



UNIVERSITY OF MISSOURI EXTENSION

# Christian County 2018 Annual Report



Christian County Extension Center

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# Extension

*University of Missouri*

Dear county commissioners and friends of MU Extension,

The past year has been extremely productive for University of Missouri Extension and Engagement. With the launch of our county engagement specialist model, which is the centerpiece of a long-overdue restructuring, we are better positioned to serve Missourians.

Most county engagement specialists are now in place and the formal training for this new position rolled out this fall. By January 2019, we expect our CESs to be well on their way to success. I see a great future for them and the communities they serve.

At the MU campus, we have been busy putting in place online resources that will benefit Missouri communities. In particular, the All Things Missouri web portal is an exciting tool that can help community leaders search for valuable data. I encourage you to check it out at <https://allthingsmissouri.org/>.

When 2018 began, we set out to meet with every county's administrative body. This effort provided valuable insight and helped strengthen relationships; and as a result, we will engage in a similar effort in 2019. Meeting stakeholders and deepening county relationships is something we truly enjoy.

As you read your county's annual MU Extension report, I am confident that you will be pleased with the results accomplished through county-based University of Missouri faculty. Our faculty take pride in their efforts to respond to local extension council input.

At the state level, we have committed to a goal of doubling the economic impact of MU Extension over the next decade. This goal of \$2 billion in public value is ambitious — but, by meeting this challenge, we will help a great many Missourians.

Your support of MU Extension and our efforts in your community are greatly appreciated. As always, people.

Sincerely,



Marshall Stewart

University of Missouri, Lincoln University, U.S. Department of Agriculture and Local Extension Councils Cooperating

equal opportunity/aDa institutions



January 2019

Dear County Commissioners and Christian County Community:

For over 100 years, the University of Missouri (MU) Extension has been partnering with counties across the state to bring the resources, programs, and benefits of Missouri’s Land Grant University out to communities. A little over two years ago, to better understand the needs of Missourians; we began a yearlong statewide listening tour and comprehensive assessment. One stop was at the OC in Ozark, where our Vice Chancellor Marshall Stewart spent time with many from Christian County who gave their input. Because we listened, 2018 was a year of significant restructure and change for MU Extension. We took time to align our work to focus on the three grand challenges that you, and communities across the state communicated to us:

**Economic Opportunity    Educational Excellence    Healthy Futures**

From a third-party auditor, we learned this past year that our annual investment of \$86 million (in 2016) generated almost \$1 billion in economic impact to Missouri’s economy. Although we were pleased by this report, I want to let you know that we are just getting started.

New Targets for MU Extension include:

- ◆ To improve the economy of Missouri by more than doubling our economic impact from \$945 million to \$2 billion over the next 10 years;
- ◆ To increase the number of high school graduates participating in post-secondary education from the current 51 percent to 60 percent over the next decade and provide place-based continuing education credentialing, job-ready programs, beginning in 2020; and
- ◆ To collaborate with our partners to improve Missouri’s national health ranking from 40th to 25th over the next decade.

For these big goals, we continue to need your partnership and support. My new role as County Engagement Specialist, which began on September 1, 2018 as a part of this reorganization, gives me the opportunity to start this new chapter together with you. We will achieve our goals as we work together, and as we focus on the best future for our county, and for all of its citizens. I am so grateful for this opportunity, and I am committed to serving utilizing the strengths and assets of the University of Missouri.

This annual report – which highlights programs and impacts of University of Missouri Extension in Christian County – provides a snapshot of how our work is taking shape. In 2018, hundreds of initiatives, programs, educational events and workshops were offered across the state on any given day through our four new program areas: Youth and Families; Agriculture and Environment; Business and Community Development; and Health and Safety. We could not do it without great supporters and partners like you!

I am especially grateful to the Christian County Commissioners, who have supported us at every turn. They have been the best of champions for the very mission that drives our work: to improve lives, communities and economies through relevant, reliable and responsive educational strategies. I look forward to the work ahead!

Sincerely,

A handwritten signature in cursive script, appearing to read 'Pam Duitsman'.

