



UNIVERSITY OF MISSOURI EXTENSION

Ralls County 2025



Annual Report

311 South Main Street
PO Box 540
New London, MO 63459
573-985-3911

**SERVE MISSOURI.
DELIVER MIZZOU.®**



Extension
University of Missouri

an equal opportunity/ADA institution



Office of Extension
and Engagement
University of Missouri

VICE CHANCELLOR'S OFFICE

108 Whitten Hall
Columbia, MO 65211

PHONE 573-882-2394

EMAIL cchiggins@missouri.edu

Dear County Commissioners, Elected Leaders, and Friends of MU Extension and Engagement,

As I reflect on the past year, I am struck by the remarkable progress we have made together. MU Extension continues to deliver on its mission of linking the University of Missouri with every community across our state, ensuring that Missourians have access to the knowledge, resources, and partnerships they need to thrive.

Through the dedication of our faculty, staff, councils, partners, and advocates, MU Extension continues to make a measurable difference across Missouri. Last year, we had more than 1.5 million educational contacts and generated more than \$1 billion in economic impact. Building on that momentum, your support also helped secure a \$5 million recurring increase in state funding. This important milestone is already being invested in people, programs, and facilities to strengthen agriculture, improve health and well-being, support local economic development, and prepare youth for leadership through 4-H.

We have also adapted to new realities. Even as the sunset of federal SNAP-Ed funding forced hard choices, our commitment to delivering nutrition and health programs to families in need has not wavered. We are expanding investments in rural health, civic leadership and community development to address the priorities Missourians tell us matter most. We are also aligning our work with university, state, and federal priorities to maximize impact, whether in rural healthcare, agricultural innovation or workforce development.

Our strengths remain clear: people, programs, and partnerships. From nearly 6,000 4-H volunteers to county council members, master gardeners, and master naturalists, Extension thrives because of the dedication of those who serve. Our trusted, research-based content was accessed nearly 2 million times and downloaded more than 76,000 times last year, and innovative programs, from soil testing to urban revitalization initiatives, continue to meet Missouri's evolving needs.

Thank you for your continued partnership. MU Extension belongs to all Missourians, and together we will keep building resilient communities, fostering innovation, and preparing our state for the future.

With appreciation,

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

WHO WE ARE

Faculty and Staff



Jim Meyer
Extension and Engagement Specialist



Laura Shulse
Office Support



Daniel Mallory
Livestock Specialist



Alyssa Fountain
Youth Program Assistant

Council Members

Terry Hoyt, Chairman
Ann Wideman, Vice-chairman
Jeanne Shuck, Secretary
Laurie Means, Treasurer

Nancy Caswell	Tara Comer
Sarah Evans	Gary Fowler
Gail Gough	Ellie Lugena
Keith Miller	Dawn Miller
Junior Muehring	Jill Palmer
Dustin Wasson	

County Executives

John Lake, Presiding Commissioner
John Wiczorek, Eastern District Commissioner
Junior Muehring, Western District Commissioner

BUDGET AND MORE

Appropriations Budget

Income	
County Appropriations	73,000
Total Income	73,000
Expenses	
Salaries/Benefits	25,560
Travel	2,331.40
Telephone	965.18
Office Supplies/Service	1,891.22
Reproduction/Copy Serv	960.54
Postage	3,838.28
Insurance	463
Repairs/Maintenance	0.00
Furniture/Equipment	0.00
Miscellaneous	692.35
Total Expenses	62,258.62

Ralls County Partners

The Ralls County Extension Council, faculty, and staff would like to express their appreciation to the Ralls County Commissioners for their continued support of extension programs. As well as area businesses, groups, and individuals that financially and through voluntarily giving of their time show their support for MU Extension and its programs on a continuing basis throughout the year.

SERVE MISSOURI.
DELIVER MIZZOU.

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.



Extension
University of Missouri

Local support

Did you know you can donate directly to Ralls 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.

UM SYSTEM COUNTY IMPACTS

MU Extension in Ralls County Community Impact Report

This report offers a detailed overview of how MU Extension positively impacts [Your County] County, showcasing the meaningful ways local engagement supports residents. It includes data on the number of students, employees, retirees and alumni affiliated with the University of Missouri System, along with the healthcare and extension services provided over the past year.

In addition, the report highlights the broader contributions of the UM System across Missouri in key areas such as education, research, healthcare, economic development and public service. It features metrics like job creation, financial aid distribution, research investment, healthcare access and broadband expansion.

This report is a valuable resource for understanding the measurable benefits the UM System brings to Missouri communities. It supports informed decision-making, advocacy efforts and strategic planning by illustrating the tangible impact of university-driven initiatives at both the local and statewide levels.

[Access your county's Impact Report.](#)



GRAND CHALLENGES

Grand Challenges

The Grand Challenges — Economic Opportunity, Educational Access, Health and Well-being, and Agricultural Stewardship — represent the most pressing issues facing Missouri communities. They are important because:

By focusing on these challenges, MU Extension in (your county) can better leverage university resources, data and partnerships to empower people to improve their lives, businesses and communities.

