



UNIVERSITY OF MISSOURI EXTENSION

Scotland County

2023 Annual Report

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**SERVE
MISSOURI.**

**DELIVER
MIZZOU.**



Extension
University of Missouri

an equal opportunity/ADA institution



Office of Extension
and Engagement
University of Missouri

OFFICE OF THE VICE CHANCELLOR
FOR EXTENSION AND ENGAGEMENT
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Columbia, MO 65211
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December 2023

Dear county commissioners and friends of MU Extension and Engagement,

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

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

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

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

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

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

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

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

Sincerely,

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

Who we are

Faculty and staff

Lisa Doster	EES
Kristy Eggleston-Wood	YPA
Julie Shaw Brown	Administrative Assistant/ Bookkeeper

Staff serving Scotland County (based in other counties)

Wendy Atterberg	Family Nutrition
Jennifer Eldridge-Houser	Nutrition & Health
Darla Campbell	Agri-Business
Brenda Schreck	Livestock
Zachary Erwin	Livestock
Robert Wesslack	Agronomy
Jennifer Schutter	Horticulture
Katie Hogan	4-H Youth Development
Michael Krauch	Northeast Regional Director

County commissioners

Duane Ebeling	Presiding Commissioner
Brent Rockhold	Eastern Commissioner
David Wiggins	Western Commissioner

Council members

Taylor Townsend Chairman	Combined District
Tara Shultz Vice-chairman	Combined District
Tasha Fadiga Secretary	Combined District
Dawn Triplett Treasurer	Combined District
Corey Stott	Combined District
Beverly Shelley	Combined District
Alexis Kittle	Combined District
Emily Frederick	Jefferson District
Holly Harris	Jefferson District
Denny Ward	Jefferson District
Kim Ludwick	Jefferson District
Greg Probst	Farm Bureau
Jenny Aldridge	City of Memphis
David Wiggins	County Commission



Pictured above: Scotland County Clerk, Batina Dodge, swearing in two new council members at the Annual Meeting

Contact Us

Email: ScotlandCo@missouri.edu Webpage: <https://extension.missouri.edu/scotland>
Facebook Page: <https://www.facebook.com/scotlandcountyextension>

Budget and more

Appropriations budget

Income

County Appropriations	25,000.00
Total Income	25,000.00

Expenses

Salaries/Benefits/Expenses	24,061.71
Travel	828.00
Telephone	15.00
Office Supplies/Service	25.00
Advertising/Printing	25.00
Insurance	25.00
Postage	15.00
Total Expenses	25,000.00

Local Support

Did you know you can donate directly to Scotland 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.

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

Scotland County



UM System Footprint in the county in 2023



FY23 county students

20 students

- 19 Undergraduates
- 1 Graduate and professional student
- 19 Full-time students
- 1 Part-time student



County employees and retirees

6 people employed by UM

- 6 Campuses
- 1 UM retiree or beneficiary
UM salary and retirement income: \$232,532
UM state tax revenue: \$8,303
UM federal tax revenue: \$34,469



County alumni

Selected school alumni

- 6 Nursing
- 7 Health Professions
- 2 Dentistry
- 1 Veterinary Medicine
- 36 Agriculture
- 4 Engineering
- 4 Law

Alumni teaching K-12

- 7 teachers
- 12.5% of all district teachers



County breakdown

MU

- 20 students
- 76 alumni
- 6 employees

UMKC

- 0 students
- 6 alumni
- 0 employees

Missouri S&T

- 0 students
- 5 alumni
- 0 employees

UMSL

- 0 students
- 8 alumni
- 0 employees



Construction projects

- \$8,205 remitted to 1 county vendor, for 1 project



County properties and offices

MU Extension in: Scotland County



County population: 4,760



County services provided

Health care (FY23)

- 373 in-state patients seen at MU Health Care, with \$155,717 of uncompensated care
- 1 in-state patient 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 122 visits to 77 patients having ZIP codes associated with the county

Extension (2022)

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

Scotland County



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

UM System Statewide Footprint

Economic and Community Development Highlights

- In 2022, Business Development Specialists worked with small businesses and entrepreneurs statewide to create or retain 81,645 jobs.

\$3.1
billion

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

- Between FY17 and FY22, UM System brought Missouri more than \$1.46 billion in federal and private research funds, funded primarily from outside the state, but spent within the state.