Pam Duitsman  
County Engagement and Community Development Specialist

**CHRISIAN COUNTY**

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Website: [extension.missouri.edu/christian](http://extension.missouri.edu/christian)

# Faculty & Staff at Christian County Extension

## Dr. Pam Duitsman

County Engagement Specialist  
**Community and Economic  
Development**



## Jim Spencer, Jr.

Agricultural Business Specialist



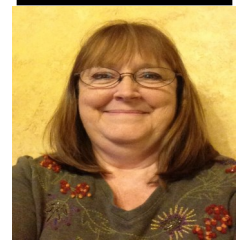
## Jennifer Hancock

4-H Youth Educator



## Kathy Pyeatt

Administrative Assistant



## Out-of-County Specialists Serve Christian County

University of Missouri Extension field faculty have multi-county responsibilities for educational programming. This is a tremendous benefit to Christian County because expertise can be shared between neighboring counties in the region to assist with MU Extension's long-standing mission of improving lives, businesses and communities.

As we respond to direct input from our local council and the unique nature of Christian county, all of our faculty, staff and volunteers continue to connect county residents with knowledge they can put into action in a wide range of daily situations.

The following MU Extension Specialists from other counties were called upon to support Extension educational programming in Christian County in 2018, either through group programs or by phone, email, or on-site consultations:

- Tim Schnakenberg, Agronomy, Stone Co.
- Patrick Byers, Horticulture, Webster Co.
- Kelly McGowan, Horticulture, Greene Co.
- Eldon Cole, Livestock, Lawrence Co.
- David Burton, Civic Communication, Greene Co.
- Amy Patillo, Labor & Work Force Dev, Greene Co.
- Sandra Smart-Winegar, Business Dev, Taney Co.
- Renette Wardlow, Human Dev, Greene Co.
- Jeff Barber, Housing Education/LEED, Greene Co.
- Willa Williams, CES, 4-H Youth Dev, Taney Co.
- Ted Probert, Dairy, Wright, Co.
- Reagan Bluel, Dairy, Barry Co.

- Robert Schultheis, Ag Engineering, Webster Co.
- Randall Wiedmeier, Livestock, Ozark Co.
- Janice Weddle, 4-H Youth Dev, Wright Co.



# Christian County Extension Council

Every Missouri county, by Missouri State Statutes, has a University of Missouri Extension Council comprised of elected and appointed citizens.

State law confers the right for councils to work with MU Extension faculty to act as educational brokers, putting the interests and concerns of local people together with the resources of our land-grant University so people can obtain their goals. The MU Extension Council strives to support our three impact areas of Economy, Education, and Health, and represent the diverse sectors of Christian County by it's membership.

The role of the Council:

- ◆ Work with MU Extension faculty and staff to provide educational programs.
- ◆ Manage finances of local Extension operations.
- ◆ Provide personnel to carry out MU Extension activities.
- ◆ Elect and organize the local MU Extension Council.

During 2019 Council meets on even months beginning in February, on the first Thursday of the month, starting at 5 PM.



Walt Martens, Council Chair

Josh Bird, Vice-Chair

Konni Hall, Secretary

Kathy Martin, Treasurer

Linda Barger, Events Standing

Committee Chair

Robert Kerley, Nominations/Elections

Standing Committee Chair

Carl Biondo

Charles Cameron

Brad Harter

Kevin Kopp

Jason Sims

Jeff Ware

Ray Weter, County Commissioner

University of Missouri Extension Council is a full partner with Missouri's land-grant Universities to deliver high-quality education and unbiased, research-based information that help people solve real-world problems and take advantage of opportunities.



