



UNIVERSITY OF MISSOURI EXTENSION

Pettis County

2019 ANNUAL REPORT

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Equal opportunity is and shall be provided to all participants in Extension programs and activities, and for all employees and applicants for employment on the basis of their demonstrated ability and competence without discrimination on the basis of their race, color, religion, sex, sexual orientation, national origin, age, disability, or status as a protected veteran.

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Thank you from the Extension Council:

On behalf of the Pettis County Extension Council, we express our gratitude and appreciation to the many volunteers, organizations, county government, businesses, and community leaders for their support of our education programs! With their continued help, we have been able to offer programs and classes that work to improve the lives of many families, farms, businesses, along with the communities of Pettis County.

We look forward to the continued execution of excellence, as we build on past successes and continue to develop and implement programs that make a difference in our community.

Transitions

Pettis County Extension welcomed a couple new people this year.

- Gene Schmitz can now be found in the Pettis County Extension Office full time.
- Monica Gerken joined Pettis County in June, serving as the Pettis County 4-H Youth Program Associate.

Honorees

The Reed family of Green Ridge were named the Pettis County State Fair Farm Family of 2019.

In 2019, two well know families were added to the Pettis County *Extension Leaders Honor Roll* for their dedicated leadership to the county extension program: Richard and Barbara Hayden and Gordon and Kay Sparks.

Four farm families were recognized as Century Farms in 2019. New century farms and their years of establishment are: Warren & Sharon Kearney of Houstonia - 1866; Richey Family Farms-Dorothy Kalthoff of La Monte - 1881; Schenk Family Farm-Mark Curtis of Dresden – 1893; Springfork Valley Farms-David Dick of Sedalia - 1908.

Annual meeting

The Extension Council held its annual meeting on February 21st with 70 in attendance. Dr. Lupita Fabregas, University of Missouri, Associate Extension Professor & Director - 4-H Center for Youth Development was the keynote speaker for the evening. Dr. Fabregas, a native of Mexico, spoke on her journey to Missouri. Before arriving in Columbia, she previously served as the Assistant 4-H Director with University of California 4-H and as clinical assistant professor and cooperative extension specialist with Oklahoma State University 4-H.

While in California, she led the largest 4-H expansion program in the United States as part of a concerted effort to spread the benefits of 4-H programming throughout the state.



Dr. Lupita Fabregas

Fundraiser

The Council hosted the seventh annual dinner and auction in March. Through the generous efforts of many workers, donors, and bidders, over \$6,500 was raised to help fund the extension programs in Pettis County.

2019-20 Pettis County Extension Council

Israel Baeza	Dana Binder	Fred Binder
Kevin Bond, Chair	Jim Cave, Vice Chair	Jonathan Curtis, ECYL
Kenneth Danko	Brad Elwell	Kevin Gibbs
Jane Henderson	Matthew Kahrs	Billie Long
Shelbi Miller, ECYL	Deanna Nelson	Megan Page
Georgia A. Reid, Secretary	Gretchen Sims	Tim Sims
L. "Kay" Sparks, Treasurer		

Pettis County Commission

David Dick, Presiding Commissioner
 Jim Marcum, Western Commissioner
 Israel Baeza, Eastern Commissioner

**VICE CHANCELLOR'S OFFICE**

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December 5, 2019

Dear county commissioners and friends of MU Extension,

I had the good fortune to catch up with some of you this past fall as I traveled the state to share the University of Missouri's Extension and Engagement vision and plan for the coming years. What a pleasure it is to serve this state we call home.

As you know, we've listened closely to Missourians' needs, restructuring our faculty and program delivery to better serve people and communities. With this reset nearly complete, we're better positioned to work together to strengthen our state's economy, increase Missourians' access to meaningful education and workforce development options, and improve our citizens' health and well-being.

MU Chancellor Alex Cartwright often calls us the University for Missouri. In very real terms this means that MU Extension is leading efforts to connect the university's powerful research, knowledge and science-based information with our state's diverse needs and local efforts to address them.

