



UNIVERSITY OF MISSOURI EXTENSION

Sullivan County

2024 Annual Report



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Extension

University of Missouri

an equal opportunity/ADA institution



Office of Extension
and Engagement
University of Missouri

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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



Tracie Moore, Extension Engagement Specialist

Hillary Robedeaux, Youth Program Associate

Amber Sayre, County Office Support

Darla Campbell, Field Specialist in Community Development

Zac Erwin, Field Specialist in Livestock

Neina Martin, Nutrition Program Associate

Karen Poe, Field Specialist in Nutrition & Health

Jennifer Schutter, Field Specialist in Horticulture

Mary Sobba, Field Specialist in Agricultural Business

Valerie Tate, Field Specialist in Agronomy

Jeremiah Terrell, Field Specialist in Human Development

Mike Krauch, Regional Director

Council members

Gregory Snyder, Chairman

Rachel Hall, Secretary

Jodi Deterding, Treasurer

Christine DeRyke

Susan Guffey

Tim Lewis

Larry Mechlin

Geri Riddick

Oscar Mensa

Chris May



County commissioners

Chris May, Presiding Commissioner

Rye Page

Michael Williams

Budget and more

Appropriations budget

County Appropriations Income 43,713.50

Expenses

Salaries & Wages	37,636.43
Travel	1,203.00
Postage	25.33
Telephone	1,226.34
Advertising	52.00
Publishing/Printing	61.78
Supplies/Services	1,400.91
Miscellaneous	261.88
Equipment	1845.53
Total Expenses	43,713.20



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



Local Support

Did you know you can donate directly to Sullivan 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.

State Fair Farm Family

Each year, the Sullivan County MU Extension Council, in cooperation with the Missouri Farm Bureau selects a family to represent them at the Missouri State Fair. We select a family actively engaged in agriculture, supporters of MU Extension, active in their community through leadership roles in organizations, support youth in areas such as 4-H and FFA and are respected by the neighbors and community. The Jordan and Jodi Deterding family was selected to represent Sullivan County for 2024.

Leaders Honor Roll

Leaders Honor Roll is designed for honoring MU Extension and Engagement's volunteers and those who champion extension, the Leaders Honor Roll is a traditional award that takes place each fall to honor volunteer leaders (individuals or couples) who deserve recognition, as determined by MU Extension faculty and staff in each county. This year Phyllis Fleshman has been added to the Leaders Honor Roll for her support to Sullivan County MU Extension programming.

UM System County Impacts

2025 UM Systemwide Impact Data Sheets

Sullivan County



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

UM System Footprint in the county in 2024



FY24 county students

16 students

- 12 Undergraduates
- 4 Graduate and professional students
- 14 Full-time students
- 2 Part-time students



County employees and retirees

1 person employed by UM

- 1 Campuses



County alumni

Selected school alumni

- 13 Nursing
- 8 Health Professions
- 2 Dentistry
- 4 Veterinary Medicine
- 53 Agriculture
- 5 Engineering
- 2 Law

Alumni teaching K-12

- 13 teachers
- 11.9% of all district teachers



County breakdown

MU

- 9 students
- 92 alumni
- 1 employee

UMKC

- 4 students
- 17 alumni
- 0 employees

Missouri S&T

- 2 students
- 3 alumni
- 0 employees

UMSL

- 1 student
- 4 alumni
- 0 employees



County properties and offices

MU Extension in: Sullivan County



County population: 5,903



County services provided

Health care (FY24)

- 528 In-state patients seen at MU Health Care, with \$398,460 of uncompensated care
- 4 In-state patients seen at UMKC School of Dentistry with a statewide average of \$52.57 per patient in uncompensated care
- MU Health Care's Missouri Telehealth Network recorded 152 visits to 94 patients having ZIP codes associated with the county

Extension (2023)

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

UM System County Impacts

2025 UM Systemwide Impact Data Sheets

Sullivan County



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

UM System Statewide Footprint

Economic and Community Development Highlights

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

\$3.1
billion

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

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



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

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



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

Education and Training Provided



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



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

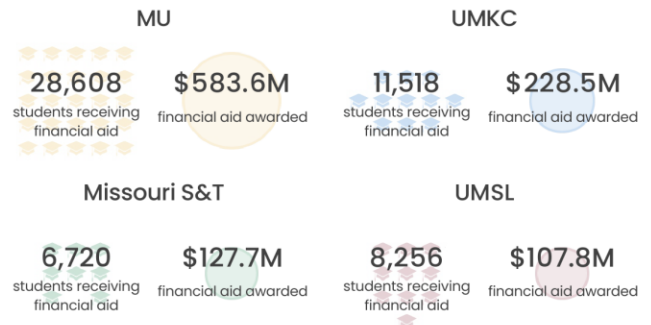


210,577 youth and stakeholder educational contacts in 4-H clubs, schools, camps and other programs (2023)