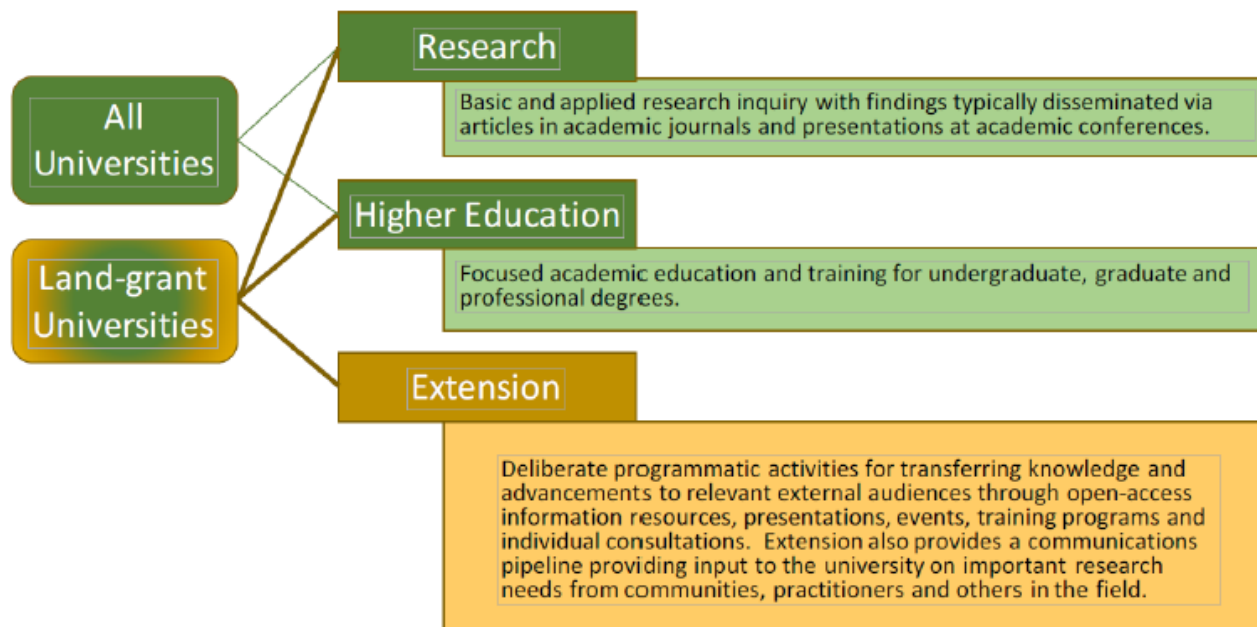
# University of Missouri Extension

MU Extension is a partnership of the University of Missouri campuses, Lincoln University, the people of Missouri through County Extension Councils, and the National Institute for Food and Agriculture of the U.S. Department of Agriculture. While often recognized for advancing American progress in agriculture, MU Extension actually has a much wider range of focus and influence. MU Extension has evolved to embrace an expansive mission, seeking to advance not only improvements in specific sectors of the economy but also provide knowledge to empower people to understand change, solve problems, and make informed decisions.

MU Extension makes university education and information accessible for:

- ◆ Economic viability
- ◆ Empowering individuals
- ◆ Building strong families and communities
- ◆ Creating healthy environments

The Land-grant Mission: MU is a Land-grant University, meaning it is a part of a federally mandated mission



The scope of work undertaken by MU Extension is both broad and deep. At any given time, hundreds of initiatives, programs, educational events, and workshops are being run by MU Extension professionals across the state. It is not easy to summarize all the diverse activities undertaken under MU Extension's mission, but at its heart, four core program areas characterize a large majority of its activities: **Business and Community; Youth and Families; Agriculture and Environment; and Health and Safety.**

# Business and Community

Helping Missouri businesses and communities succeed and fostering leadership through proven, tested counseling and training methods. An integrated statewide delivery system for programs and education is focused on helping businesses of all kinds and in all sectors grow throughout their business life cycle. Community and economic development needs and challenges of communities small and large across the state of Missouri are addressed with programs that target community leadership development, economic development, community decision-making, local food systems, local government, diversity and social inclusion, and enhancement of quality-of-life.

## IMPACT in 2018

**Farm to School**      **13 Sessions. 277 participants.** Counties: Christian, Taney, Greene, Stone

Pam is the “Farm to School of the Ozarks” (F2SO) Project Coordinator, working with multiple School Districts and agriculture producers on these projects. Funding from USDA has been consistent since 2013. Pam is working to incorporate two additional Districts into *Farm to School of the Ozarks* this fall.

Background and Impacts: Farm to School programs are a WIN for everybody. Communities, schools, farmers and food producers, public health workers and colleagues from MU Extension are all working together in the Southwest region of Missouri to help implement these programs.



Farm to school programs work to improve the connection communities have to fresh, local food, and local food producers. Farmers and schools are connecting to provide schools with locally grown food products that are included in some school meals and snacks. Students are also participating in educational learning activities related to agriculture, food, health, and nutrition. School gardens are offering students hands-on experiences to grow their own food. Several schools in multiple counties are participating, with the intention of empowering children and their families to make in-

formed food choices while also strengthening the local economy and helping to build more resilient communities.