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

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



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

Education and Training Provided



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



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

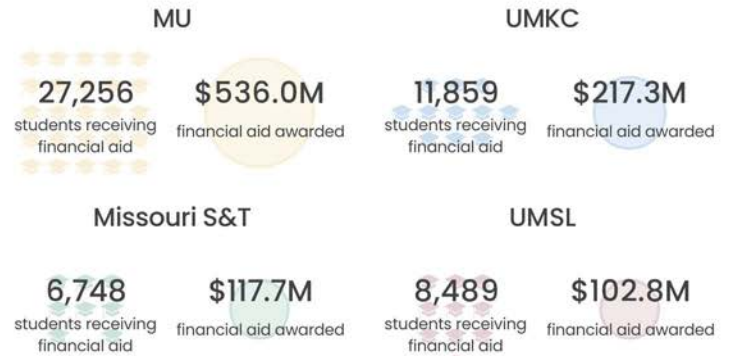


311,749 youth and stakeholder educational contacts in 4-H clubs, schools, camps and other programs (2022)

Education Highlights

FY23 Financial Aid Awards

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



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

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

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

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

Prepared in December 2023, based on the best available and most recent data. Data Sources include: Missouri Office of Administration • UM IR • MU Institute for Public Policy • Center for Applied Research and Engagement Systems (CARES) • MU • UMKC • Missouri S&T • UMSL • UM System • UM Health Care • MU Extension • US Census Bureau • US Dept. of Health and Human Services • National Science Foundation



Missouri Grand Challenges: Local Solutions



SCOTLAND 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

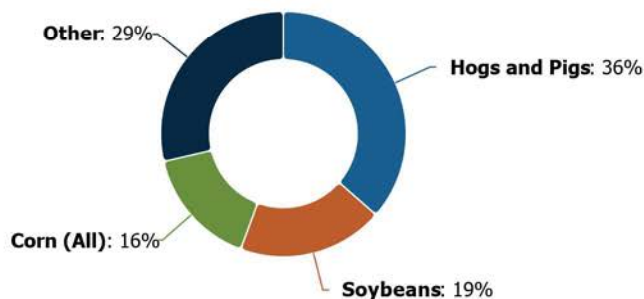
Knowing Local Challenges



CHALLENGE 1: Economic Opportunity: *Agricultural Economics*

Leading Agricultural Products

Total Commodity Sales: \$156,663,000



Data Source: US Department of Agriculture, National Agricultural Statistics Service, [Census of Agriculture](#). 2017.

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 \$46,367,000 in 2017, an average of \$65,030 per farm. This compares favorably to the statewide average farm income of \$29,485.

Report Area	Total Farms	Average Farm Income
Scotland	713	\$65,030
Missouri	95,320	\$29,485

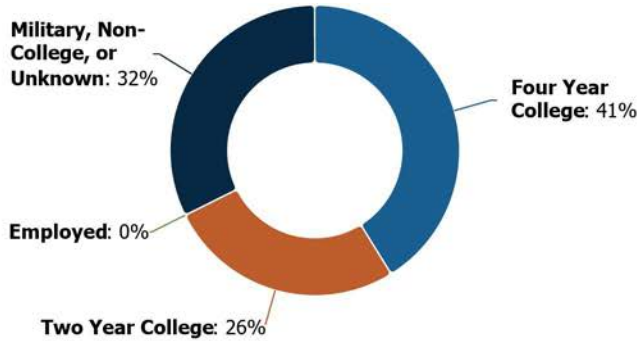
Data Source: US Department of Agriculture, National Agricultural Statistics Service, [Census of Agriculture](#). 2017.



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 34 graduates surveyed in the report area, 14 went to a four-year college, 9 to a two-year college, 0 directly entered the job market. The remaining 11 are reported as in the military, not in college, or unknown.



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



CHALLENGE 3: Healthy Futures: *Access to Care*

Mental Health Care Providers

This indicator reports the number of providers with a CMS National Provider Identifier (NPI) that specialize in mental health. Mental health providers include licensed clinical social workers and other credentialed professionals specializing in psychiatry, psychology, counseling, or child, adolescent, or adult mental health. The number of facilities that specialize in mental health are also listed (but are not included in the calculated rate). Data are from the latest Centers for Medicare and Medicaid Services (CMS) National Provider Identifier (NPI) downloadable file.

Ratio (Population to Providers)

Missouri 855:1

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

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 6 primary care physicians (MDs and DOs) to serve the area's 899 residents over the age of 65. The patient-provider ratio in the report area is 150:1, which means there is 1 provider for every 150 older adults. The ratio of adults to providers in the report area is lower than the state average of 242:1, which means there are more providers per person in this area.

Ratio (Population to Providers)

150:1

Missouri 242:1

Scotland

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



CHALLENGE 4: Agricultural Growth & Stewardship: *Agricultural Economy*

Jobs Derived

Missouri has a diverse agriculture industry, strong in crops and livestock, as well as food and forestry processing industries. These industries remain a significant part of Missouri's economy, supporting more than 1 in every 10 jobs, on average. In 2021, agriculture, forestry, and related industries in Missouri were estimated to contribute: 456,618 jobs, \$93.7 billion in output and \$31.8 billion in household income. [Learn more about Missouri Agriculture's Economic Impact.](#)

Percent of Jobs Derived from Agriculture

32.6%

Scotland

Missouri

23.55%

Data Source: Missouri Department of Agriculture, [Missouri Agricultural and Small Business Development Authority](#). 2021.