Education Highlights

FY24 Financial Aid Awards

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



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

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

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

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

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



Missouri Grand Challenges: Local Solutions



SULLIVAN 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

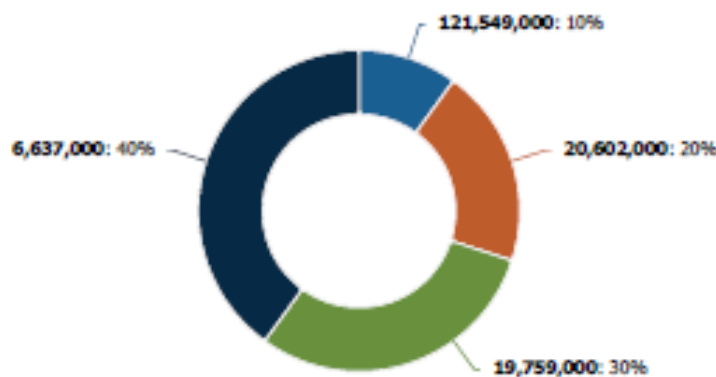
Knowing Local Challenges



CHALLENGE 1: Economic Opportunity: *Agricultural Economics*

Leading Agricultural Products

Total Rank (Sales): \$10



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

Net Farm Income

Net farm income (total sales, government payments, and other farm-related income minus total farm expenses) reflects the strength of the local agricultural community and can be an important measure for lenders and policy makers. The report area had a combined net farm income of \$38,154,000 in 2017, an average of \$59,430 per farm. This compares favorably to the statewide average farm income of \$56,606.

Report Area	Total Farms	Average Farm Income
Sullivan	642	\$59,430
Missouri	87,887	\$56,606

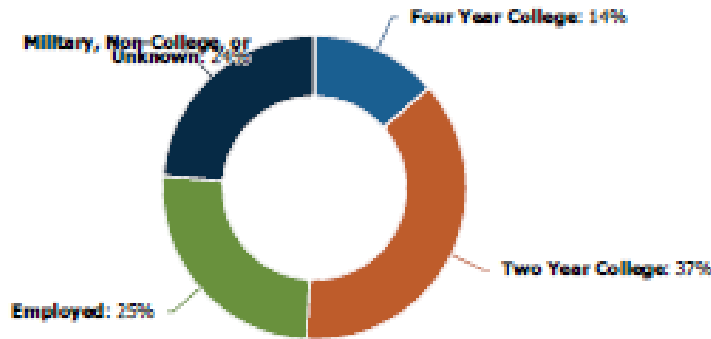
Data Source: US Department of Agriculture, National Agricultural Statistics Service, [Census of Agriculture](#), 2022.



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 59 graduates surveyed in the report area, 8 went to a four-year college, 22 to a two-year college, 15 directly entered the job market. The remaining 14 are reported as in the military, not in college, or unknown.



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

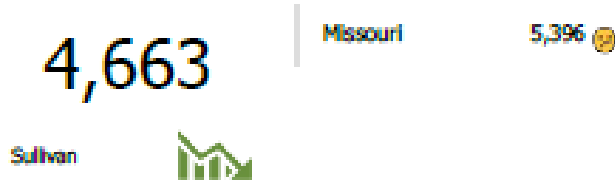


CHALLENGE 3: Healthy Futures: *Healthy Aging*

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 173 hospital or emergency room admissions for fall and jump-related injuries. The rate of these injuries was 4,663 per 100,000 population, which is lower than the state rate of 5,396. Falls hospitalizations have improved since the 2001-03 time period when the rate was 5,990.

Rate per 100,000, 2019-2021

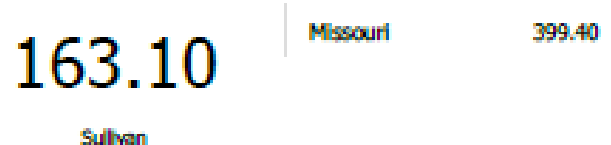


Data Source: US Department of Health & Human Services, [Missouri Department of Health & Senior Services](#), 2019-2021.