Farm to School programs are a win for everybody. Here are a few examples:

**Economic Impacts:** For every job created by school districts purchasing local foods, additional economic activity creates another 1.67 jobs. Each dollar invested in farm to school stimulates an additional \$1.40-\$2.60 of local economic activity, in one study resulting in \$1.4 million overall for the state.

**Farmers and Food Producers:** The increased purchases from local producers and processors supports jobs and local earnings. Schools offer a very stable market opportunity for farmers, ranchers, food processors and manufacturers, and can establish long-term revenue streams for individual farmers.

**Dr. Pam Duitsman, County Engagement Specialist**

# Business and Community

**Farm to School Continued:** Student healthy behaviors: We see significant improvement for healthy behaviors in children from kindergarten through twelfth grade. Kids choose healthier foods; eat more fruits and vegetables; and demonstrate a higher willingness to try new foods. Data also shows that kids consume less unhealthy snack foods, drink fewer sodas, and actually increase their physical activity. Measures of “screen time” show that kids participating in Farm to School spend less time in front of a screen – whether it be a computer, television, or games console.

**School Food Service:** Schools increase the fruits and vegetables they offer, develop new seasonal recipes, and decrease waste from school lunches. Students are much more likely to participate in schools meals, which generates increased revenues for schools through their meal programs. Food service staff show improved motivation and morale; an increased knowledge and interest in fresh food preparation; and have more interactions with teachers to strengthen classroom and cafeteria connections.

**Student Education:** Through these programs, we have been increasing student’s knowledge of agriculture, gardening, healthy eating, nutrition, growing cycles, local food, seasonality, and STEM (science, technology, engineering and mathematics) concepts and language arts in children from K-12. Overall academic achievement improves in K-12 settings. Farm to School also improves opportunities for physical and social activities, and increases engagement in school activities. Life skills, self-esteem, social skills, and behavior improve as well.



**Adults:** The impact of Farm to School programs extends to the educators and parents. Teachers show positive changes in healthy eating and lifestyles. Parents show increased knowledge of local agriculture and of healthier behaviors such as increased fruit and vegetable consumption. Adults who participated in gardening at a young age are more likely to eat fruits and vegetables, try new produce, prepare meals at home, shop for healthy and local foods, and make healthier purchases.

## **Short Term Learning:**

100% of participants responded that: the Quality of Content (relevancy, clarity) was Excellent; their ability to apply what they learned at the training was excellent; and the overall Quality of Training Session was excellent.

Dr. Pam Duitsman, County Engagement Specialist



# Business and Community

## Farm to School Continued:

### What will you do as a result of this program?

- ◆ I can go back to my classroom and start teaching the curriculum!
- ◆ Incorporate Farm to School lessons into our elementary after-school program.
- ◆ Implement the garden and taste testing events ASAP.
- ◆ I am going to amend the soil in our school's raised beds and ready them for spring planting.
- ◆ So many ideas to take back and try out, and now having a ready-made curriculum will be great!
- ◆ Implement more nutrition into my sustainable gardening class.
- ◆ We will begin to implement curriculum as a part of our program.
- ◆ Improve my current classroom garden; considering a summer school course for gardening.
- ◆ Work with after school program to brainstorm ways to use in our science program.

### Long-term outcomes of Farm to School

Implementation and sustainability of school gardens have increased and been strengthened through technical assistance provided. Outdoor classroom/gardening curriculum has been integrated into teacher instruction. Cooperative agreements have been developed with community organizations to support sustainability. Junior Chef Competitions have been offered at several schools, and continue into 2018. These offer an innovative educational experience and produces tremendous behavioral impacts for students and their families. Fresh, local fruits and vegetables are being introduced into the school cafeterias. Schools are working with county health departments and support organizations such as Springfield Grocer to implement a system for purchasing large quantities of local food sustainably. Teams of students are taking on the challenge of implementing and sustaining the gardens at their respective school sites.



Dr. Pam Duitsman, County Engagement Specialist

# Business and Community

## **Food System and Farm to Institution programs      31 Sessions. 280 participants.**

This past year, Pam has coordinated and taught at 31 conferences, workshops and meetings which brought together Food System Stakeholders from across the region and the state. Participants from Christian and surrounding counties have engaged with a diverse group of statewide and local stakeholders and experts offering education and facilitated discussion concerning the challenges, opportunities, resources, certifications, trainings, regulations, and steps needed to improve connections in our Food System from farm to table.