This report presents localized data and insights in how MU Extension in Ralls County is addressing these challenges. Each section breaks down county-specific statistics compared to state averages.

[Access your county's Grand Challenges Report.](#)





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

Missouri 4-H for Ages 8 – 18



What is 4-H?

4-H is where Missouri's young people find their spark and learn by doing. Whether raising animals, coding robots, growing gardens, or giving back to their neighbors, 4-H members gain real-world skills with the help of caring mentors.

Rooted in University of Missouri Extension, 4-H connects classrooms, communities, and families to create learning that sticks—building confident, capable leaders who are Beyond Ready for life. In 4-H, youth discover their strengths, practice resilience, and learn to lead with heart—preparing them not just for what's next, but for anything that comes their way.



4-H brings hands-on learning directly into schools through in-school and afterschool programs that extend classroom lessons. **Teachers, 4-H professionals, and volunteers** guide students through 4-H projects in areas such as science, agriculture, health, and leadership, helping youth connect learning to the real world.

Programs like **Show Me Embryology** give students a front-row seat to science in action as they watch chicks hatch and explore the life cycle of a chicken. These experiences help students grow curiosity, confidence, and critical thinking skills, preparing them to be Beyond Ready for whatever comes next.



Community clubs are at the heart of 4-H. Led by trained volunteers, members come together regularly to learn, lead, and serve. Youth elect officers, enroll in projects, and plan hands-on activities that build leadership, teamwork, and responsibility. Some clubs focus on a single project—like photography or livestock—while others explore a variety of topics throughout the year.

SPIN (Special Interest) **clubs** provide a short-term way to dive deep into a specific topic with expert guidance. These clubs meet for several weeks to a few months, giving youth flexibility while developing skills to be Beyond Ready for life.

Legend



Agricultural Growth
& Stewardship



Economic
Opportunity



Educational
Access &
Excellence



Health
& Well-Being

Local Impact

4-H Youth Development in Ralls County

4-H Youth Development Program

4-H programs are built on the belief that youth learn best by doing. With the support and guidance of adult volunteers serving as mentors, youth engage in hands-on learning experiences through projects in areas including engineering and technology, environmental science and natural resources, plant and animal science, leadership and personal development, expressive arts, and healthy living, in addition to taking on leadership positions which help to mold them into the caring, competent, and confident citizens who know the value of contributing to their communities.

During the 2024-2025 4-H Year 15% of Ralls County youth were reached through 4-H programming through MU Extension.

4-H programming reaches youth through a variety of delivery modes in Ralls County, including Community Clubs, SPIN Clubs or short-term 4-H programming, and in-school or afterschool membership or school enrichment programming. These varied delivery modes allow participants to participate in the format that best meets their needs and interests, while focusing on multiple skills including public speaking, leadership, exploring sparks (or interests), developing life skills, responsibility, group decision making, and exploring college and career pathways.

DIAGRAM of Ralls County 4-H Enrollment by Delivery Mode (used data from ES237 to create)

4-H Community Club Members

- 82 youth reached through the 6 community clubs in Ralls County during the 2024-2025 4-H Year.
- Over 174 4-H members were engaged in science related projects and experiences.
- Collectively, youth participated in 902 hours of documented community club work and.

4-H SPIN Clubs

- 6 youth participated in 4-H through the SPIN Clubs which are short-term 4-H clubs focused on a specific topic. Among the Bowling SPIN Club offered in Ralls County this year, the club focused on teamwork and skill.

4-H School Enrichment, In-school and Afterschool Clubs

- 135 youth were reached by school enrichment programs in Rall County in 2024-2025.
- 8 classrooms across the county were reached through the Embryology: Hatching Chicks in the Classroom program culminating in 80 hours of learning about development, agriculture and sanitation, in addition to responsibility.
- 183 youth were reached through 4-H youth development programming through in-school and afternoon school program focusing on topics including SNAC and Embryology.

4-H Programming Participation

- 30 youth served in a leadership role within their club or council.
- Youth showcased what they learned in their projects this year with 592 exhibits by 89 youth shown at the Ralls County Junior Fair.
- Ralls County was represented by many youth exhibiting in the 4-H Building and Livestock Shows at the Missouri State Fair in 2025. Two youth also showcased their public speaking skills by presenting demonstrations in the 4-H Building at the Missouri State Fair.
- 18 County youth also sighted in on their future through their shooting sports projects which strive to teach them focus and safety while honing their skills and developing sportsmanship. 6 youth competed in the Missouri 4-H State Shoot events this year and 1 youth from Ralls County represented the state of Missouri at the National 4-H Shoot in Grand Island, Nebraska in 2025.
- 2 state level recognition forms were completed by members. Completing these forms allowed members to 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 youth participated in MOVE Across Missouri, where youth and adults are encouraged to track their physical activity and fitness in their daily life, learning about healthy lifestyles.
- Youth also took their 4-H experience beyond the county lines participating in State 4-H Teen Conference.
- 82 County members enrolled in a combined total of 371 projects during the 2024-2025 4-H Year.