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 2 primary care physicians (MDs and DOs) to serve the area's 1,226 residents over the age of 65. The patient-provider ratio in the report area is 613:1, which means there is 1 provider for every 613 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



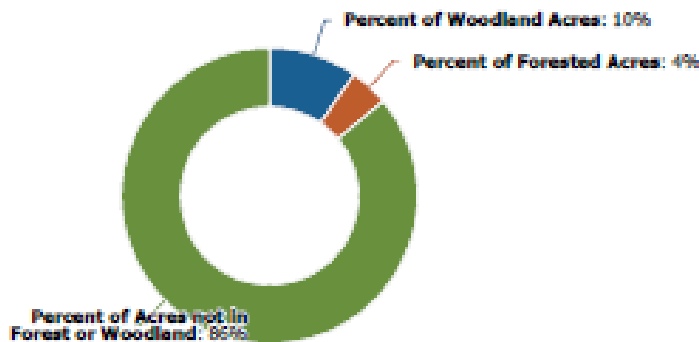
Data Source: US Department of Health & Human Services, Health Resources and Services Administration, [HDSA - Area Health Resource File](#), 2021.



CHALLENGE 4: Agricultural Growth & Stewardship: *Resource Management*

Forested, Woodland & Non-forested Acres

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

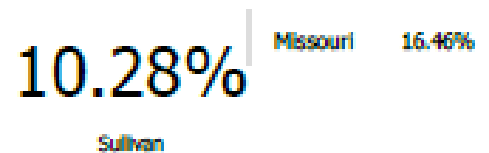


Data Source: Multi-Resolution Land Characteristics Consortium, [National Land Cover Database](#).

Rotational Grazing

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

Percent of Operations Utilizing Rotational Grazing



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

Sullivan County

Missouri 4-H

Local Impact

4-H Clubs

Hillary Robedeaux

Sullivan County 4-H Clubs are a community of 62 youth building life skills, contributing to their community, and becoming college and career ready. Three in every ten Sullivan County youth under the age of eighteen participated in a MU Extension 4-H Youth Development program in 2024.

4-H Youth Development programs are guided by the 4-H Thriving Model, which is a framework to illustrate the connection between high quality 4-H programs and indicators of youth thriving with developmental outcomes which ultimately leads to the long-term outcomes of youth who experience academic or vocational success, are civically engaged, are employable and economically stable, and experience happiness and wellbeing.

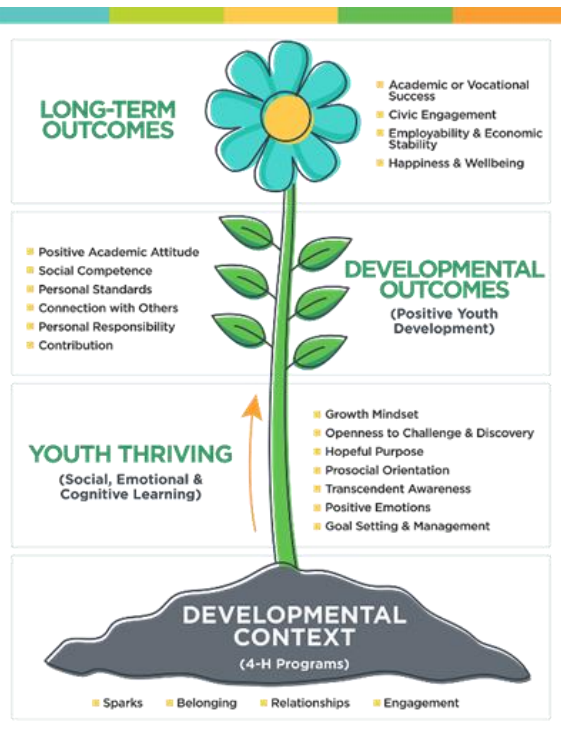


4-H Members

Hillary Robedeaux

4-H programs are also grounded in the belief youth learn best by doing. Through hands-on projects like 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. Youth have the opportunity to concentrate on one focus area, or they can try a variety of programs throughout their 4-H experience. Sullivan County served youth through 4 community clubs, 5 SPIN Clubs.