Value Added

Value-added agriculture refers to production, manufacturing, marketing or other services that increase the value of primary agricultural commodities. In 2021, the total value-added derived from agriculture, forestry and related economic activity was an estimated \$34.9 billion. Meat processing, food processing, animal and pet food manufacturing, and crop production and related industries are Missouri's top value-added products: \$9.5 billion and 155,425 jobs from livestock production and related industries alone. [Learn more about Missouri Agriculture's Economic Impact.](#)

Percent of Total Value Added from Agriculture

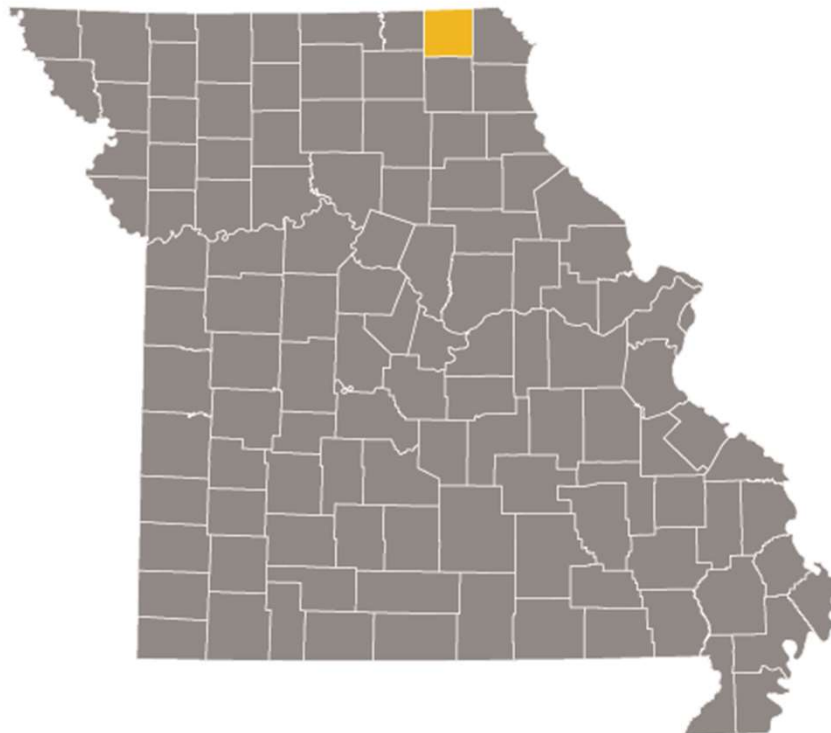
37.8%

Scotland

Missouri

21.98%

Data Source: Missouri Department of Agriculture, [Missouri Agricultural and Small Business Development Authority](#). 2021.





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

Missouri 4-H for ages 8 – 18



Community clubs are organized by volunteer club leaders and teams of recognized volunteers. Members attend club meetings, elect officers, enroll in projects and plan learning and community service activities. Some clubs opt to be single-project clubs, where all members focus on the same project.



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.



4-H's Healthy Living programming teaches skills for healthy choices and lifestyles, enhancing overall well-being and equipping youths to tackle life's challenges. Emphasizing social-emotional health, 4-H fitness, health, nutrition and safety programs cultivate confident, caring young leaders who prioritize mental and physical well-being.

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

Scotland County

Missouri 4-H

Local Impact

4-H Members

4-H programs are grounded in the belief that 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.

Scotland County served youth through three community clubs and one SNAC club offering long-term educational experiences in which members learn life skills such as decision making, public speaking, and working with others.

There were 113 members in the community clubs and 28 members in SNAC club in Scotland County during the 2022-2023 4-H Year.

- Over 100 4-H members were engaged in science related projects and experiences.
- Collectively youth participated in 1243 hours of community club work in Scotland County.
- Over 2000 hours of community service projects were completed by 4-H members and volunteers during the 2022-2023 4-H Year.

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

- 36 youth participated in a total of 4 different events during the 2023 Scotland County 4-H Achievement event
- 26 members and 4 adults participated in the Northeast Region Energizer held in the spring of 2023 in Kirksville
- Six hundred ninety-nine exhibits at the 2023 Scotland County Fair from 107 4-H members and 41 FFA members, who are also supported through youth programming.