Community input through forums, meetings, and workshops have allowed us to begin mapping success to build the local food system. Work has continued with the Missouri Department of Agriculture, Missouri and Regional USDA Development, Department of Elementary and Secondary Education, Missouri Department of Health and Senior Services, Food Hub developers, Missouri State University, Lenders, Lincoln University educators, Food Distributors, and many state and local stakeholder organizations. Next steps include development of key materials that will be used to implement a pilot project to guide local food system connections.



The long-term goal is to be able to replicate this across the state.

Participant feedback has included: 100% reported: these events was needed or very needed; improved understanding of their role, and the bigger picture, of the food system; and that their knowledge had increased as a result of their participation. 89% reported they would change their behavior based on what they learned, and gave examples of how they plan to engage in food system development.

Customer Quotes: “I have learned information I did not know “; “ I found this workshop informative and I want to learn more”; “ I have gained a mastery of topics covered “; “I now feel I could teach this to someone else “.

When asked “What was the most beneficial part of today’s learning?”:

- ◆ All of the resources – and the various voices of support.
- ◆ The presenters were knowledgeable and I benefited from participant questions.
- ◆ It was a great day! Very beneficial!
- ◆ The personnel and presentations were so wonderful; the enthusiasm and practical tips were wonderful!

**Dr. Pam Duitsman, County Engagement Specialist**

# Business and Community



Left: Hollister BlackBerry Lane Farm Tour  
Right: Farm2School Gardener's Orchard Field Trip  
Middle: Pam at School Garden  
Below: Springfield Catholic School Field Trip



Drs. Amy Patillo & Pam Duitsman

# Business and Community

## On-Farm and Produce Food Safety Courses

Pam taught four Sessions of this day-long workshop in 2018, which included 46 participants from Christian and surrounding counties. The Food Safety Modernization Act (FSMA) is the most sweeping reform of the US food safety laws in over 70 years. The overall objective of FSMA is to prevent food safety issues. It is the first mandatory federal standard for the production of fruits and vegetables in the US. Any producer in the US growing food that will be consumed by humans needs to ensure they are certified through a food safety training course (*unless they are exempt*). The Federal Produce Rule mandates certain on-farm practices to ensure safe production of fresh produce. Most farms must meet the rule's specific production practice requirements beginning in January 2018. Regulated farms fall into three size categories based on annual produce sales:

\$25,000 to \$249,999 (very small); \$250,000 to \$499,999 (small); and \$500,000 and above (large).

Farms with annual sales below the minimum threshold for very small farms are exempt from the Produce Rule. FDA contracted with Cooperative Extension to create a curriculum that covers FSMA requirements as well as Good Agricultural Practices (GAPs) for on-farm food safety. The curriculum, "Food Safety Modernization Act Produce Safety Alliance training", meets the training and certification requirement for farms subject to the FSMA Produce Safety Rule. In Missouri, MU Extension is providing the training and certification. We only have a few certified trainers. In SW, the MU Extension training team includes only three people -- Patrick Byers (lead trainer), Robert Balek (Horticulture), and Pam Duitsman. We have been collaborating with Lincoln University Extension to offer trainings. The 8-hour training includes modules on FSMA, worker health & hygiene, soil amendments of biological origin, domestic animal & wildlife issues, production & post harvest water, postharvest handling & sanitation, & food safety plans/traceability.

Feedback from FSMA trainings held in 2018: This was a relevant training. Demystified FSMA, clearly delivered/defined what we need to implement to be compliant. Love the manual; it will be a handy resource.

- ◆ 80% of attendees indicated that they were committed to implementing produce safety practices
- ◆ 75% strongly agreed or agreed that the module "increased my knowledge of worker health, hygiene, and training requirements in the FSMA Produce Safety Rule"
- ◆ 90% strongly agreed or agreed that: after the training, they were confident that "I can implement practices to address food safety risks related to worker health, hygiene, and training"; their knowledge of postharvest handling and sanitation requirements in the FSMA Produce Safety Rule was increased from this training
- ◆ 85% strongly agreed or agreed that I am confident that I can implement practices to address food safety risks related to postharvest handling and sanitation
- ◆ 100% of responders to surveys indicated that the training was well organized
- ◆ 86% of survey responders agreed or strongly agreed that the modules "increased my knowledge of produce safety requirements in the FSMA Produce Safety Rule".

