertilizer applications were mailed to the customers that had submitted their samples. Follow-up consultations were provided by Field Specialist in Agronomy, Rusty Lee and Field Specialist in Horticulture, Justin Keay, as customers needed additional assistance interpreting the results and recommendations. Increases in grain yield and forage tonnage are expected when elements of fertility are deemed required.

These samples enable farmers to manage their soil fertility by first knowing current levels and which added elements would generate a return on investment.

- Promotes farm sustainability by keeping land productivity at a high level.
- Reduces unnecessary expenses of applying costly fertilizer at a level above what can be utilized.
- Reduces environmental impact from the off-target movement associated with over-application.

## Private Pesticide Applicator Training

### Number of Warren County Learners

Thirty-seven Warren County citizens participated in the Private Pesticide Applicator training facilitated by Rusty Lee, Field Specialist in Agronomy. This 2.5-hour program gave a collective learning total of 92.5 education hours.

### What Did They Learn?

Upon completion of the training, participants were able to:

1. Recognize the need to correctly identify pest organisms prior to choosing a pest management strategy.
2. Understand the concept of economic thresholds and economic injury levels when making pest management decisions.
3. Possess a basic understanding of biological control and other non-chemical methods of pest management.
4. Better understand the format and information provided on each pesticide label.
5. Recognize the importance of using label information in all phases of application.
6. Understand the importance of having a Material Safety Data Sheet, and other materials available when applying pesticides.
7. Understand the need for proper selection and use of protective clothing and safety equipment.
8. Understand the importance of the "Restricted Use Pesticide (RUP) designation for certain pesticides

9. Consider environmental impacts when selecting a pesticide for use.

10. Consider the impact of pesticides on water sources when applying a pesticide.

11. Understand the need and procedure to develop an emergency plan (fire, storm, flood, other) with local emergency officials.

### How Does This Work Make Warren County and Missouri Better?

This training enables farmers to meet the legal requirements mandated by the Environmental Protection Agency and the Missouri Department of Agriculture's Bureau for Pesticide Control on the safe and proper use of agricultural pesticides on their farmlands, including restricted-use pesticides (RUPs).

This enables farmers to meet society's demands for lessening agriculture's environmental impact.





# Economic Opportunity

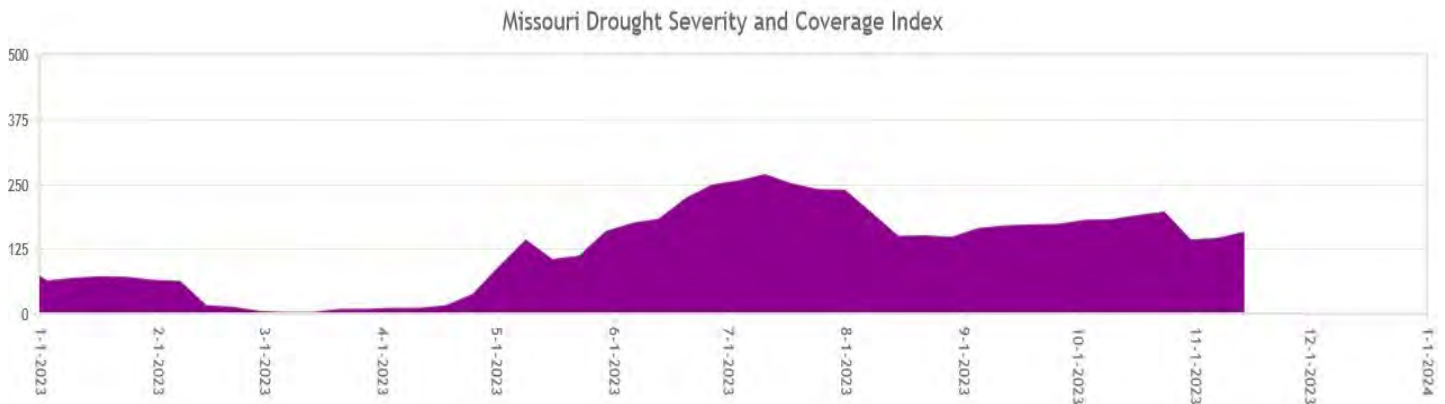
## Warren County Forage Loss Assessment 2023

### State-wide Overview

The 2023 forage production season featured a prominent drought event that continues to impact the State. Drought conditions first emerged in April (Figure 1) when the state recorded its 4<sup>th</sup> driest April (- 2.17") dating back to 1895. Precipitation totals remained below average in May (-1.87") and June (-2.72") with average monthly temperatures running 1 to 2 °F above normal (Figure 2). Several rounds of heavy rainfall in late July and early August helped to bring temporary drought relief, but dry conditions returned in September and October. Overall, the seven-month period from April to October has been the 14<sup>th</sup> driest (- 6.02") for Missouri and 2023 is currently the 7<sup>th</sup> warmest year on record through October. The largest precipitation deficits and areas most impacted by drought are approximately located along an axis from southwest to northeast Missouri.