Whether you're a farmer researching the latest profitable grazing practices, a 4-H leader developing after-school robotics programs with local schools, or a community leader helping people formerly addicted to opioids return to productive work, you deserve the very best MU Extension and university engagement efforts have to give. As a comprehensive university, we can be uniquely responsive. We have schools of medicine, nursing and health professions, for instance, to support health care in rural communities, a law school clinic that helps veterans qualify for the benefits they deserve. MU education students become the teachers who enrich children's lives in nearly every school district in the state. We are here for you and with you.

Together, we can make lasting impacts. That's why in this new year we are focused on growing and leveraging local partnerships, expertise and resources. With 110 of 115 county engagement specialist positions filled — and renewed focus on responsive program development — we are ready to go.

As the first public university west of the Mississippi River, our land-grant roots run deep through Missouri's heritage and history. They help chart our future, too: What can we do to make our state better? How can we think and do different?

I know you will be proud to see your own communities' successes in the pages of this year's county annual report. On behalf of all of us at MU Extension, I look forward to your thoughts on how we can best lead, serve and grow through the year ahead.

Sincerely,

A handwritten signature in black ink that reads 'Marshall Stewart'.

Marshall Stewart

University of Missouri, Lincoln University, U.S. Department of Agriculture and Local Extension Councils Cooperating
EQUAL OPPORTUNITY/ADA INSTITUTIONS

Agriculture and Environment Resources (ANR)

Todd Lorenz, Extension Professional
Gene Schmitz, Field Specialist in Livestock
Mary Sobba, Field Specialist in Ag Business

Weather patterns continue to be the major factor for production agriculture in the 2019 growing season. We live in central Missouri, which lays in a transitional climate zone. This potentially means that we can have similar summers as Georgia and similar winters as Michigan. This transitional climate has played itself out in extremes over the last three seasons. The well above normal rain and snowfall throughout 2019 led to extreme flooding, record high river levels, many levee breaches, and wet ground for the fall season. While May is Missouri's wettest month, a statewide average total of 10.31 inches was record setting. University of Missouri Extension specialist rallied, around the state, to get producers flood meetings delivered.

According to the Missouri Agricultural Statistics Service, by June 2, 2019 only 69% of corn and 18% soybeans had been planted. This number is down from the 5-year average of 97% and 63% respectively. Through the end of September, the Missouri River Basin had its 2nd wettest 9 months in 124 years of modern record keeping. This leaves saturated soils as we head into spring 2020. The soils can accept very little or no more water, which could set up additional issues in our transitional zone. More details can be found at <http://climate.missouri.edu/news/arc/growingsummary2019.php>

Japanese beetles continued to create havoc for both homeowners and some production agriculture fields. This is the first year of seemingly reduced populations. The female emerge, mate, and lay eggs in the soil from June into August. The reduction of overall population survival was likely due to the drought of 2018 followed by the extremely fluctuating winter weather into 2019. State entomologist have predicted a 10 to 15 year increase in this new pest before environmental, disease or predator emerges to create a new balance in the population. If that holds true for central Missouri, we are more than half way there and this is the first year of decline.

As in past reports, it is in years like these that I reflect on the Paul Harvey speech "So God made a Farmer" at the 1978 Future Farmers of America Convention. It truly takes a great caretaker to survive the ever-changing complexities that production agriculture provides to these stewards of the land.

Gene Schmitz 2019 Livestock Programming Highlights

2019 contacts: 2,747 direct and indirect contacts were made through office visits, farm visits, phone calls, e-mails, pasture walks, meetings, etc.

Media efforts included monthly news releases distributed to print media and radio outlets in Benton, Cooper, Hickory, Miller, Moniteau, Morgan and Pettis counties and selected statewide publications. Monthly interviews aired via BCE-TV, a web-based local news program in Warsaw.

Other Programming Highlights

Beef Cattle Management: Show-Me-Select replacement heifer program, beef cattle nutritional management including hay testing and ration formulation, genetic selection, Tri-County Steer Carcass Futurity, Hickory County Cattlemen's bus tour.

Forage Management: Alliance for Grassland Renewal board activities and renovation schools, regional grazing schools, NRCS/MU Grasslands project including pasture walks and native warm season grass use and management, Mid-Missouri Grazing Conference, pasture drought recovery meeting, alfalfa management workshop, drone use in forage management, novel endophyte tall fescue variety and fertilizer management research.