Dr. Pam Duitsman, County Engagement Specialist

# Business and Community

## School Wellness

Pam has partnered with schools in Christian County and Greene County during 2018 to incorporate School Wellness activities. Five sessions reaching 149 participants took place in 2018. One noteworthy event was the Nixa Iron Chef Competition, where over 80 youth chef participants engaged in The 6<sup>th</sup> Annual Iron Chef *Rockn' Wrap* Competition, forming 20 teams that competed to learn and hone culinary skills, methods of healthy recipe creation and meal preparation & creativity. A Master Chef category, with four older chefs, competed on their own. The wraps were not ordinary! The competition called for the greatest, most creative, and deliciously healthful, made from scratch “artistically composed wrap” innovation, and called participants to use the secret ingredients black beans and peppers. Student chefs took it to the next level with fresh ingredients, veggies, fruits, grains, legumes, greens, herbs, spices, dressings/sauces & more. Top teams from the grades 4-6 and Master Chef grade category were featured on OzarksLive! TV show making their recipes.

The goal of the event is to inspire students to become connected to their food, acquire valuable lifetime culinary skills, encourage cooking with friends/family, and learn how to develop flavors in different and in a healthy way. A parent coach was allowed to assist each team. Over 200 community members came to support the event, taste test recipes, and encourage the students. As part of School Wellness and Farm to School efforts, Pam works with communities to form partnerships and coalitions to help develop healthy communities with policies and environments that support access to healthy food and opportunities for physical activities. The Iron-Chef event was held with children to increase awareness of where food comes from; how to handle food safely; and how to prepare healthy tasty food.



Dr. Pam Duitsman, County Engagement Specialist

# What our clients say

I loved it all! Wrote tons of notes from each presenter!

Pest Management – lots of great resources for further reference.

I am excited, motivated and encouraged by the group's enthusiasm and expertise.

The presenters were knowledgeable, and I benefitted from participant questions.

Have really enjoyed this class, would take it again and will recommend it to others.

This exceeded my expectations! Thank you for inspiring so many of us!

I have looked forward to each class, have learned new things – really enjoyed the instructors and other participants.

Realistic, applicable information that we can put to use. I really enjoyed it!

What was most beneficial?  
Hands-on demonstrations!

I liked knowing when/how to plant each type of veggie; I like hands-on activities.

This is a class where everyone can benefit.

The leaders were excellent in presenting the material and caring for each participant.

Thank God for MU Extension. We would never have gotten started without your help.

I love it! Great ideas!

# Business and Community

**MU Extension Business and Development** work in Christian County is accomplished through a formal statewide and regional partnership with the Small Business Development and Technical Center (SBTDC) located at Missouri State University.

Business development program specialists and business counselors with MU Extension and the Missouri Small Business and Technology Development Centers, Missouri procurement Technical Assistance Centers, Missouri Environmental Program, Missouri Career Options Project, and the Missouri Market Development programs served Christian County residents and their companies with business start-up, management counseling and other assistance in 2018. Participants and clients include: Small business owners in the service, construction and retail industries; Prospective entrepreneurs; Non-profit organizations; and Displaced workers.

Christian County SBTDC Impact FY 2018	
Sales Increase of	\$1,312,434.00
PTAC Awards	\$ 124,693.00
Number of Awards	2
New Businesses Starts	5
Jobs Created	51
Jobs Retained	97
Total Capitalization	\$ 916,771.00
Clients/Companies Receiving Business Counseling	41
Training Event Attendees	219
Business Development Contacts	411

Missouri SBTDC Impact FY 2018	
Sales Increase of	\$ 453,895,246.00
PTAC Awards	\$ 295,988,671.36
Number of Awards	4,350
New Businesses Starts	284
Jobs Created	2,778
Jobs Retained	5,397
Total Capitalization	\$ 104,175,953.36
Businesses turned around or failures prevented	14
Acquired Assets	\$ 13,322,538.00
Clients/Companies Receiving Business Counseling	3,938
Training Event Attendees	9,609

How does this work make Christian County and Missouri better?