The top project areas included:

- Arts & Crafts
- Wood Working
- Cake Decorating
- Gardening
- Shooting Sports
- Poultry
- Bacon

4-H Programming Impact

- 4-H members are twice as likely to go to college compared to their non-4-H peers, and they tend to pursue careers in STEM fields (Lerner & Lerner, 2011).
- 4-H also prepares youth for the workplace. Youth must be prepared to live and work in a world we cannot completely envision- competing for jobs that do not yet exist, using technologies that have yet to be identified. 4-H is the only youth development program with direct access to technological advances in agriculture, life sciences, and social sciences from the university system. This brings relevant science content and 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.

Local Impact

4-H Volunteers

4-H Volunteers are the true muscle of the 4-H program, extending the reach of 4-H professionals and making a difference in the lives of youth by connecting them with a caring adult to support them in their development.

- Ralls County 4-H members were supported by twelve enrolled, screened and oriented adult volunteers supporting the development of youth in the 2024-2025 4-H year.
- Volunteers contributed 4,000 hours to the Ralls County 4-H program valued at \$ 139,160.00.
- 5 volunteers participated in volunteer development efforts including the Club Leader Summit and Project Leader Summit offered by 4-H Professionals to learn and be equipped for the leadership roles in which they serve.

Adult volunteers serve as mentors for our youth, helping them transition into caring, healthy adults who Contribute back to their communities, which is priceless.

By connecting education, career exploration, and hands-on learning, 4-H prepares young people to be **Beyond Ready**—equipped with the knowledge, skills, and adaptability to succeed in school, careers, and life. As well as grow as confident communicators and thoughtful problem solvers, ready to lead wherever life takes them and successfully navigate future challenges that they may face.



4-H Student Nutrition Advisory Council (SNAC) club at Ralls County Elementary School. The students learned leadership skills that focused on promoting healthy lifestyles, nutrition, physical activity, cooking, as well as public speaking.



Ralls County students who attended the May 27 and 28, 2025 4-H Missouri Teen Conference on the University of Missouri campus. Those attending the conference learned who they are as leaders not only in 4-H, but also, in their schools and communities. They also enjoyed a dance, meeting new friends and catching up with old ones, and playing fun, leadership skill building games.

Resources

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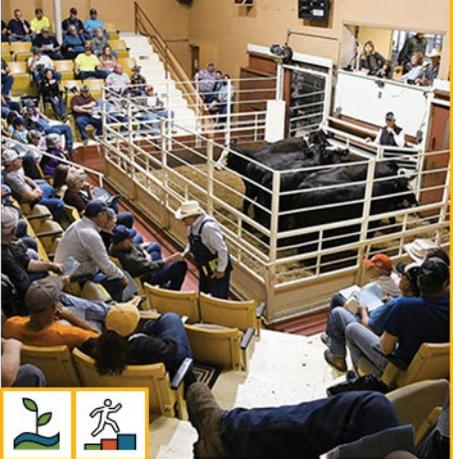
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U.S. News and World Report (2011). How Higher Education Affects Lifetime Salary. Retrieved from <https://www.usnews.com/education/best-colleges/articles/2011/08/05/how-higher-education-affects-lifetime-salary>



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

Agriculture and Environment



The Missouri Show-Me-Select Replacement Heifer Program strives to enhance beef herd reproductive efficiency, boost farm income and establish dependable sources of quality replacement cows in Missouri. The program brings in the power of animal genomics through an enhanced DNA-option, Show-Me-PLUS.



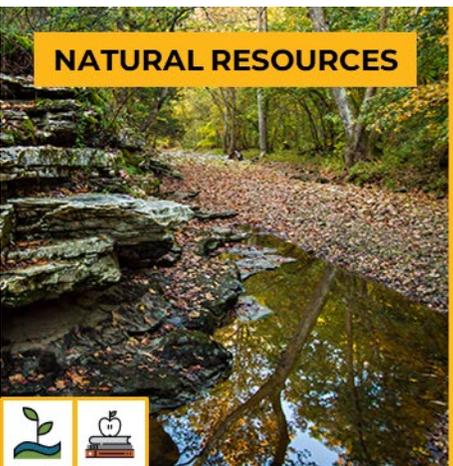
Since its inception more than **900 FARMS** have enrolled, with an estimated statewide impact of **\$200 MILLION**.



The **Missouri Master Gardener** program enables people of all ages to get in-depth horticultural training and apply what they've learned to improve their communities and educate others about gardening.



In 2025, 2,125 Missouri Extension Master Gardeners completed over **112,713 VOLUNTEER HOURS** throughout the state, a value of **\$3.9M dollars**.



The Missouri Master Naturalist program is a community-based initiative for adults, supported by the Missouri Department of Conservation and MU Extension. It aims to create a group of knowledgeable volunteers who can offer education, outreach and service for the responsible management of natural resources in Missouri communities.

Additionally, the **Missouri Woodland Steward program** offers a short course that equips private landowners with knowledge of woodland management, helping them identify wildlife habitats, develop plans and connect with local natural resource experts.