Other Events: County Cattlemen's Association meetings, MU Dean's tour in west central Missouri, livestock updates at selected Pesticide Applicator Training sites, Show-Me-Quality Assurance training for 4-H youth, State Fair Community College ag class nutrition and forage presentations, Farm Safety Day, State Fair Ag Safety booth, southwest Missouri Ag Weather committee, Tri-County Dairy Day, sheep and goat parasite management, and SWCD board of supervisor activities in Benton and Pettis Counties.



Gene Schmitz shown discussing novel endophyte tall fescue research with MU Extension summer interns.

MU Extension Tax Schools

During 2019, University of Missouri Extension agricultural economics department and regional agricultural business specialists worked together to coordinate two summer and six fall tax schools. The schools were designed for those who prepare taxes including: enrolled agents, tax preparers, CPA's, individuals and attorneys.

The training included updates on the Tax Cuts and Jobs Act legislation, rulings and cases, individual taxpayer issues, agricultural and natural resources topics, IRS rules and regulations, business issues, retirement issues, cybersecurity, limited liability companies, trusts and estates, religious organization tax issues, and ethics. The schools were approved for 8 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 2,955 hours.

The 2019 school attendance totaled four hundred twenty-eight people. The schools were held in Cape Girardeau, Columbia, St. Joseph and Springfield. The participants were from all over Missouri. There were 3 participants from Pettis County.

The teaching teams included a CPA and former IRS employee, an IRS certified retired ag economics professor, an attorney and a regional extension ag business specialist.

The trainings received positive evaluations and planning is underway to offer additional trainings in 2020. Local county residents benefit when local tax preparers have the opportunity to gain knowledge, which benefits their clients and communities. The schools are a program of the ag business and policy

program of MU Extension, coordinated by Mary Sobba and a team of ag business specialists help throughout the state.

Show-Me Master Gardener Chapter



The Show-Me Master Gardener chapter is a very active, self-governing group operating within the guidelines set by the MU Extension program. By the end of 2019 the Show-Me Master Gardeners membership was 31 (18 regulars and 13 interns). Unfortunately, we moved 9 members to inactive status, but, we now have 4 Emeritus Master Gardeners in the Chapter. With 2 members being on medical leave, we are hoping for the healing to be done over our winter months. Eight (8) Master Gardeners taught 68 classes. They took 156 calls and committed 2,019 hours of volunteer work beautifying and educating Pettis County.

The ability to care for and enjoy living spaces has both physical and psychological benefits for people who garden. Eight Pettis County homeowners received house calls to assist pests and tree issues. We provided \$1200.00 in scholarship money for the 2020 horticulture sessions at State Fair Community College. State Fair Community College chooses which students receive the scholarships

Programs provided by Master Gardeners share the extension message to the broader public. By promoting research based gardening and pesticide information, Master Gardeners help enrich the lives of their audiences while also encouraging more sustainable environmental practices.

Activity Summary of the Award Winning Show-Me Master Gardener Chapter

- Maintained 4 Gardens in Pettis County; Maple Leaf Garden, Bothwell Lodge Gardens, Katy Depot Gardens and the Catholic Charities Gardens.
- Set up and ran a question and answer booth at the AgExpo in February.
- Set up and ran a question and answer booth at the Sutherlands Spring Sale Events. Six (6) sale dates from 7:00 a.m. to 1:00 p.m.
- Information booths at the Missouri State Fair. Hours worked 10:00 a.m. to 4:00 p.m. for 11 days. During that time 7,500 sheets of information were handed out. Several classes were taught in the Floriculture Building and 500 samples of compost were given.
- Held 2, both Spring and Fall fundraiser plant sales this year.
- Funds and products were donated to CASA (products), University of Missouri Extension fundraiser and the 4-H Foundation Fundraiser.
- Ten (10) Pettis County Master Gardeners judged several of the surrounding County Fairs, other shows and events and the Missouri State Fair.

- Other activities that were attended by the Show-Me Master Gardeners: Spring Gardening Seminar by MG's of KC: Powell Gardens annual plant sale; Master Pollinator Steward Program at MU; MO-DOT (Stop the Invasion Program) at State Fair Community College; Bradford Research Center Tomato Festival and the MG Multi-County Fall Dinner.