- ◆ New businesses help create additional jobs.
- ◆ New and existing business growth contributes to local, county, and state taxes.
- ◆ Promotes economic development through new and retained jobs, increased sales, technology development and commercialization.
- ◆ Knowledge gained through training and one-on-one consulting sessions allows business owners to operate more efficiently and expand their businesses.
- ◆ Business owners learn industry best practices and are able to apply them to their businesses to promote growth in sales, additional jobs, and increased productivity
- ◆ Business owners understand and are able to manage their cash flow to create stronger businesses for our local and state economy.

Sandra Smart-Winegar, Business Dev

# Business and Community

## My Hometown: Do I leave home or do I stay? Youth and adult partnerships that make a difference in rural communities.

MU Extension's Labor and Workforce team, John Gulick of Osage County Extension and Dr. Amy Patillo of Greene County Extension attended and presented at the Missouri Community Betterment "Rural Rally", the 55<sup>th</sup> annual conference focusing on engaging youth and adults in community betterment and community development. Nearly 200 volunteers, community leaders, and youth attended to highlight local economic development efforts in more than 17 counties and 19 communities. Gulick and Patillo's session "My Hometown: Do I Leave Home or Do I Stay?" engaged 67 youth and adults representing 17 counties in an interactive session to discuss why youth return home or not. Youth and adults addressed attitudes and actions that encourage and discourage youth from returning home to their community to live, work, and play. This session provided communities with resources to make big changes that create hometown opportunities for youth to build lifelong careers.



Dr. Amy Patillo, Labor & Workforce Dev



# Business and Community



StrikeForce Ag Instructors Tour at Milsap Farm

## StrikeForce Farmer Development project

In the first year, the StrikeForce Farmer Development Program (SFDP) is a USDA-NRCS grant serving 46 counties in Southwest and Southeast Missouri, has funded 34 projects to train, educate, and provide outreach and technical assistance to aspiring, new, and developing farmers. These programs address the needs of farmers through local and regional training, education, outreach, and technical assistance initiatives that enhance local food production and self-employment in specialty crop production and farming. The project has served 45 veterans and provided mentorship programs to 28 farmers. The StrikeForce project is a multi-disciplinary project supported by the following team members, David Burton, Patrick Byers, Sarah Denkler, Jamie Gundel, and Amy Patillo.

The StrikeForce Project targets areas that need the economic boost and will benefit from the expansion of small farms and on-farm businesses. The funding has expanded educational opportunities to farmers in StrikeForce counties to make their operations more profitable and efficient, while emphasizing conservation of natural resources. These areas have particularly benefited from the increased educational offerings that financial assistance from NRCS sponsored programs has provided for workshops and conservation practices associated with specialty crops. In addition, the MDA Specialty Crop Block Grant program has supported initial efforts among team members to develop curriculum and workshops that support specialty crop producers. Examples include the Missouri Blueberry School, Growing Blackberry Production in Missouri project, activities at the Year Round Learning Farm, Winter Production Conference, and Missouri Tomato School. Continued project funding will allow the curriculums and approaches developed in these regional projects to be expanded to a broader audience and offer new custom designed workshops for scaling up and funding opportunities, as requested by farmers.

Dr. Amy Patillo, Labor & Workforce Dev

# Business and Community/Youth and Families

## Creating Collaborative Environments for Positive Youth Development

A partnership between Business and Community (Workforce Development) and Youth and Families (4-H) in Christian County reached 156 Nixa eighth grade honors science students, teachers, and stakeholders. Students benefited from presentations on STEM (Science, Technology, Engineering, and Mathematics) related careers.

Students had the opportunity to meet and work with Jason Preston of 417 Drones, which is Missouri's only Legal Commercial Drone Solution Company. Students learned about the use of drones in photography including aerial, realty, radiometric data, and photogrammetry. Students learned about the use of drones in search and rescue, crime scene and accident solutions, safety protocols, and commercial drone operations.

Students were also given the opportunity to interact with Brian Barton from MC Solar about the construction and operation of the Nixa Solar Farm learning about renewable energy topics such as: energy efficiency, solar thermal, solar electric, wind, microhydro, renewable energy in the developing world and the economics of renewable energy. Students learned where our energy comes from at a local, national, and global scale.