- There were 347 youth reached through community clubs, SPIN clubs, in-school, and afterschool 4-H clubs in Sullivan County during the 2023-2024 4-H Year.
- Over 53 4-H members were engaged in science related projects and experiences.
- Collectively youth participated in 370 hours of community club work in Sullivan County.
- Over 111 hours of community service projects were completed by 4-H members and volunteers during the 2023-2024 4-H Year.



LONG-TERM OUTCOMES

- Academic or Vocational Success
- Civic Engagement
- Employability & Economic Stability
- Happiness & Wellbeing

- Positive Academic Attitude
- Social Competence
- Personal Standards
- Connection with Others
- Personal Responsibility
- Contribution

DEVELOPMENTAL OUTCOMES (Positive Youth Development)

- Growth Mindset
- Openness to Challenge & Discovery
- Hopeful Purpose
- Prosocial Orientation
- Transcendent Awareness
- Positive Emotions
- Goal Setting & Management

YOUTH THRIVING (Social, Emotional & Cognitive Learning)

DEVELOPMENTAL CONTEXT (4-H Programs)

- Sparks
- Belonging
- Relationships
- Engagement

Sullivan County

Missouri 4-H

Local Impact

4-H members have demonstrated learning through the following activities:

- 53 youth participated in a total of 9 different events during the 2024 County 4-H Achievement Day event
- 2 members participated in the Northeast Region Energizer and 2 members attended the Regional 4-H Round-Up.
- 20 exhibits at the 2024 Sullivan County Fair.
- Sullivan County youth exhibited over 20 exhibits in the 4-H Building and livestock shows of the Missouri State Fair.
- 3 state level recognition forms were completed by members. These forms provide members with a vital step in the Experiential Learning Model. Members reflect on the things they have done and learned throughout the 4-H year and how they can apply what they have learned in the upcoming year.
- 2 members participated in the State 4-H Teen Conference, which offered youth a fantastic opportunity to experience leadership in 4-H. This event provides a safe and enjoyable campus experience where youth can enhance their skills and forge new friendships.
- 1 Sullivan County youth participated in the State Shoot events.

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



experiences help youth explore interests in citizenship, communication, and leadership.

Sullivan County members enrolled in a combined total of 125 projects in 2024.

Impacts of 4-H Programming

4-H members are twice as likely to go college compared to their non 4-H peers and they tend to pursue careers in STEM fields (Lerner & Lerner, 2011).

- 4-H also prepares youth for the workplace. Youth must be prepared to live and work in a world we cannot completely envision- competing for jobs that do not yet exist, using technologies that have yet to be identified. 4-H is the only youth development program with direct access to technological advances in agriculture, life sciences, and social sciences from the university system. This brings relevant science content and hands-on learning that helps youth thrive (Arnold, Bourdeau, & Nott, 2013).
- Youth who earn a bachelor's degree increase their annual earnings by \$2 million over their lifetime. (U.S. News and World report, 2011) If 50% of the Sullivan County youth participating in 4-H events on a college campus receive a Bachelor's degree, 4-H would help young people acquire \$3,000,000 more in lifetime earnings.



Local Impact



4-H Volunteers

Hillary Robedeaux

- Sullivan County 4-H members were supported by 25 enrolled, screened and oriented adult volunteers supporting the development of youth in 2024.
- Volunteers contributed 2,500 hours to the Sullivan County 4-H program valued at \$83,725.

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

4-H School Enrichment- Embryology

Hillary Robedeaux

- There were 285 students from nine classrooms who participated in the Hatching Chicks in the Classroom program in 2024.
- Students participated in over 1,710 hours of learning with the “Chick It Out” program.

During the Embryology program, students learn about the 21-day development occurring within a fertilized, incubated egg that can result in the hatching of a chick. Students review the necessity of hand washing due to potential contamination caused by salmonella in poultry and poultry products. Students often gain experience with death and disabilities. Throughout the experience, students are charged with rotating the eggs and are responsible for checking to make sure the incubator has water and is maintaining the correct temperature. Once the chicks hatch, the students care for them, providing feed, water, warmth, and a calm environment.

Impacts of Programming

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



Sullivan County

Missouri 4-H

Local Impact

4-H SNAC Clubs

Hillary Robedeaux

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 an ambassador of Healthy Living in their communities by designing and implementing a leadership project that will improve education and the fitness of others. Across the state, youth have developed creative ways to advocate for healthy living. In 2024, Missouri saw the establishment of 121 SNAC Clubs, engaging 2,543 youth and reaching over 7,330 others through their leadership initiatives. In Sullivan County, SNAC efforts reached 51 youth and leadership projects completed included 6 food labels .