- Scotland County youth exhibited over 50 exhibits in the 4-H Building and livestock shows of the Missouri State Fair.
- Seven 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.
- 3 members participated in the State 4-H Teen Conference, which offered youth a fantastic opportunity to experience being a teen in 4-H. This event provides a safe and enjoyable campus experience where youth can enhance their skills and forge new friendships.
- Scotland County was represented at State 4-H Congress by one delegate. Delegates attended workshops covering diverse areas from science to leadership development that were complemented by experiences at the MU Student Center, social activities, and inspirational speakers. State Congress plays a vital role in helping these teens develop essential life skills, exploring potential career paths, nurturing leadership abilities, and fostering new friendships with peers from across the state.
- Three youth from Scotland County participated in skill development contests on the State level including State Meats Contest, State Livestock Judging, State Fashion Revue, State Poultry Day and State Public Speaking. Participation in these events helps youth to develop confidence and practice their decision making and public speaking skills through competitions tied to project areas they are passionate about.
- Eight youth from Scotland County participated in the State Shoot events
- Scotland County has one 4-H State Ambassador
- Scotland County had one delegate attend National 4-H Congress with the MO delegation in Atlanta GA

Scotland County

Missouri 4-H

Local Impact

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.

Scotland County members enrolled in a combined total of 514 projects in 2023. The top project areas included:

Beef	Woodworking
Photography	Swine
Dog	Foods
Shotgun	Rifle
Archery	Arts & Crafts

4-H Volunteers

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.

- Scotland County 4-H members were supported by thirty-eight enrolled, screened and oriented adult volunteers supporting the development of youth in 2023.
- Volunteers contributed 3000 hours to the Scotland County 4-H program valued at \$95,400.00.

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 Scotland County youth participating in 4-H events on a college campus receive a Bachelor's degree, 4-H would help young people acquire \$7,000,000 more in lifetime earnings.

Scotland County

Missouri 4-H

Local Impact

4-H School Enrichment- Embryology

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

4-H SNAC Clubs

4-H Student Nutrition Advisory Council (SNAC) clubs are offered in a variety of settings, including before school, during school, after school, 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 2023, there were 91 SNAC Clubs across Missouri with 2,577 youth participating and reaching 4,300+ youth through the leadership projects.

In 2023, 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. 36 counties were awarded a total of \$18,000 through this mini grant.

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.

- There were 107 students from six classrooms who participated in the Hatching Chicks in the Classroom program in 2023.
- Students participated in over 30 hours of learning with the "Chick It Out" program.

In Scotland County, SNAC efforts reached 28 youth and leadership projects completed included preparing meals for Ronald McDonald House in Columbia.

Scotland County

Missouri 4-H

Local Impact

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

Missouri 4-H Inspires Kids to Do	Missouri 4-H Grows True Leaders	4-H Builds Leadership and Communication Skills	4-H Builds Social and Emotional Skills
<ul style="list-style-type: none">• 98% said they are willing to work hard on something difficult.• 91% set personal goals.• 97% said they try to learn from their mistakes.• 98% said they treat others the way they want to be treated.	<ul style="list-style-type: none">• 97% said they like to learn about people who are different than them.• 93% said they think about others' feelings before they say something.• 75% reported feeling comfortable being a leader.	<ul style="list-style-type: none">• 95% help others reach their goals.• 86% are comfortable speaking in a group.• 99% said they show respect for other's ideas.• 85% can work with someone who made them upset.• 95% Look for ways to involve all members of a group.	<ul style="list-style-type: none">• 94% said they keep trying until they reach their goals.• 89% stop to think about their choices when making a decision.• 97% reported that they like to learn new things.• 91% of Missouri 4-H'ers surveyed said they are willing to try something they might get wrong.

Resources

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

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

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

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

Scotland County

Missouri 4-H

Local Profiles and Stories



Pictured left:
Elementary
students during
National 4-H week.



Pictured right:
High students
during National
4-H week.

Local Profiles and Stories

Missouri Farm Family

Jeff and Emily Frederick and family of Memphis were among the families honored during the 66th annual Missouri Farm Family Day, August 14th, at the Missouri State Fair.

The Frederick family was selected as the Scotland County Missouri Farm Family by University of Missouri Extension in Scotland County and the local Farm Bureau. The family includes Jeff and Emily and their three daughters; Lilly (15), Addy (13), and Cammy (11).

Each year, the fair sets aside a day to recognize farm families from across the state that are active in their communities, involved in agriculture, and/or participate in local outreach and extension programs such as 4-H or FFA.

Jeff and Emily spent their childhood years growing up with multi-generational family farms in Scotland County so they wanted to continue calling Memphis home. Both are graduates of Scotland County R-1 High School. Jeff is a graduate of Indian Hills Community College, and Emily received her degrees from Northwest Missouri State University. Except for their years of higher education, Jeff and Emily have called the farthest corner of northeast Missouri home. They celebrated their 18th year of marriage this past year. Jeff is employed by the US Postal Service and Emily teaches at the Scotland County R-1 Elementary School. Jeff, Emily, and their three daughters have been active in 4-H and FFA for many years.