Legend



Agricultural Growth & Stewardship



Economic Opportunity



Educational Access & Excellence



Health & Well-Being

Agriculture and Environment

Profiles and stories



Heifers owned by Dan McCutchan at the December 2025 Show Me Select heifer sale at F&T Livestock in Palmyra, Missouri.



Buyers at the 2025 Performance Tested Bull Sale at F&T Livestock in Palmyra, Missouri. . At the 2025 sale, 33 bulls sold for an average of \$6,221 per head, generating \$205,293 in total sales. These dollars not only strengthen the local economy, but also have a positive benefit on Northeast Missouri.

Show Me Select Heifer Program

The Show-Me-Select (SMS) program focuses on increasing the adoption of management practices by Missouri farmers, improving long-term herd reproductive efficiency, and increasing profitability. Program participants learn the importance of pre-breeding examinations and how these practices impact both economic and productivity levels. In Ralls County, one (1) beef producer enrolled in the SMS program this year and one (1) consigned to a sale.

The Northeast Region hosts two Show-Me-Select Heifer sales annually in Palmyra, Missouri. In 2025, 486 heifers sold in the spring and fall sales with a combined average price of \$4,236. These Palmyra sales alone added \$2,096,212 to the local economy by improving reproductive efficiency and marketing opportunities for Missouri-raised heifers.

Agriculture and Environment

Local Impact

FOOD SAFETY MODERNIZATION ACT (FSMA)

The Food Safety Modernization Act (FSMA) Ensures the U.S. food supply remains safe by shifting the focus from responding to contamination to preventing it in livestock feed. MU Extension livestock specialist Brenda Schreck works directly with agricultural firms that provide and/or process livestock feed to develop and maintain feed safety plans. In Ralls County, one (1) plan is maintained as part of ongoing compliance efforts.

Across Northeast Missouri, Schreck continues to maintain 23 plans for elevators and feed manufacturing firms. Discussions focus on implementing documentation for preventive controls and maintaining accurate records as required by the FDA. Feed safety manuals help firms track preventive measures and ensure animal feed safety standards are met.



A group of heifers at the December Show Me Select heifer sale in Palmyra, Missouri. The Food Safety Modernization Act (FSMA) ensures that livestock feed is safe from contamination and helps to ensure that livestock and humans, who consume livestock products, such as beef and milk, are safe from diseases caused by contaminated livestock feed.

Agriculture and Environment

Horticulture Programming in the Northeast and East Central Regions During 2025

In 2025, 898 individuals attended thirty-four educational programs that were organized or co-taught by Justin Keay, Field Specialist in Horticulture. Participants in these in-person and online programs were actively engaged in the learning process. The programs included topics such as home vegetable gardening, commercial fruit and vegetable production, on-farm produce safety workshops, hands-on grafting fruit tree workshops, training for those wanting to sell fruits and vegetables as well as products containing them at farmer's markets, soil fertility management trainings, and many other topics. Five innovative horticultural related programs were developed and offered by Justin in 2025 including *Starting and Sustaining a Farmers Market Webinar Series*, *Twilight Pest Management Farm Tours*, *Jump Start Your Farm*, *Boosting Profits with High Tunnel Tomatoes*, and *Soil Health and Cover Crops for Vegetable Gardens*.

Throughout the year, Justin answered 397 requests for horticulture information through calls, emails, and walk-in visits by individuals. He also visited 16 farms across the Northeast and East Central regions and fielded 397 requests for horticultural information. In addition, he is the editor of the Missouri Produce Growers Video Newsletter, which reaches over 1,000 subscribers every month. Nineteen educational videos were created in 2025 and are hosted on the MU IPM YouTube Channel. These educational videos from the newsletter received over 38,000 views. Participants who were engaged in horticulture programming during the year learned about insects, weeds, diseases, soil health and fertility, general plant care, and variety selection. Small farmers also learned how to increase their fruit and vegetable yields, grow their farm revenue, and protect Missouri's natural resources.

In media related programming Justin drafted eleven press releases and participated in five radio interviews which educated Missourians and connected them to resources offered by MU Extension. The press releases were picked up by local, regional, and national media, which contributed to a total media reach of over 9 million individuals in this area, throughout Missouri, and across the nation.

He has continued to build and strengthen partnerships throughout 2025 to help extend the reach of his programs and as a result grow the impact, that they have on the areas they reach. To accomplish this, he collaborated on several events with the Missouri Farmers Market Association, Missouri Farmers Union, and Missouri Organic Association. Also, in 2025, Justin assumed a 10% appointment on a grant project which focused on connecting small farmers to services provided by the USDA Farm Service Agency as well supporting producers in the development of crop budgets and small farm business plans. This appointment has allowed him to develop new educational programs and build strong relationships with members of the MU Extension's Agriculture Business and Policy Team.

Finally, during the past year Justin was recognized by being awarded the Dave E. Baker Distinguished Extension Programmatic Leadership Award and the National Association of County Agricultural Agents National Achievement Award for his efforts to build strong programs and grow the small farm sector in the Northeast and East Central regions of Missouri.