In 2024, the Missouri 4-H Foundation collaborated with Healthy Blue to offer mini grants of up to \$500 per county to help support 4-H SNAC Clubs across the State of Missouri to implement their leadership projects. A total of 37 counties received funding, amounting to \$18,500 in mini grants. In Sullivan county, mini grant funds were applied for an used to complete 6 leadership projects.

In 2024, Sullivan County 4-H was honored to receive the



One by One Grant, which provided funding to enhance community engagement and visibility. The grant was used to purchase youth T-shirts featuring Sullivan County 4-H and MU Extension branding through 4Imprint. These promotional items were distributed during the Milan and Green City Trunk or Treat events, serving as a meaningful way to promote 4-H and Extension programs while connecting with families in the community.

Resources

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

Arnold, M. E. (2018). From Context to Outcomes: A Thriving Model for 4-H Youth Development Programs. *Journal of Human Sciences and Extension*, 6(1), 11. <https://doi.org/10.54718/NBNL5438>

Independent Sector. (2023). *Value of Volunteer Time Report | Independent Sector Resources*. Independent Sector. <https://independentsector.org/resource/value-of-volunteer-time/>

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

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

Sullivan County

Agriculture and Environment

Local Impact



Soil Testing

Valerie Tate

Soil testing is a valuable tool for farmers. It is a process used to estimate the ability of the soil to support plant growth. Samples submitted to the University of Missouri Soil Testing Lab are analyzed for pH and nutrients including phosphorus, potassium, calcium and magnesium. Soil can also be tested for micronutrients including sulfur, zinc, manganese, iron and copper. The objectives of the MU Soil Testing Lab are: to help farmers make effective use of fertilizer to increase their financial returns; benefit society with improved environment and water quality through efficient use of fertilizer on farms, lawns and gardens; and to ensure public and private labs are providing reliable and quality soil test results to the citizens of Missouri.

University of Missouri Soil Testing Lab ensures Missouri farmers are efficiently using the plant nutrients which are applied to agricultural fields by providing unbiased, research-based fertilizer and limestone recommendations based on soil fertility analysis. This is a cost-effective way to determine if adequate fertilizer is being applied in order to obtain the yield goals set by the farmer. It also ensures the farmer is not applying excess fertilizer, which is not only costly, but can be damaging to the environment. In 2024, the MU Soil Testing Lab analyzed 23 soil samples from Sullivan County.

Pesticide Applicator Training

Valerie Tate

The private pesticide applicator license issued by the Missouri Department of Agriculture is required for producers wanting to purchase and apply restricted use pesticides. Restricted-use pesticides are classified as such because without additional training they pose a risk to people, animals, or the environment. Agricultural producers needing to obtain or renew certification of this license must take this pesticide safety training every five years. They must be 18 years of age and directly involved in the production of agricultural commodities to obtain this license. During the training, participants learn about safe handling of pesticides, proper mixing, calibration techniques, environmental ramifications of improper mixing or careless application, chemical breakdown of pesticides in the environment, what records are needed, pesticide formulations, personal protective wear and how to clean it, pesticide storage, common Missouri pests, and integrated pest management (IPM) techniques.

During 2024, 5 agricultural producers in Sullivan County were trained and licensed to purchase and apply restricted use pesticides.

Food Safety Modernization Act

Brenda Schreck

Food Safety Modernization Act (FSMA) aims to ensure the United States food supply is safe by shifting the focus from responding to preventing contamination in livestock foods. MU Extension livestock specialist Brenda Schreck met with agriculture firms that provide and/or process livestock feed. Schreck created one new firm plan in the state and continues to maintain 16 in the northeast region.

Discussions were held on the implementation of documentation for animal feed safety preventive controls on-site, and the firm's efforts for animal feed safety as required by FDA. Feed safety manuals aid firms in maintaining accurate documentation of preventive measures as they are conducted on-site.

Sullivan County

Agriculture and Environment

Local Impact



Show-Me-Select Replacement Heifer Program

Zac Erwin

The Show-Me-Select program focuses on increased adoption rate by farmers in Missouri of management practices that offer potential to improve long-term reproductive efficiency of their herds and resulting profitability. Also focusing on increasing marketing opportunities for and adding value to Missouri-raised heifers with the creation of reliable sources of quality replacement heifers in terms of genetics and management.