Emily coaches Tiger Cub Cheerleading and enjoys helping with the Color Guard, Memphis Swim Team, and other community activities. Emily has come full circle with the Azen Jolly Timers 4-H Club, having grown up being a member of 4-H and FFA and now serving as a 4-H leader with children of her own in the club. Jeff and Emily have served as Shooting Sports Safety and Archery leaders for Scotland County for four years. Jeff has also served as a Woodworking project leader for Azen

Jolly Timers. In addition to his dedication to supporting his family and activities in the community, Jeff has established a successful cabinet business, Frederick Woodworking, with his father Richard.

Lilly, Addy, and Cammy keep the family busy with numerous sports and activities. Lilly just finished her freshman year of high school. She plays softball, basketball and plays the trumpet in the band. She is an active member of Student Council, FFA, and FBLA. Addy just completed her first year in the high school building as a seventh grader. She plays percussion in the junior high band and enjoyed being the junior high girls basketball manager this year. Cammy just completed fifth grade. She is a Tiger Cub football cheerleader and plays basketball and softball. All three girls swim on the Memphis Swim Team and remain active in the Azen Jolly Timers 4-H Club. The girls are busy with their 4-H archery and woodworking projects and looking forward to the 2023 Scotland County Fair.

The event showcases the impact that Missouri farm families have on the economy and heritage of the state, said Missouri State Fair Director Mark Wolfe. "These families are involved in agriculture activities in their communities and are active participants in local outreach and extension. As the premier showcase for Missouri agriculture, the Missouri State Fair is most certainly the appropriate place to celebrate these families."





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



MU Extension specialists

play an important role in addressing emergencies and disasters. MU Extension specialists swiftly distribute information so farmers and ranchers can make timely decisions that safeguard their enterprises.



Management-intensive grazing

involves dividing large fields into smaller paddocks and systematically rotating livestock among them. Producers who attend 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.



The Missouri Integrated Pest Management Program,

funded by USDA grants, has been an important extension program for 30-plus years. Mizzou IPM distributes articles, pest monitoring data and publications on how to improve the application of integrated pest management strategies and systems.

The MU Soil Testing Program delivers research-based nutrient and lime recommendations to more than 32,500 customers annually.

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

Scotland County

Agriculture and Environment

Local Impact

Private Pesticide Applicator Training

One hundred ninety-seven total applicants were trained for PPAT licensing by Nick Wesslak in the Northeast Region. Participants were from Marion County, Ralls, County, Knox County, Shelby County, Lewis County, Clark County, Scotland County, and Monroe County.

Seventeen applicants were from Scotland County.

Nick presented at the 2023 Pesticide Safety Education ISE on the MU Extension Pesticide Safety Education Program's (PSEP) Vision of Excellence, in which he covered a short history of MU Extension's PSEP program including a current state of the program update, MU Extension's PSEP program goals, and metrics of how success could be measured for PSEP programming efforts. There was a total of 50 participants at this event, which was held in Columbia.

Nick taught youth pesticide safety programming to high school age children so they could learn safe usage of pesticides and other chemicals. The program aimed to help youth better understand why pesticides and other chemicals are important to human safety and food production, while also helping them to a better understanding of the risks involved with the use of these products.

The ultimate goal was equipping the next generation with the knowledge necessary to reduce easily avoidable pesticide and other chemical exposures caused by misuse, improper storage, lack of personal protective equipment (PPE), and improper disposal. 240 students participated in this programming from Ralls County Marion County, Monroe County, and Lewis County.



Scotland County

Agriculture and Environment

Local Impact

Soils

The regional agronomist (Nick Wesslak) and regional horticulturalists (Justin Keay and Jenniffer Schutter) oversaw the soil sampling program at the county level and made recommendations to clients based upon their soil sample results for the eight northeast counties of the state of Missouri. There was a total of 282 participants including 8 from Scotland County. Other participants were from Clark County, Marion County, Knox County, Lewis County, Monroe County, Ralls County, and Shelby County.

Participants in the soil sampling program learned about their soil fertility levels and received research-based recommendations to achieve their desired yield goal of their particular crop(s) and

were able to get more in depth recommendations from specialists, such as when a particular herbicide the producer was considering using had an application rate that was dependent upon soil texture and/or organic matter content of the soil.

Marion County Extension donated a soil analysis to the Missouri Disabled Sportsmen organization and Nick aided in herbicide recommendations based upon those soil results and the sunflower crop being grown. This Missouri Disabled Sportsmen organization holds events such as dove hunts, for disabled veterans and children. The dove hunt that was conducted in 2023 occurred in Shelby County and saw close to 100 doves being collected.

Crop Consultations and Contacts

Nick Wesslak consulted with 596 different individual agricultural contacts on topics related to row crops, forage crops, and horticulture crops across his eight different assigned counties plus two outside counties. Only 35 contacts were related to horticulture. Individual contacts for counties were as follows: Boone had 4, Clark had 21, Knox had 17, Lewis had 62, Marion had 312, Monroe had 46, Pike had 7, Ralls had 75, Scotland had 17, and Shelby had 35.