Human Environmental Sciences

Susan Jones-Hard, Nutrition and Health Education Specialist
Sarah Traub, Human Development Specialist

During 2019, the focus of MU Extension Nutrition and Health Education was building the resources and capacity to schedule and deliver named and one-time evidence-based nutrition and health curriculum courses throughout the County.

County Engagement Specialist - Nutrition and Health, Susan G. Jones-Hard, M.A. completed instructor training certification in Chronic Disease Self-Management and Diabetes Self-Management in St. Joseph, MO sponsored by the Regional Arthritis Centers. Both of these six- week courses were developed by Stanford University's Patient Education Research Center to help individuals and their significant others live healthy lives by successfully employing effective self-help strategies.

Also early in the year, the Nutrition and Health Specialist completed MU Extension instructor training on campus for Matter of Balance and Stay Strong Stay Healthy- Level I. Matter of Balance was designed by the State of Maine to help reduce fall risks and subsequent injuries of an aging population. Stay Strong Stay Healthy is an eight-week evidence-based strength training program designed by the University of Missouri for older adults to keep their bodies and minds functioning at their best and improving health and quality of life.

Self-study certification in Cooking Matters-Adults was completed in the Spring of 2019. This six-week course, developed by ShareOurStrength.org, helps low-income families learn to shop and cook healthier through hands-on training and participant discussion. During the summer 2019, MU Extension Food Preservation coursework was completed in Columbia.

Beyond completing instructor certifications to assure quality education, visits were made to community organizations, agencies and facilities in the county to network with potential partner organizations, schedule facilities and classes for 2020 and enroll participants in upcoming courses.

Many lessons were learned about this process which will ensure that coursework will be successfully delivered in 2020 and beyond.

Scheduled Events in Pettis County in 2020:

July-August – Cooking Matters (Location TBD)

August-September – Stay Strong- Stay Healthy Level I (MU Extension – Pettis County)

September-October – Matter of Balance (West-Central Independent Living Solutions – Sedalia)

Stay Strong, Stay Healthy: Level 1

Stay Strong, Stay Healthy (SSSH) is a twice a week, 8-week strength-training program for older adults. At each session a prescribed set of eight upper and lower-body strengthening exercises are done. SSSH is modeled after the evidenced-based StrongWomen program developed by researchers at the Friedman School of Nutrition Science at Tufts University. While the original Tufts program includes only women, University of Missouri Extension has adapted the curriculum to include men. Missouri's Stay Strong, Stay Healthy instructors strive to individualize the training for each participant, regardless of their current fitness level, so they can safely participate and gradually build strength beneficial to health.



Three Stay Strong, Stay Healthy Programs took place in Sedalia in 2019. There were a total of 16 sessions and 10 county participants.

Focus on Kids (FOK)

FOK helped 3 participants from Pettis County learn how to better support their children through the divorce and separation process in face-to-face classes. Several more Pettis residents completed the course online.

Taught by Sarah Traub, the Focus on Kids program has powerful impacts, as parents are better able to meet the social and emotional demands of their children. A healthy home environment nurtures children who are more successful in school and are less likely to engage in risky behaviors.



Participants in this program provided the following responses.

- More than 90% of FOK participants perceive the program as beneficial to them with regard to both their parent-child and ex-partner relationships.
- One-year follow-up surveys indicate that nearly 75% of former FOK participants report the program as being helpful and worthwhile.
- Credit the program with increasing their knowledge and use of positive co-parenting behaviors and report significant reductions in co-parenting conflict

After attending Focus on Kids, *"I will work more on communication with my wife and talk more with my daughter about her feelings."*

The most helpful part was learning *"communication with the other parent is a must have. I honestly felt that everything was really helpful. I am really glad I got to attend this class."*

Family Nutrition Education Program (FNEP)

Michelle Chapman-Larson, West Central FNEP Coordinator
Maria 'Monse' Montoya De Rivera, Nutrition Program Associate
Katharine Hanlon, Nutrition Program Associate

The Family Nutrition Program (FNP) brought \$9,595,006.00 federal funds to the state of Missouri. These funds were used to provide nutrition education to 897,375 Supplemental Nutrition Assistance Program recipients and eligible citizens of Missouri. There were 3,283,220 educational contacts. This year we had 2,578,418 indirect educational contacts. Indirect contacts are reached through newsletters, health fairs, food pantries and the Show Me Nutrition help line. 3,299 of these participants reside in Pettis County.