In 2024 twenty-four heifers were enrolled from Sullivan County in the Missouri Show-Me-Select Replacement heifer program. Show-Me-Select producers sell heifers in sanctioned Show-Me-Select Heifer Sales held annually at Kirkville Livestock, LLC and F & T Livestock in Palmyra, MO. SMS producers also sell in other public auctions and private treaty. In 2024, 801 Show-Me-Select heifers, totaling \$2,724,285, sold through SMS sales for an average price per head of \$3,401. Analyzing data from these sales show that Show-Me-Select tagged heifers when compared to those that do not carry the Trademarked tag, realize a 284-dollar increase in value. That equates to an added value of \$227,484 returned to participating producers in Northeast Missouri. Several area producers purchased heifers at these sales.

25th Annual Missouri Livestock Symposium

Zac Erwin

The Missouri Livestock Symposium (MLS) started in 2000 as a means of providing the latest research and best management practices to area livestock producers and landowners. The MLS has evolved into an annual educational program attracting hundreds of livestock producers from across the Midwest and is considered a source for professional development by area agricultural educators and professionals. The MLS involves a 20 member all volunteer planning committee contributing approximately 672 hours annually to planning and another 293 hours for event implementation.

The Missouri Livestock Symposium features a true multi-disciplinary and cross-agency approach to program planning with a diverse committee consisting of producers, Extension specialists, University researchers and governmental liaisons. The inclusion of diverse backgrounds and people strengthen the program direction and overall program delivery. Strong attendance noted for the 2024 Livestock Symposium. Keynote speaker, Cassandra Fish, Beef Market Analyst headlined the event as she spoke about "How the Industry has Changed." Many notable topics and speakers were featured on Saturday December 7th as livestock producers looked for answers and interaction with experts in livestock production.



Sullivan County

Agriculture and Environment

Local Impact

Feedlot School

Zac Erwin

Currently 82% of beef calves raised in Missouri are fed and harvested out of state; expanding the state's feeding capacity will have a significant economic impact. It is estimated that every head of cattle fed in Missouri will add \$1,140 per head to farm revenue. Feedlot School is designed to help cattle producers capture post-weaning growth potential. The curriculum includes topics such as competitive advantages, feedlot performance expectations, health management, diet formulation, budgeting, marketing, and feeding technologies. Participants gain practical tools to apply changes on their farms and enhance post-weaning growth and performance. The school also includes opportunities to engage with processing industry representatives and tour local farms in Missouri where cattle finishing is actively practiced. Two producers attended from Sullivan County.

Evaluation results revealed that 96% of attendees currently feed or plan to start feeding cattle in Missouri. A majority of participants also reported intentions to take these actions:

- 62% of attendees plan to build a feedlot with a shelter.
- 80% of attendees plan to increase on-farm feeding capacity.
- 64% of attendees plan to start feeding cull cows.

Roughly 44% of attendees plan to adopt working with a consulting feedlot nutritionist.

Participant Comments:

- Well run-informative-learned some new things.
- Very helpful to continue our education.
- Overall a great school.
- Excellent Class!! Instructors were all great and really kept my attention. Slides seemed to work well and going.



Farmers' Markets are a Primary Source of Price Data

Darla Campbell

The Missouri Department of Agriculture partnered with University of Missouri Extension to collect farmers' market price data on crops present at Missouri farmers' markets June-October of 2024. Five MU Extension Specialists collected data while providing production, marketing, and financial resources to producers around the state. The data is available seasonally on MDA's website and helps new and experienced producers determine market prices for their products. There was a total of 59 different markets visited in 2024 with 2295 prices collected. Milan was one market included with eight vendors.

USDA grant will Strengthen Local Food Systems

Darla Campbell

I submitted a \$50,000 Business Builder grant to USDA to develop and strengthen farmers' markets in Putnam, Sullivan, Schuyler, and Scotland Counties. Focus of the project (if funded) will be youth entrepreneurship, developing marketing plans for individuals and the market, and pursuing alternative market venues to strengthen local food systems.