Scotland County

Agriculture and Environment

Local Impact

Women in Agriculture Workshop

University of Missouri Extension, Missouri Department of Agriculture, Missouri Department of Conservation, USDA Farm Service Agency employees presented a hands-on workshop geared to women involved in agriculture in northeast Missouri. Three Scotland County workshop participants heard a state update from the Missouri Department of Agriculture Director Chris Chinn as well as presentations on soil health and testing, aging trees, fall gardening and an update on USDA FSA programs. Participants also enjoyed a hands-on activity of melting and pouring their own soaps as well as observing a candle making demonstration.

By offering programs targeting women in agriculture, MU Extension empowers women to make informed decisions about farm and home management.

- 92% of participants rated their overall satisfaction of the Workshop as "very good" or better
- 87.5% of respondents rated their overall impression of the information gained at the Workshop as Very Good or better
- 96% of respondents rated their overall impression of the materials presented at the Workshop as Very useful or better



Just Kidding presented by Joanie Baker



Making Scents with Gigi presented by Heather Keith

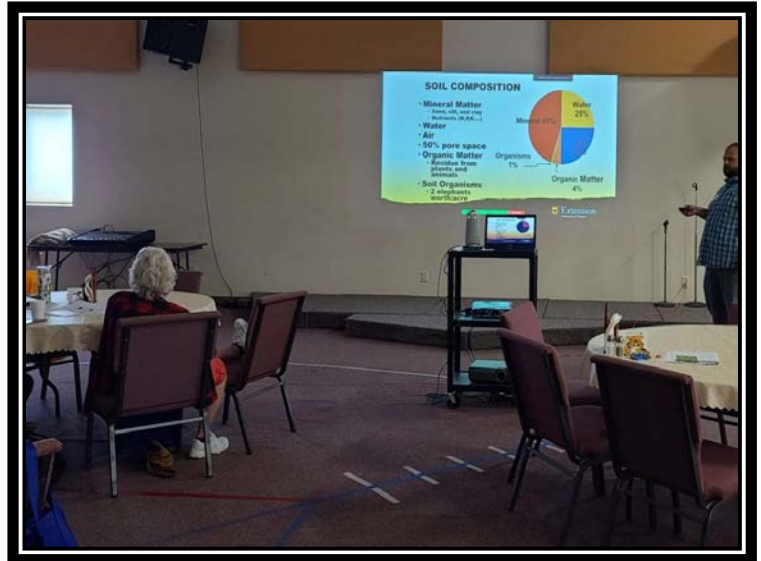
Scotland County

Agriculture and Environment

Local Profiles and Stories



Making Soap



Soil Health and Testing presented by Nick Wesslak



Fall into Fall Gardening presented by Jennifer Schutter



Aging Trees presented by Alex Bross

Scotland County

Agriculture and Environment

Local Impact

Horticulture Information

Thirty-three people from Scotland County receive the Garden Talk newsletter each month. The newsletter provides them with timely gardening tips and information on a variety of horticulture topics. It also includes upcoming horticulture programs and activities. Some residents receive it electronically.



Each month during KMEM Coffee Break from 8:30-9:00 am, horticulture specialist, Jennifer Schutter, discussed timely gardening topics, tips and upcoming events reaching hundreds of listeners each time.

Garden Talk!
— for the Heartland garden enthusiast —

Throughout the year, citizens of Scotland County receive information and advice on various gardening questions and soil testing, to help them make more informed choices about their vegetable gardens, flower gardens, fruit trees, lawns and landscapes.



On October 19, two Scotland county resident attended the Women in Agriculture program held in Kirksville where they learned about a variety of horticulture topics, trees diseases and environmental issues, estate and succession planning, mental health issues, conservation and farm service agency programs, and more

In August, Jennifer Schutter gave a horticulture program called “Live Life in Full Bloom” to a group of 28 women at the First Christian Church in Memphis.

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Scotland County

Agriculture and Environment

Local Impact

Feedlot School

“Missouri was once a top 10 state for feeding cattle, but much of that institutional knowledge was lost decades ago,” said Eric Bailey, assistant professor of animal sciences and state beef nutrition extension specialist. “With recent increases in packing plant capacity in Missouri, MU Extension identified a need to provide educational opportunities to farmers wanting to feed out cattle.”

This is the fourth Feedlot School offered by MU Extension in recent years.

“There has been considerable interest from beef producers in northern and, specifically, northeast Missouri to explore more diversified strategies within their operations,” said Zac Erwin, livestock specialist in Adair County. “Nearly a decade of slim to negative profit margins at the cow/calf level will cause producers to think about doing things differently.”