Participants in FNP become more aware of nutrition, make healthier meal and snack choices, eat breakfast more often, are more willing to try new foods, increase their physical activity and in general make healthier food choices. Those who practice healthy eating and activity behaviors are more likely to enjoy a high quality of life as an adult and into old age. A healthy labor force is critical to attracting and keeping jobs in Missouri. In addition, this important programming effort serves to reduce healthcare costs over the participant's lifetime, saving taxpayers money in reduced public healthcare benefits and insurance premiums.

In Pettis County, 1,775 Youth and 1,524 Adults contacts were made for a total of 3,299 contacts.

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

<u>Schools</u>	<u>Agencies</u>
Horace Mann Elementary	Sedalia Area Farmer's Market
La Monte Elementary	Liberty Park
Pettis Co. Elementary	Katy Trail Children's Center
Green Ridge Elementary	Open Door Benevolent Services
Heber Hunt Elementary	Sacred Heart Catholic Church
Skyline Elementary	Sedalia/Pettis Co Branch Library
Smithton Elementary	Sedalia Housing Authority
Washington Elementary	Olsen West Apartments-Senior Housing
Thompson Early Learning Center	Pettis County Community Partnership
Parkview Elementary	Boonslick Regional Library
Sedalia Middle School	

In addition to the numbers, NPA's have shared these success stories demonstrating local impact:

“After a three year absence, I decided to offer a Kids in the Kitchen program at Boonslick Library for June. While we are required to offer six weeks, the librarian and I decided on less time as we were unsure of how turn out would be. Turns out our assumptions were incorrect as the class became super popular by filling up quickly after the first class.

One day, one of the library staff approached me to inform of the positive feedback she had received while waiting in the bank lobby one day. After noticing her Boonslick Library shirt, a parent of one of the students approached her and informed of the wonderful time her son was having in my KIK class. That he couldn't stop talking about it and that he looked forward to every Tuesday! When hearing this, it made me feel great knowing that I had such a positive impact. Having a public job paired with living in a smallish community, positive publicity is a great assurance that I'm doing a good job.” –Kate

“To supplement the veggie lesson, I had the second graders at one of my schools make veggie stir fry as way to reinforce one of the ways students could “eat the rainbow” (eating different colored veggies/fruits) in one sitting. The following week, I received this email from one of the teachers:

Thank you SO SO MUCH. our kids have really enjoyed it. I had six kiddos who went to the store with their parents last night and made the recipe—with chicken! In our district and the demographics we have, it is typically something in a box that you throw in the oven for dinner. My heart could explode. THANK YOU THANK YOU!” –Kate

“I really like this story because it made a good change. In one of my home visits, my client told me that she was very happy with the nutrition classes because she saw a big change in her diet. She didn't eat vegetables because she didn't have ideas of how to cook them. We had different food demonstrations that she enjoyed. Now she told me that in her meals she cook a lot of vegetables in different ways. The most important thing is that her family like the recipes with vegetables and the whole family enjoy them. Now I can say, I eat healthy!! Is her phrase.” – Monse

In summary, it has been a successful year in Pettis County for FNP. We look forward in 2020 to more programming opportunities and continued progress in helping to improve the lives of Missouri families.

4-H Youth Development



Blake Gazaway, 4-H Youth Development Specialist
Nan Hutcheson, Youth Program Associate

4-H in Pettis County 2019

A community of 250 youth building life skills, contributing to their community and becoming college and career ready.

Findings from a 2019 evaluation study reveals that Missouri 4-H:

Develops Leadership

70% of the Missouri 4-H'ers surveyed said they find it easy to speak up in a group.

79% reported feeling comfortable being a leader.

90% said 4-H is a place where they get to help make group decisions.

83% said 4-H is a place where you have a chance to be a leader.

84% said 4-H is a place where you learn about ways to help your community

Builds Initiative

89% of Missouri 4-H'ers surveyed said they are willing to try something they might get wrong.

90% said they keep trying until they reach their goals.