Agriculture and Environment

Farm Visits in 2025

During the past year Justin Keay visited five farms in Ralls County where he assisted growers with fertility management, marketing, pest management, site establishment, infrastructure assessments, soil infiltration tests, and provided other assistance as needed. These farm visits provide growers with practical solutions to solve problems on their farms, increase productivity, and reduce unneeded investments. The visits also assist in helping farms grow in ways that ensure their long-term financial sustainability. Through the utilization of the testing and diagnostic services of MU laboratories he can provide farms with science-backed guidance as well as provide ongoing support and assistance to the farmers he works with. Supporting small farms in the area helps to enhance local food availability in communities and increase agritourism opportunities.

Two highlights from these farm visits are his work with a lavender farm and a hydroponic tomato grower. Justin helped the lavender grower in assessing their site to determine if it was suitable to enable them to expand their existing lavender planting. This assessment included pulling USGS maps to understand soil types and drainage on the site since lavender suffers from disease problems that are exacerbated by poor soil drainage. The grower was investing substantial capital in soil amendments to increase drainage in their planting and Justin used the USDA NRCS Soil Infiltration test to help the grower understand whether these investments would pay off. He also helped guide them on the selection of appropriate fungicides to manage phytophthora, the primary disease that causes yield loss in lavender. Plant and soil samples were sent to the MU Plant Diagnostic Clinic and MU Plant Soil Testing Lab for testing and once the results were in, Justin interpreted test results and helped the grower develop a fertility and disease management plan. The grower gained insights into what was necessary to expand their lavender production and manage disease in their fields.

Justin also spent time working with Peter Raith, an area farmer who grows high-tunnel tomatoes on a small farm for sale at the Hannibal Farmer's Market. Peter had decided to install a hydroponic system as the soil on his site had very poor drainage. Management of a hydroponic system requires a steep learning curve for farmers and represents a substantial farm investment. Justin assisted him with developing a fertility management and irrigation plan, as well as educating him in the identification of insects. He also helped to develop a pest management protocol to protect plant yields. Through use of the Soil Testing Lab, Justin assisted Peter in testing his irrigation water and injecting acid to modify it to best suit his hydroponic tomatoes. As well as providing Peter with research backed guidance to help with optimizing the management of his hydroponic system thus enabling him to grow a profitable crop.

Agriculture and Environment

Profiles and Stories



Justin Keay examines a tomato crop at a local farm, Thirty percent of Missouri farms are smaller than 50 acres in size, according to the 2022 USDA Census of Agriculture and roughly 20% of those are 10 acres or less.



Conducting a Soil Infiltration test at a Ralls County lavender farm to determine if soil amendments to increase drainage would pay off.



Justin Keay provides information on hydroponic watering systems to Peter Raith of Blue Skies Farms in Hannibal, Missouri. Peter was interested in installing the watering system to provide water for the high tunnel tomatoes which he grows on his small farm and sells at the farmer's market in Hannibal.



One of the lavender plants growing on the Ralls County farm where Justin Keay made an assessment to verify that the grower could expand their plantings. He also assisted the grower in developing a plan to increase fertility and better manage diseases in their crop.

Agriculture and Environment

Profiles and Stories

Ralls County University of Missouri Extension Master Gardeners

The Ralls County (Groovy Gardeners) MU Extension Master Gardeners provide research-backed horticultural education through community events and visits to local schools, educating both adults and youth on sustainable gardening activities. Master Gardeners volunteer to help renovate and improve public gardens and landscapes, such as the courtyard at Mark Twain High School, gardens at the Mark Twain Lake Dam, and the butterfly garden at Ralls County Elementary School. These sites and activities are used as teaching tools to educate community members on plant selection, and pest management, helping to ensure community members stay active and enjoy their outdoor spaces.



Groovy Gardeners of Ralls County garden club members work on sprucing up the courtyard at Mark Twain High School. Club members also landscape around the Ralls County Elementary School Bus Loop and are responsible for selecting and nurturing the plants and flowers in the butterfly garden at the Ralls County Elementary School.



In September 2025, these hardworking Groovy Gardeners of Ralls County garden club members spent time working on making sure that the area around the Ralls County Elementary School bus loop looked nice for students, faculty, staff, and visitors by pulling weeds and doing other landscaping related work.

Agronomist Report 2025 Pesticide Applicator Training and Pesticide Safety

In 2025, Nick Wesslak conducted Private Pesticide Applicator Training (PPAT) for 16 applicants in Marion County, 12 applicants in Ralls County, 21 applicants in Knox/Scotland County, 11 applicants in Shelby County, 11 applicants in Lewis County, 5 applicants in Clark County, and 11 applicants in Monroe County. In all, a total of 87 applicants in Northeast Missouri received training to earn a PPAT license by attending one of the training workshops.

In addition to conducting the private pesticide applicator training courses Nick conducted Commercial Pesticide Applicator Training Recertification in Columbia, Missouri for 953 individuals with 68 of those individuals being online over the 9-day recertification period.

He also conducted Non-Certified Restricted Use Applicator (NRUP) Training for area agribusinesses. Training was held in Clark County for 32 individuals, Marion County for 16 individuals, and Lewis County for 18 individuals. In total, 66 individuals who are employed by agribusinesses in the Northeast region received the necessary training to meet the requirements to conduct commercial application operations.