With the beef industry on a slow march toward becoming more vertically integrated, Erwin said, producers that are diversified are realizing they may hold a competitive advantage. Diversification is “the ultimate risk-management strategy,” he said.

Over half of the feedlot school attendees currently feed cattle in Missouri and 40% plan to begin feeding cattle in Missouri following school attendance. 96% of those that attended plan to increase their on-farm feeding capacity. The Feedlot School

contributes to MU Extension’s goal of doubling the economic impact of agriculture production in Missouri by 2030 through educating farmers on all aspects of cattle feeding.



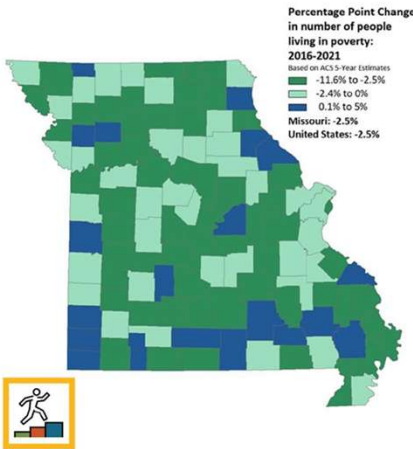
Pictured right: Feed mixing demonstration



Pictured above: Dr. Derek Brake, University of Missouri, teaching about the proper way to mix feed.



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



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

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



The annual **Connecting Entrepreneurial Communities** conference is designed for stakeholders, economic developers, businesses, local government, educators and nonprofits interested in increasing their communities' potential for entrepreneurship. In 2023, the conference offered breakout sessions in Benton County's shops and businesses, providing firsthand insight into the world of entrepreneurial communities.

The 2023 conference drew 104 ATTENDEES, generating an estimated initial economic impact of around \$33,000 FOR BENTON COUNTY.

AMERICA'S
SBDC
MISSOURI

CLIENT HIGHLIGHT

LOGS
— OF —
GLORY

The **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.

FY2020-2022, Missouri SBDC ASSISTED 878 STARTUPS and helped Missouri small businesses earn more than \$440 MILLION.

Legend



Agricultural Growth
& Stewardship



Economic
Opportunity



Educational
Access &
Excellence



Health
& Well-Being

Local Impact

Extension Tax Schools

University of Missouri Extension ag economics department and ag business specialists worked together to coordinate one summer and three fall tax schools. The summer school was in person and live online. Fall schools were in Columbia and Springfield and in addition a was online. The schools were designed for those who prepare taxes including enrolled agents, tax preparers, CPAs, individuals, and attorneys.

The training included updates on legislation, rulings and cases, individual taxpayer issues, agricultural and natural resources topics, ethics, trusts and estates, agriculture and natural resource tax issues, business tax issues, business entity tax issues, IRS issues, penalties and defenses, form 4797 sales of property, retirement tax issues, like-kind exchange issues. The schools were approved for 8 and 16 hours of continuing education credit by the IRS, Missouri Bar and for CFP continuing education. Total continuing education hours reported to IRS for the schools was 3,336 hours.

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

The trainings received positive evaluations and planning is underway to offer trainings in 2024. Local county residents benefit when local tax preparers have the opportunity to gain knowledge, which benefits their clients and communities. The tax schools are a program of the ag business and policy program of MU Extension, coordinated by Mary Sobba with help from a team of ag business specialists throughout the state.

The resources for the schools included the IRS, the National Income Tax Workbook from the Land Grant University Tax Education Foundation, and materials written by the instructors.

The 2023 school attendance totaled three hundred twenty-seven people. The participants were from throughout Missouri, including four participants from Scotland County.





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



The **Diabetes Prevention Program** is a CDC-recognized program provided by licensed lifestyle coaches to prevent type 2 diabetes. Through lifestyle coaching participants can achieve sustainable weight loss, increase in physical activity and learn coping skills to manage stress.

More than 1 IN 3 PARTICIPANTS
have reached the
5 - 7% WEIGHT LOSS GOAL.



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.



MU **Continuing Education for Health Professions** (CEHP) provides evidenced-based, relevant and responsive learning activities designed to narrow professional practice gaps with respect to knowledge, competence, and performance of the healthcare team. A commitment to lifelong learning, in partnership with those we serve, contributes to excellence in practice and improved health outcomes.

CEHP provided 169 LEARNING ACTIVITIES which reached over **53,000 PROFESSIONALS** across all Missouri counties.