93% said they try to learn from their mistakes.

95% said they are willing to work hard on something difficult.

96% reported that they like to learn new things.

Builds Connections for a Bright Future

91% said they like to learn about people who are different from them, and get along.

90% said they think about others feelings before they say something.

96% said they treat others the way they want to be treated.

98% said they show respect for others ideas.

4-H'ers 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). In 2019 Missouri 4-H connected more than 4,628 young people to University of Missouri campuses. Being on campus is a predictor of youth going onto higher education (Dalton & St. John, 2016).

Youth who earn bachelor's degree increase annual earnings by \$2 million over their lifetime (U.S. News and World Report, 2011). If 50% of the Pettis County youth participating in 4-H events on a college

campus receive a Bachelor’s degree, 4-H would help young people acquire \$25 million more in lifetime earnings. *An example - 25 youth X 0.50 X @\$2,000,000 = \$25 million) more of lifetime earnings.*

4-H also prepares youth for the work place. 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 not yet been invented to solve problems that have yet to be identified. 4-H is the only youth development program with direct access to technological advances in agriculture, life sciences, engineering, learning technologies and social sciences from the university system. This brings relevant science content and hands-on learning that helps youth thrive (Arnold, Bourdeau, & Nott, 2013).

In Pettis County, 198 were engaged in science related projects and experiences.



Lock-In at Liberty Park Convention Hall



Pettis County Jr. Livestock Show



Pettis County Dog Show



Hams at Achievement Days



Foods judging at Achievement Days



Clover Kid Day Camp – Mad Science



Camp Heits Point Flag raising



4-H Photographers at the Holiday Photo Shoot



Dresden 4-H Club meeting

4-H clubs

4-H participants = 250*

Pettis County 4-H clubs offer long-term educational experiences in which members learn life skills such as decision making, public speaking and working with others. Members learn by doing under the guidance of adult volunteers, who teach projects ranging from computers science and arts to animal science and healthy living. Clubs also involve youth in community service, camping and educational trips

4-H SPIN and special-interest programs

4-H participants = 51*

Pettis County 4-H SPIN and special-interest clubs and programs include community partnerships and events, day camps and other educational activities.



Sky's the Limit SPIN Club where 4-H youth learned about the history of kites, the different styles and how to make a kite. Then they made their own kite and flew them.



4-H school programs

4-H participants = 2,288*

Pettis County 4-H school programs are educational experiences that supplement learning in the classroom. Teachers, 4-H volunteers or 4-H staff lead these activities. The most popular 4-H school program in Pettis County is Embryology.

* Duplicates not removed.

4-H members are supported by 205 youth and adult volunteers

Time valued at \$522,000.00

Volunteers are the core of the 4-H Program. They help to create, support and deliver educational programs and experiences. Missouri 4-H volunteers report contributing on average 100 hours per year to the program. Valuing their time at \$24.14 per hour (Independent Sector, 2017), the contribution of Pettis County 4-H volunteers was worth more than \$416,000.00 in 2018. More importantly, these individuals serve as role models and mentors for youth.

Embryology Program

Participants = 1,840*

The 4-H embryology program is a popular classroom supplement designed to provide youth with a hands-on science learning experience by observing pre-incubated eggs hatch over the course of a few days under their care. During 2019, 1,840 students from 63 classrooms from area schools, preschools, daycares, and home schools participated in embryology resulting in 11,040 hours of learning. Students learn about where their food comes from while gaining knowledge of life cycles and embryo and reproductive development. By using experimental learning and hands on activities in the classroom, teachers are able to build classrooms geared towards developing student's scientific and observational learning skills. Participants developed the social skills necessary to care for and nurture a living being by helping turn and care for the chicks both before and after they hatch alongside their teacher.



4-H science programming seeks to cultivate an appreciation of the sciences and life early on in Missouri youth. Aligned with state standards, embryology reaches hundreds of students yearly who are able to pass on their knowledge of nutrition and science to their parents thus encouraging a more educated community. A more educated and science literate populace in turn benefits the demands of today's technological and science driven economy.