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

The program's main goal is to equip 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. A total of 775 middle and high school students participated in the program this year. The number of attendees by county is as follows: Shelby 143, Marion 92, Lewis 125, Ralls 118, Monroe 53, Macon 58, and Clark 50, The number of people attending whose county was not indicated was 136,

Integrated Pest Management

Nick participated in several activities regarding MU IPM (Integrated Pest Management) efforts in the field and several photos and videos related to IPM were captured for later educational use during these activities. Lewis, Ralls, and Marion Counties were the locations of several of the activities including corn and soybean disease scouting. Ralls County also was the site of migratory insect trapping stations for the IPM Pest Management Network. The network served as an alert system for the entire Northeast Missouri region and helped to indicate to producers what species of migratory pests they needed to be scouting for in their fields.

Participants gained weekly knowledge of migratory pest levels to inform them of scouting decision thresholds. Nick served as an MU Extension IPM Scouting School (MU Extension in the Field Crop and Forage Chat) host and presenter in Marion County. This event was advertised directly in the immediate surrounding counties. The MU Extension 4th Annual Crop and Forage Chat was held in the Northeast Region in Marion County with 18 individuals attending the event. Quincy Herald Whig media coverage of the event generated 13,705 indirect educational views.

The Quincy Herald Whig covers the Northeast Missouri region, specifically the counties of Clark, Knox, Lewis, Marion, Monroe, Pike, Ralls, Scotland, and Shelby. In person participants and article readers gained a better understanding of current plant disease issues in corn and soybeans, grazing management practices, and corn and soybean insect pest management. Nick also conducted an in-field TV interview with WGEM NEWS discussing farmers' winter preparations for next year's crop, which was broadcast to approximately 99,000 homes throughout Northeast Missouri and West Central Illinois. In addition, it was placed online with a more in-depth article that generated 113,241 indirect educational contacts.

Opportunities for Drones in Missouri Agriculture

Nick developed the curriculum for a presentation on federal regulation exemptions needed to operate an agricultural utility drone and delivered hands on manual flight control instruction which he gave to 35 attendees in Lawrence County and 6 attendees in Montgomery County. The presentations were part of a statewide initiative funded by a grant from the Missouri Governor's office.

Soils

During the past year Nick Wesslak oversaw the soil sampling program at the county level for the eight counties in the Northeast Missouri region and made recommendations to clients based upon their soil sample results. A total of 219 individuals had soil samples tested and 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 crop(s). Nick also provided them with more detailed

recommendations, 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.

Northeast Missouri Agricultural Connection

Nick Wesslak served as a team member of the NEMO Ag Connection Newsletter as well as writing and editing articles for the newsletter. In addition, subscription numbers from the newsletter led to a total number of indirect contacts of approximately 27,000 individuals throughout the region. During the past year he also made 713 different, agricultural related contacts and provided consultations to these individuals on topics related to row, forage, and horticultural crops. Most of these contacts were in Ralls, Marion, Scotland, Knox, Lewis, Clark, Monroe, and Shelby Counties.

Agriculture and Environment

Engagement and Stakeholder Relations

The Northeast Missouri Old Threshers Ag Safety Day proved to be a successful event for Shelby County with a total of 538 children participating in the event. The number of children by county was as follows: County of residence unknown: 136, Clark: 50, Macon: 58, Monroe: 53, Ralls: 98, and Shelby: 143, in attendance.

The focus of the event was on learning valuable, safety minded practices when working around the farm and covered some of the most dangerous activities producers in the area face in their livestock, forage, and row crop production practices. Specifically, the children learned tractor ROPS safety, grain bin safety, PTO safety, pesticide safety, livestock safety, food preservation and storage safety, first aid, inclement weather safe shelter, soil health, outdoor, hunting and fishing safety, electronic rescue aids, and rural mental health safety. Participants also learned about high voltage safety.

Mississippi Hills Master Naturalist Report

January started a busy year for the Mississippi Hills Chapter of Missouri Master Naturalists (MHMN) with Clarksville Eagle Days on January 25 and 26. The Chapter has been assisting the city of Clarksville with Eagle Days since 2019, providing educational information, children's activities, giving assistance with spotting scopes at the riverfront, and introducing the hourly live eagle show provided by World Bird Sanctuary. The Honeysuckle Hack team was busy meeting monthly on the 4th Saturday to remove invasive honeysuckle from Riverview Park in partnership with Hannibal Parks and Recreation.

February opened with MHMN participation in the Hannibal Chart Teen Task Force Health Fair with five members staffing a booth on the benefits of spending time in nature. Several members also assisted at Mark Twain Lake to cut and place cedar trees in exposed flood plains for fish habitat. The end of February saw MHMN members helping with the Youth Shed Hunt at Mark Twain Lake in which 200 children participated as well as the 2nd annual Hannibal Eagle Day with 650 visitors enjoying a live eagle show, several nature booths, along with crafts and activities for the children, a nature story time, and conservation education opportunities.