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being



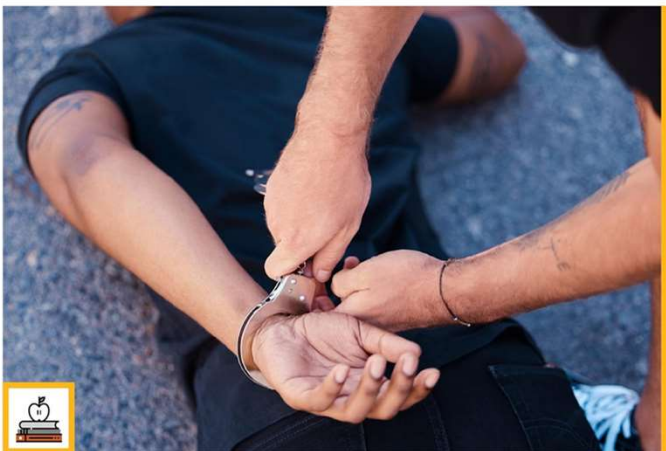
MU EXTENSION **Serves MISSOURI and Delivers MIZZOU**
 through credible statewide programs
First Responder Education



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 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.



The **Law Enforcement Training Institute** (LETI) offers advanced training on a wide variety of topics, including defensive tactics, firearms, use of force and de-escalation. LETI offers customized programs for all required continuing education areas of concentration.

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being



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

“This course made me more self-sufficient and improved my family’s access to quality food.”



MU Extension offers research-based **home food preservation** courses and publications to help people cut food waste and save money.



Preschool through junior high youths learn how to maintain healthy lifestyles through information about nutrition, food safety and physical activity. **Show-Me Nutrition** classes support Missouri’s Show-Me education standards for health and physical education and the state’s School Wellness Policy.

“We have struggled with our daughter’s picky eating for years and have tried so many techniques to try and get her to eat new foods. Your influence on her has worked magic this year. She has come home so excited about trying new foods and has now become not only willing but excited to try new things.”

Parent of a Show-Me Nutrition participant



Stay Strong, Stay Healthy teaches older adults easy yet powerful exercises to boost strength, balance and daily life capabilities. Participants also gain insights into nutrition for healthy aging and active living.

After eight weeks, Stay Strong, Stay Healthy participants significantly IMPROVED their STRENGTH, BALANCE and SLEEP QUALITY.

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

Scotland County

Health and Human Sciences

Local Impact

A Matter of Balance

Jennifer Eldridge Houser and Carrie Elsen co-taught Matter of Balance to 20 participants. This course was marketed and delivered at Scotland County Medical Center. Matter of Balance program is for older adults who experience concerns about falling and restricting their activities.

A Matter of Balance is an award-winning, evidence-based program designed to manage falls and increase activity levels. This program emphasizes practical strategies to manage falls. Participants learned to view falls as controllable, set goals for increasing activity, make changes to reduce fall risks at home, and exercise to increase strength and balance.

This program had 20 people registered that includes 160 contacts.



Stay Strong, Stay Healthy

Stay Strong, Stay Healthy class was taught at Scotland County Hospital. It met 10-11am Tuesdays and Fridays until May 18th. It is a class designed to help folks build the strength they need to enjoy good health as they age. Stay Strong, Stay Healthy (SSSH) is an eight-week exercise program that incorporates the latest research to help participants develop the fitness, flexibility, and balance that will enable them to live independently longer.

In hourlong courses held twice a week, trained and certified instructor, Jenn Eldridge, led participants through a warmup, easy-to-learn strength exercises and a cool-down. SSSH exercises are safe and effective, and we provided weights for student's use on-site. After the course Jenn provided students with a guide to use to continue strength training in the comfort of their homes.

Jennifer Eldridge also completed an assessment of secondary data that was shared with the CFO of Scotland County Hospital in order to assist the hospital in making decisions on how to best expand services to match the population of Scotland County. Also, directed a Community Health Survey meeting with Scotland County Hospital administration and staff, health department administration, and regional planning administration as requested by Chief Operating Officer Meagan Weber.



Scotland County

Health and Human Sciences

Local Impact

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 from Scotland County were from Scotland County R-1 Elementary, Memphis Head Start, and Memphis Housing Authority.

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 367 participants were from Scotland County



Pictured left: Students from the Memphis Housing Eat Smart Be Active class tasting a new recipe

Scotland County

Health and Human Sciences

Local Impact

Success stories from direct programming efforts

A participant from our ESBA class in Memphis returned for our Getting Healthy Through Gardening class. When she began our ESBA class in April, she did not know how to cook or use knives. We worked with her over the course of 6 weeks, and she was finally getting more comfortable cooking with us. When she started our adult gardening program in August, she showed us how much she had worked on her cooking skills between courses. Throughout the gardening program, her skills continued to improve until she was making the recipes almost by herself.

- Shyla Elliott

Shyla and I have really enjoyed doing our adult lessons in Scotland County at the Memphis Housing Authority. Although we don't have a large group, we feel that we are making a great impact on the clients we have. They really seem to enjoy the cooking and learning some skills such as using knives to dice and chop vegetables and fruits. One of our clients told us that she had made the recipe that we made in class for her family, and they did enjoy it.

- Wendy Atterberg



Pictured right: Wendy works with participants for the adult gardening program to look for produce





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