Living History Farm Tour

Participants = 373

The University of Missouri Extension 4-H program partnered with the Central Missouri Agriculture Club and Cole Camp Antique Tractor Club to educate 373 area youths and adults about the important role that agriculture plays in their lives. Young people from area schools and several home schools came together over the two-day event to learn and observe how agriculture has shaped Missouri communities and has evolved over time.



Checking out the machinery

The students spent the days viewing demonstrations on farm tool history and seeing firsthand how to bale straw, shell corn, make apple cider, churn butter and boil lye for soap making. This year's tour also featured a blacksmith, llamas and donkeys. By experiencing the farm tour, students learn about historic farming practices and gain an understanding of how much farming has changed with modern technology and how that change has impacted the development of the surrounding region.

References:

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).

Dalton, R., & St. John, E. (2016). *College for every student: A practitioner's guide to building college and career readiness*. New York, NY: Routledge.

Independent Sector (2017). Independent sector releases new value of volunteer time of \$24.14 per hour. Retrieved from <http://independentsector.org/news-post/value-volunteer-time/>

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

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

Business Development Program (BDP)

Kelly Asbury, Director SBOTC, Sedalia

As entrepreneurs and innovators, Missouri's small businesses are becoming a more diverse group that continues to make the state's economy productive. There are approximately 500,000 small businesses in Missouri. Nearly 98 percent of all businesses with employees categorized as small businesses. In assisting the owners and managers of those businesses, MU Extension contributes to a county's economic development through growth in jobs, sales, innovation, technology development and commercialization.

Development Program:

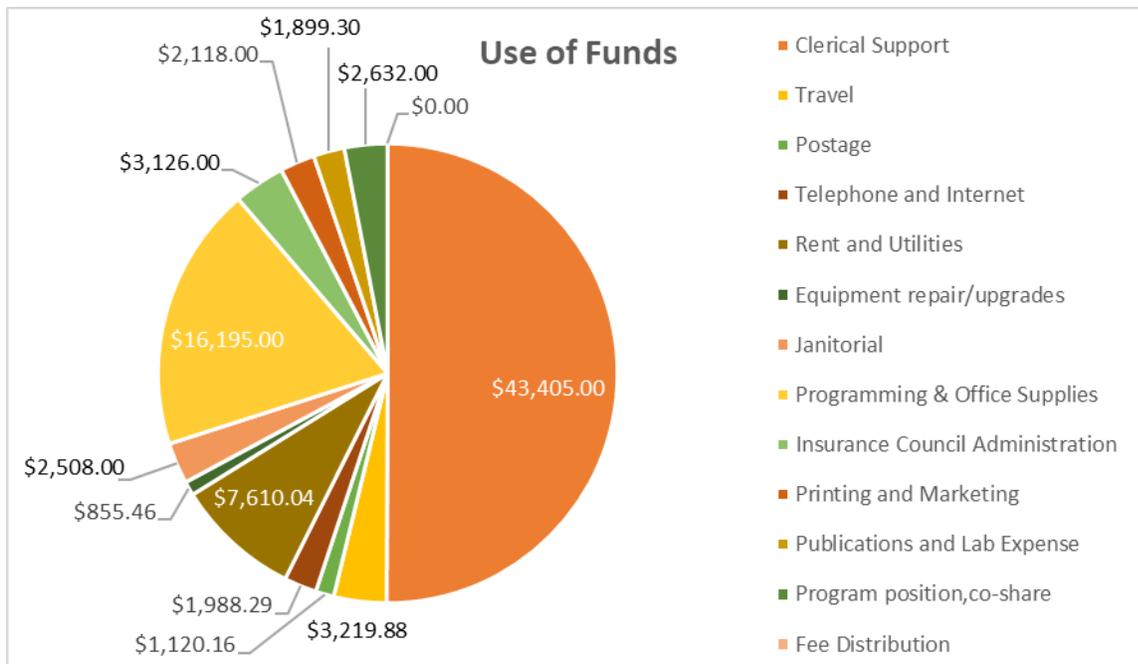
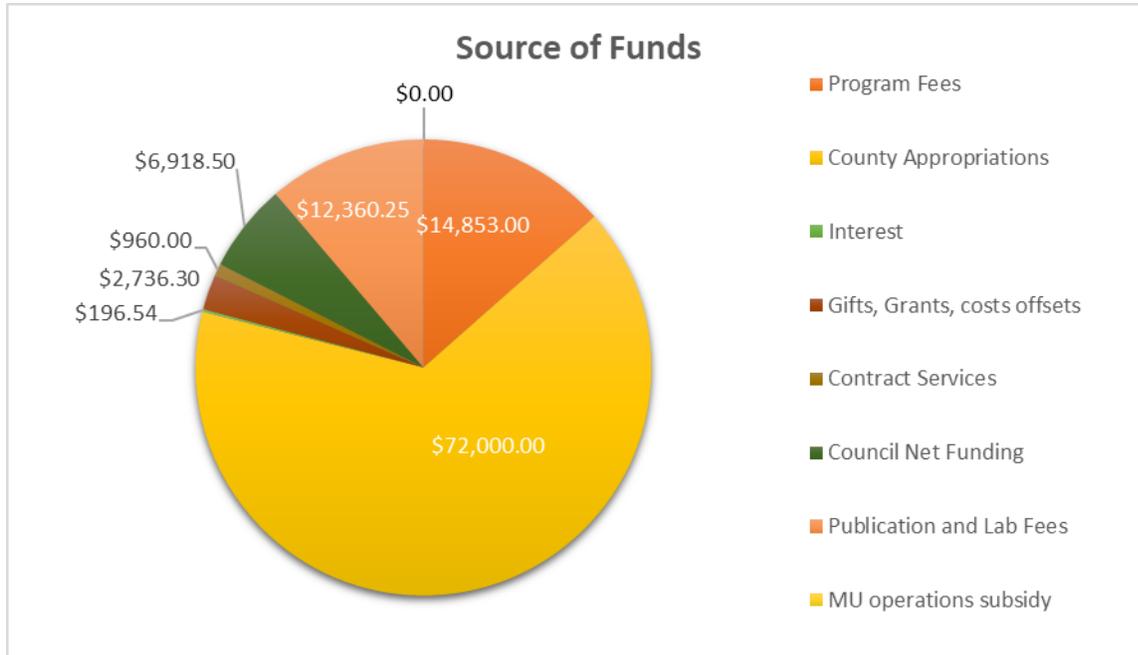
Sales Increase	\$1,771,547.00
PTAC Awards	\$36,440.00
Number of Awards	1
New Businesses Starts	11
Jobs Created	25
Jobs Retained	297
Total Capitalization	\$2,213,899.00
Businesses turned around or failures prevented	0
Acquired Assets	\$2,402,224.00
Clients/Companies Receiving Business Counseling	71
Training Event Attendees	286