Nick Wesslak also helped to film a live birding demonstration during Hannibal, Missouri's Eagle Days on February 22 at Nipper Park, which saw over 625 people in attendance. In March, the month started with a prairie burn at a MHMN member's property. Several members participated in a training session for Sturgeon Watch in partnership with MDC, which would take place later in April.

MHMN partnered with the Mark Twain Lake Army Corps of Engineers in building 80 fish habitat structures, that were later sunk in Mark Twain Lake. For Earth Day on April 25, MHMN partnered with the Army Corp of Engineers at Mark Twain Lake/Frank Russell Recreation Area for a day of fishing with students from three local elementary schools.

The Inaugural Missouri Birding Challenge was held May 1-15 with a few members participating and two members participated in the Knox County Safety Day by giving a presentation on Outdoor Safety that focused on tick and mosquito bite prevention. MHMN joined Monroe City for the Queen of the Prairie “Every Yard a Prairie” event on May 17 where MHMN sold native plants for planting, demonstrated pollination and answered questions about invasive species, remnant prairies, pollination, bumblebees, and butterfly metamorphosis. There were also several crafts for children in attendance to make.

In June, a memorial service was held for a MHMN member who passed away in 2024 and in their memory a bench was dedicated and placed on the Environmental Trail at Mark Twain Lake. Members also enjoyed the annual picnic at Mark Twain Lake at the Frank Russell Recreation Area.

The chapter worked with Mark Twain State Park on invasive species removal and spraying throughout the summer months. In addition, the MHMN became involved in the Missouri Dark Sky Program over the summer and eventually ordered two additional light meters to take readings in other locations throughout the Marion County area.

In August, MHMN partnered with Hannibal Arts Council for the Wild and Wacky Art Adventure in Hannibal where members helped over 200 children learn about Missouri turtles, make a turtle craft, and play turtle games. A Stream Team event was held on Bear Creek with an invertebrate study and a collection of physical data on the stream.

Reece Worthington discussed “Prairies before the Plow” with 18-chapter members, a survey of 4 of the old cemeteries around Mark Twain Lake was conducted, and the second year of the Indiana Bat Monitoring program ended for the season and will resume next spring.

In September, the chapter participated in the Northeast Missouri Old Thresher’s Ag Safety Day discussing outdoor safety with students from several elementary and middle schools in the Shelby County area. MHMN also presented a similar outdoor safety program to over 200 4th grade students in Pike County with subject areas including: poison ivy, venomous snakes, sun safety, and ticks and mosquitoes. Litter pickup efforts in Ralls County also continued throughout the summer months.

In October, the Core Training Committee had its first meeting to begin planning for the 2026 Core Training Class. A fall hike was enjoyed at the Bridlespur Hunt Club near Eolia to enjoy the fall weather and visit outstanding natural glades and a limestone tunnel.

November brought the annual Fall Field Day, and this year it was located on the Mississippi Riverfront in Canton where several species of non-native trees and other plants had taken over the wetland area. With the cooperation of MHMN, the city and residents of Canton, and Culver Stockton students and staff, numerous trees were able to be removed and turned into mulch. Trails were also constructed, and three educational speakers presented topics at the local library.



Nick Wesslak conducted several Private Pesticide Applicator Training (PPAT) sessions throughout the area this year. A total of 87 applicants received training to be certified in the application of pesticides for use on private lands and farms in Ralls, Marion, Knox, Shelby, Scotland, Lewis, Clark and Monroe Counties.



Mississippi Hills Master Naturalist Honeysuckle Hack team members are hard at work removing invasive honeysuckle from Riverview Park in Hannibal, Missouri. In partnership with the Hannibal Parks and Recreation Department the team has been meeting the fourth Saturday of each month to work on eradicating this aggressively growing plant which rapidly drives out native plants.

Over 500 children from around the area were in Shelby County to attend the Northeast Missouri Old Threshers Ag Safety Day on September 12th where those in attendance learned important safety related practices to remember when working around the farm with an emphasis on the most dangerous activities farmers may be involved in when it comes to livestock, forage, and row crop production practices on their farms,



Farmers' Markets are a Primary Source of Price Data

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 2025. 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 45 different markets visited in 2025 with 1,908 prices collected.

Darla Campbell, University of Missouri Field Specialist in Community Development, made 16 market visits to 12 different markets in Northeast and Central Missouri. These markets were in Kirksville, Unionville, Brookfield, Milan, La Plata, Louisiana, Hannibal, Palmyra, Mexico, Lancaster, and Columbia.

Vendors: Adair-18; Audrain-8; Boone-18; Callaway-9; Chariton-3; Cooper-5; Howard-2; Lewis-2; Lincoln-4; Linn-11; Macon-10; Marion-14; Monroe-1; Pike-9; Putnam-15; Ralls-16; Randolph-7; Schuyler-21; Sullivan-8, and Out of State-3.



University of Missouri Field Specialist in Community Development, Darla Campbell visited 12 different Farmers' Markets in the Northeast and Central Missouri areas to collect data on crops sold at the markets. The above pictures were taken during her visit to the Farmers' Market in Hannibal, Missouri.