This year's drought occurred during the growing season, resulting in widespread negative impacts to the agricultural sector. Depleted soil moisture has led to poor pasture and crop conditions along with mature tree stress. Timely rainfall in July and August provided some relief to crops, but the return of hot and dry conditions in September and October limited fall pasture growth. Agricultural water supply has also been a persistent issue with many pond levels low or dry. Larger streams and rivers have also been dry, with up to 40% of the state's monitoring gauges measuring streamflow that is well below normal since April. Hydrological drought has also contributed to commercial navigation impacts along the Mississippi River, especially south of St. Louis. Altogether, there have been 984 community drought impact reports through the Condition Monitoring Observer Reports (CMOR) program this year.

The transition from October to November in Missouri was marked by beneficial rainfall and colder temperatures but conditions were short lived. As of November 20, Missouri is on track for another month featuring both above normal temperatures and below normal precipitation, extending the 2023 drought through the end of the fall season. This has resulted in a continuation of drought impacts including agricultural concerns, enhanced fire risk and low water levels on streams, rivers and ponds. As of November 14, approximately 55% of the state remains in drought with 19% of the state being characterized as either severe or extreme drought (Figure 3).



**Figure 1.** Missouri Drought Severity and Coverage Index (DSCI) from January 1, 2023 to November 14, 2023. DSCI values quantify the combined spatial extent and severity of drought conditions. Data provided by the National Drought Mitigation Center (<https://droughtmonitor.unl.edu/DmData/TimeSeries.aspx>).



# Economic Opportunity

## Forage County Specific Data - Warren

Cool-season grasses are the predominate forage species in Warren County. Much of its annual forage production occurs prior to the summer “slump” period of July and August. That makes April, May and June the quarter of the calendar to make or break a year’s forage production.

Assuming soil fertility is adequate, soil moisture is the largest determining factor of forage production. This direct plant response makes tracking rainfall, and its contribution to soil moisture, an excellent barometer of forage production. During the April - June period, rainfall for Warren County was 7.31 inches below the 1901-2000 average amounts. This represents a 58 % decline in precipitation during this critical period of forage production. My observations of pastures and hayfields in the county, including conversations with area producers, provided a verification of this expected reduced forage productivity claim.

While there was some short-term relief from a few July and August rains, our cool-season grasses saw April - June temperatures for the county being 2% above the 100-year average, and more importantly, a lower-than-normal soil moisture level to start the growing season due to our drought actually beginning in the fall of the previous year.

These measurements, observations and conversations shape my opinion to be that Warren County experienced a 58% reduction in forage growth for the 2023 growing/grazing season.

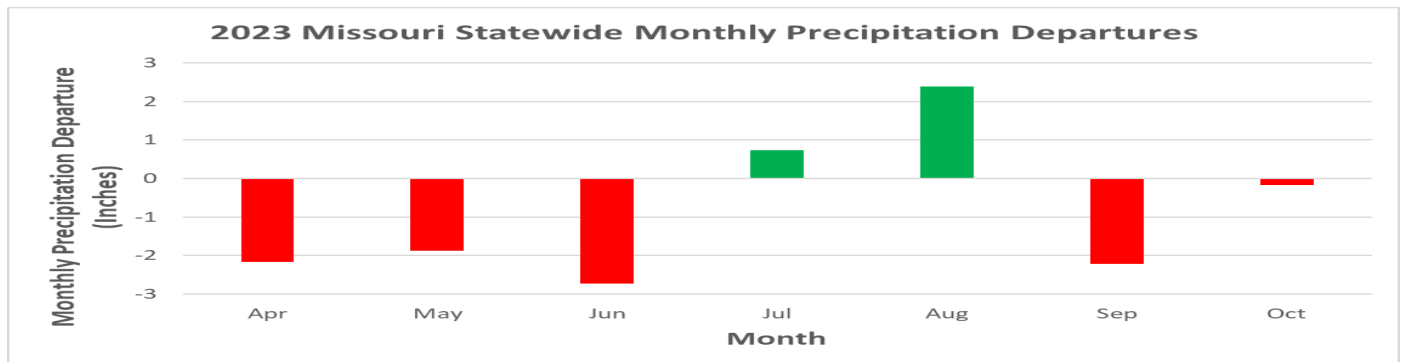
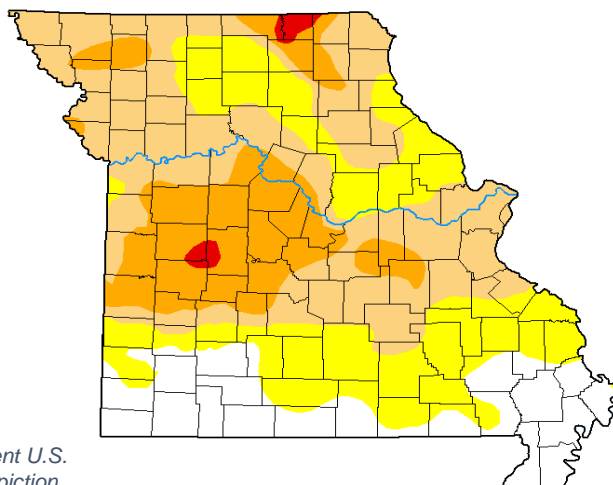