Indicators of University of Missouri System Impact within Pettis County

The university advances Missouri citizens and communities through its mission of teaching, research, Public service, and economic development across the four campuses and University of Missouri Extension. The following statistics are estimated UM connections to Pettis County for 2018.

- Alumni residing in the county: 838
- UM students from Pettis County: 169
- UM employees residing in the county: 61
- Alumni teaching K-12 in the county: 33 teachers
- Pettis county patients seen at UM Health Care: 5,769

Pettis County Extension Program Funding, CY2019



Faculty and Staff Serving Pettis County

Headquartered in Pettis

Blake Gazaway

County Engagement Specialist
in 4-H Youth Development

Monica Gerken

Youth Program Associate

Katharine Hanlon

Nutrition Program Associate

Gene Schmitz

Field Specialist in Livestock

Sherol Bose

Office Administrative Assistant

Billie Long

Volunteer - Master Gardener, Emeritus

Small Business and Technology Development Center at State Fair Community College

Kelly Asbury

Director

Additional faculty with assignments in Pettis

Amie Breshears

County Engagement Specialist in
Agriculture and Environment

Susan Jones-Hard

County Engagement Specialist in
Nutrition and Health Education

Maria "Monse" Montoya De Rivera

Nutrition Program Associate
Pettis County Community Partnership

Todd Lorenz

Regional Horticulture and Agronomy Specialist

Kent Shannon

Field Specialist in Agricultural Engineering

Christina Edholm

Field Specialist in Human Development

Kathi Mecham

Field Specialist in Horticulture

Jacquelyn Eidson

Business Development

Sarah Havens

Field Specialist in Natural Resources