Business and Community

Profiles and Stories

Extension Tax Schools

University of Missouri Extension coordinated and offered tax education through one summer and three fall tax schools. The summer school was in person and live online. Fall schools were in Columbia and Springfield as well as 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, installment sales, tax benefits of home ownership, retirement tax issues, and individual tax issues. The schools were approved for up to 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 4,024 hours.

The teaching teams included CPAs, a former IRS

stakeholder liaison, an IRS certified retired ag economics professor, an attorney, a certified financial planner, Missouri Department of Revenue, MU faculty, and extension ag business specialists.

The evaluations had many positive comments and helpful suggestions. One comment from an online participant was “The video was outstanding — best I’ve seen on any CPE I’ve done live.”. Planning is underway to offer trainings in 2026. Local county residents benefit when local tax preparers have the opportunity to gain knowledge, which in turn benefits not only the clients they serve, but also the local 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, 2025 National Income Tax Workbook from the Land Grant University Tax Education Foundation, and materials written by the instructors.

The 2025 school attendance totaled three hundred eighty-nine people, which was an 11% increase from 2024. The participants were from throughout Missouri and two from out of state.

A total of 62 individuals in Northeast Missouri attended one of four tax schools that were held this summer and fall either in person, in Columbia or Springfield, Missouri, or online. The number of area participants by county was Adair 9, Audrain 12, Clark 2, Knox 1, Lewis 1, Macon 11, Marion 5, Monroe 1, Pike 5, Ralls 2, Randolph 6, Schuyler 2, Scotland 1, and Shelby 4.



Agriculture Lender Seminar

Sixty-five lenders from 20 Missouri counties and Illinois attended an ag lender seminar in Mexico. Lenders learned about crop and livestock outlook, agriculture & tax policy, rental rates & land values, input costs and enterprise budgets and regulatory updates. The average tenure of agricultural lender was 12 years with a range of 1 to 38 years. On average, lenders had 207 agricultural loans in their portfolio with an average loan size of \$33,526. Given this information, it is estimated the Mexico Agricultural Lenders Seminar reached 13,455 loans valued at 4,487.6 million dollars. Attendees drove an average of 49 miles to attend the program with a range of 5 to 95 miles.

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

Participants described the seminar as informative, well-organized, and enjoyable. Several complimented the quality of the presentations and expressed appreciation for the event overall. In addition to the ag lender seminar in Mexico, there were seminars in Chillicothe, Jefferson City, Springfield and Warsaw. The total statewide attendance was 198 ag lenders.



Agriculture lenders from 20 Missouri counties and Illinois attended the Agriculture Lender Seminar in Mexico, Missouri. The counties and the number of participants from each county were: Audrain-11; Boone-9; Callaway-6; Clark-9; Cole-8; Cooper-1; Gasconade-1; Howard-2; Lewis-3; Lincoln-4; Linn-2; Macon-2; Marion-7; Monroe-2; Montgomery-1; Osage-4; Pike-4; Ralls-2; Randolph-1; Schuyler-1; Scotland-3; Shelby-1; St. Charles-1; Sullivan-2; and Illinois-5

University of Missouri Field Specialist in Agriculture Business, Mary Sobba leads an Agriculture Lending Seminar in Mexico, Missouri.



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Health and Human Sciences



Building Strong Families

Studies show that people with strong family bonds tend to have lower stress levels. Building Strong Families helps families deal with disagreements, manage stress and show their love for one another.



Policy, systems, and environmental (PSE) changes encourage residents to improve community health by making healthy choices easier and more accessible. Residents design strategies around local needs, assets, and interests.

HELPING HANDS FOOR PANTRY leaders decided pantry clients needed access to healthier foods. Review of food procurement and display practices led to a new policy allocating \$1,000 of pantry discretionary spending for **LOW-FAT DAIRY OR FRESH PRODUCE**



Home Food Preservation

Preserve the season's bounty in a safe and delicious way.

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

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

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

Legend



Agricultural Growth & Stewardship



Economic Opportunity



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Health & Well-Being

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Local Impact

Teen Health Fair in Hannibal

At the Teen Health Fair held February 1, 2025, at the Admiral Koontz Armory Recreation Center in Hannibal, Missouri. Northeast Missouri Nutrition Program Associates Laurie Kurre and Brittney Ames engaged with both teens and adults about the importance of limiting sugar in their drinks. The duo discussed the impact of sugary beverages on health while encouraging healthier choices.

One of the highlights of the booth was a display featuring common drinks alongside baggies of sugar, showing the actual amount contained in each beverage. Many fairgoers, both teens and adults, were surprised by the shocking amount of sugar in popular beverages.

We hope this experience inspired attendees to think more carefully about what they drink and make better choices moving forward. And for those who were wondering, even Tom Sawyer and Becky Thatcher stopped by to check out the booth.



Hannibal, Missouri's goodwill ambassadors, Tom Sawyer and Becky Thatcher, view information on the amount of sugar in various popular beverages at the University of Missouri Extension's booth during the Teen Health Fair at the Admiral Koontz Armory Recreation Center in Hannibal, Missouri.



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