Sullivan County

Agriculture and Environment

Local Impact



Master Gardeners

Jennifer Schutter

Sullivan County Master Gardeners completed 569.5 volunteer hours. Of this, 457.75 were service hours to their communities with a value of \$15,330.05, using the value of \$33.49 for 2024 per volunteer hour from the Independent Sector. Master Gardeners are required to complete 6 hours per year of continuing education, which totaled 111.75 hours for the Sullivan County. 2024 marked the 20th anniversary for the Sullivan County Master Gardener Chapter, which was formed in 2004. The chapter's community service projects included: beautification at Green Castle City Hall and the Depot; holding a plant sale for the public; beautification at the Scatter Garden in Oakwood Cemetery, helping elderly gardeners care for their garden beds and lawns; garden bed clean-up and maintenance at local churches in Green City; and beautification at the Green City Library and Museum. Master Gardeners Paul and Sandra Henley completed 20 years as active Master Gardeners, with Paul volunteering nearly 140 hours in 2024! Three individuals from Sullivan County completed Master Gardener training in Kirksville during the spring of 2024. These Master Gardener trainees will volunteer their time to service projects throughout 2024-2025 to complete the second component of the Master Gardener program. Master Gardeners assist in the community through beautification projects, by helping to disseminate research-based information and assisting with various other horticulture projects.

Farm Tour

Jennifer Schutter

Thirty-five people from six counties attended a farm tour in Putnam County on June 26. Ten people from Sullivan County attended. The first stop was the farm of Duane Carney where participants saw and learned how he grows fruit crops and vegetables using various methods, from raised beds to complete enclosures, to keep predators away, and how he collects rainwater to water his plants. The second stop was to the farm of David Hyle, where participants toured his solar greenhouse. David grows tropical plants like coffee, lemon and banana trees, flowers and vegetables using solar heat. He also grows plants in raised beds in the greenhouse, and has a fish pond inside that he uses to water his plants. He has grown a 19 pound cabbage inside this greenhouse. Participants gained ideas that they can use in their own gardens and greenhouse operations.

Garden Talk Newsletter

Jennifer Schutter

Sixty-one people from Sullivan County receive the Garden Talk newsletter each month, informing them of timely gardening tips and other important gardening information. The newsletter also includes upcoming horticulture programs and activities. Some residents receive it electronically.

Hydroponics Workshop

Jennifer Schutter

Thirty-three people attended a hydroponic plant workshop on May 8 in Kirksville, with one individual participating from Sullivan County. Participants learned about hydroponic systems, crop selection for systems, and how to grow plants hydroponically.

Women in Agriculture

Jennifer Schutter

A Women in Agriculture program was held November 8, at Wildflower Grove in Green Castle. Thirty women attended the workshop, with 9 of them from Sullivan County. Various sessions agriculture topics were taught throughout the day.



Sullivan County

Health and Human Sciences

Local Impact

SNAP-Ed

Neina Martin

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.

1,011 direct and indirect contacts were made in Sullivan 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.

Programming Partners

Schools	Agencies
Newtown Harris	Sullivan County Health Dept.
Milan Elementary	Milan Interfaith Food Pantry
	Sullivan Co. Multipurpose Sr. Center

The KIK program during Milan's summer school was a huge success the kids looked forward to each class. They enjoyed learning new physical activities/games. Some of the children had never had nutrition classes and were thankful to learn about the five food groups and to take home the new recipes that we cooked.

At the Sullivan County Health Department and Milan Food Pantry SNAP Outreach was a success also. Participants were very thankful to have access to complete SNAP applications. Some new recipes were tried with available foods at the pantry.



Nutrition and Health

Karen Poe

Karen Poe the new Nutrition and Health Specialist spent the year learning her new role with MU Extension. Karen had numerous learning assignments to help grow in her position.

Karen assisted at the Sullivan County Food Bank. This is a collaborative effort with Neina Martin, NPA and the food bank staff. The team set up an information table, offered incentives, and opportunity was given to people who came to food pantry to sign up for food stamps if indicated. On average about fifty direct and or indirect connection were made at the food bank.

The nutrition team held Kids in the Kitchen in Milan at the Summer School session. Nutritional information was discussed and presented, a snack was prepared and served. Forty-eight students were in attendance. The team included Neina Martin NPA, Hillary Robedeaux YPA and Karen Poe Nutrition and Health Specialist.

Karen and Neina participated in the Sullivan County Health Department Safety and Wellness Day where they distributed information and incentives. 125 direct/indirect contacts.

Hillary Robedeaux and Karen attended the Health Fair at Simmons Nutrition in Milan where 75 Direct and indirect contact were made.