Figure 2. Statewide monthly precipitation departures from normal during April to October 2023. Precipitation normals based on 1901 – 2000. Data provided by the National Center for Environmental Information (<https://www.ncei.noaa.gov/access/monitoring/climate-at-a-glance/>).

## U.S. Drought Monitor Missouri

November 14, 2023  
(Released Thursday, Nov. 16, 2023)  
Valid 7 a.m. EST



- Intensity:**
- None
  - D0 Abnormally Dry
  - D1 Moderate Drought
  - D2 Severe Drought
  - D3 Extreme Drought
  - D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

**Author:**  
Brad Rippey  
U.S. Department of Agriculture



Figure 3. Most recent U.S. Drought Monitor depiction (retrieved 11/20/23).





# Economic Opportunity

## Farm Tax Workshops

MU Extension hosted and taught Farm Tax Workshops for farm businesses and farm and ranch families. The content included farming: hobby vs. business, employee vs. independent contractor, weather related sales, sale or trade of business property, legislative update, 1099s, expiration of key income tax provisions, tax issues arising from the death of a farmer, and depreciating and expensing farm assets.

The workshops were designed to convey information in a concise manner using information from the IRS and the Land Grant University Tax Education Foundation. The purpose of the classes is to get relevant and helpful information to farmers so they can make decisions and be better prepared to work with their professional tax preparer.

The workshops were a combination of in person classrooms and online via Zoom, with a total of 77 participants. Warren County had two residents participate in the farm tax workshop.

Farm tax education workshops benefit individuals by increasing their understanding and knowledge, leading to more informed decisions and management of taxes. Better knowledge also leads to improved communications with their tax preparers and accountants. The result is researched and timely purchases of farm expenses, optimizing income tax scenarios and improved profitability over time. Money saved in income taxes stays local and is spent in local businesses up and down main street, making a more vibrant and sustainable rural economy.

## 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 was offered 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.

Instructors 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.

Attendance totaled 327, Warren County totaled 5 residents.





# Economic Opportunity

## 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

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.



A series of five workshops across Missouri reached a total of 177 attendees. Warren County totaled four participants.

## Agriculture Lender Seminars



The Agriculture Lender Seminar presented by Darla Campbell and Mary Sobba was attended by 83 Missouri residents, one resident was from Warren County.

Eighty-three lenders from 25 Missouri counties and Illinois attended this year's seminars in Mexico and Brookfield. Lenders learned about crop and livestock outlook, agriculture policy, rental rates & land values, MU budgets, input costs, USDA Farm Service Agency, and Missouri Agricultural and Small Business Development Authority (MASBDA) programs. Lenders in attendance manage 6,007 farm loans totaling \$115,500,000.

By attending University of Missouri's Agricultural Lenders' seminars, lenders gain knowledge to help their clients make better decisions based on objective education and resources. More information and better decisions benefit their portfolio of producers, landowners, and ag-businesses through enhanced understanding of enterprise budgets, market expectations, and other decision influencing factors affecting families' and businesses' financial health.



# MU EXTENSION **Serves MISSOURI and Delivers MIZZOU**

through credible statewide programs

## **Business and Community**

Missouri Small Business Development Centers (SBDC) provide professional training and customized one-on-one counseling to small businesses across the state.

Working with the Missouri SBDC helps business owners make confident decisions. **In 2023, this translated to 11 new clients counseled and 136 training event attendees in Warren County.**



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.**



**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.**

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

**Strategic Doing participant**

### Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being