Jennifer supplied each student with folders containing information on the College of Engineering at Mizzou.

## Learning

21 out of 21 students stated that they learned something new about science after this session.

20 out of 21 students stated that they learned something new about engineering after this session.

13 out of 21 students stated that they would like to study science after high school.

10 out of 21 students stated that they would like to study engineering after high school.

## Customer quotes

"My favorite part was the entrepreneurship and business aspect of drones."

"I was really interested by this topic and I learned a lot."

"He showed models and also made things interesting."

"I loved learning about all the uses for drones that I didn't know about; especially since I own a drone."

"My favorite part was learning about how far technology/drones have gone. You can use drones for scale models and to see how healthy plants are."

Dr. Amy Patillo & Jennifer Hancock

# Youth and Families

Today's challenges present daily life issues for many Missourians. MU Extension provides frontline research and education focused on helping individuals, families, and communities reach their full potential in areas such as managing health, sustaining families, childcare, and youth development. One out of every five Missourians aged 5-18 participates in 4-H Youth Development Clubs or after school programs managed by 4-H Center for Youth Development staff, each year. 4-H provides an important source of child and youth skills development, leadership building, character building, and other activities that prepare Missouri' youth to be responsible well-prepared citizens.

## Impact for 2018

### Chronic Disease Self-Management

This 6-week course meets for two hours each week, and is for anyone with a chronic health condition. Topics include dealing with difficult emotions, nutrition, physical activity, managing pain and fatigue, communication, and working with your physician. Participants set and report on goals each week.

Six-month outcome findings for this program: improvement of health outcomes and reduction of health care utilization; decreased activity limitations and depression symptoms; improved communication with health care providers; improvements in quality of life, fatigue, sleep issues, pain and shortness of breath; significant improvement in ER visits, hospitalization, and health care costs. **In 2018, Pam taught 6 sessions which included 66 participants**, many from Christian County. Sessions were held at Mercy Clinics.



Learning outcomes:

- ◆ 100% of the participants responded that they strongly agreed that: the class made them more confident in their ability to take care of their chronic condition; participating in the class improved their ability to deal with problems caused by their chronic condition; participating in the class increased their independence and ability to carry-out routine daily activities; participating in the class improved the physical symptoms (i.e., pain, stiffness, etc.) caused by their chronic condition; participating in the class improved the emotional distress (i.e. depression, etc.) caused by their chronic condition; participating in the class led them to change something (action or knowledge) based on what they learned or experienced.
- ◆ 100% of the participants indicated that they would recommend this class to others.

**Dr. Pam Duitsman, County Engagement Specialist**

# Youth and Families

## Living a Healthy Life with Diabetes

Diabetes self-management classes are interactive, and successfully build confidence in the ability of participants to manage their health while maintaining an active and fulfilling life. The class meets as a series – for six weeks. Each class lasts 2-2½ hours. Pam has collaborated with Mercy Health Systems, Cox Health, and community partners.

**In 2018, Pam taught 19 sessions which included 165 participants**, many from Christian County. Sessions were held at Mercy, Cox, and Parks and Recreation meeting rooms. Participants learn how to: manage symptoms of diabetes; communicate effectively with your health care team; plan menus; keep your blood sugar in check; and get more out of life.

Learning outcomes reported from participants were:

- 100% of participants agreed or strongly agreed that because of this course: they are more confident in their ability to take care of their diabetes; they improved their ability to deal with problems caused by their diabetes; increased their independence and ability to carry out routine daily activities; they improved the emotional distress (i.e., depression, etc.) caused by their diabetes; they changed something based on what they learned or experienced.
- 83% of participants agreed or strongly agreed that because of this course they improved the physical symptoms caused by their diabetes.

Written submitted comments from participants included:

- ◆ Thank you for giving me tools. I am so grateful. This has given me hope and direction.
- ◆ This class was awesome.
- ◆ I learned how to prepare healthier meals, lower my A1C, and avoid insulin. This course was very informative and helpful. It would have cost me almost \$2,300 for the class (my hospital) offers.
- ◆ My life has changed for the better and my health improved because of this class.
- ◆ Excellent Class!
- ◆ Helped me change habits that had a positive effect on my life.
- ◆ Great class, learned a lot. Great group of people. The instructors were very knowledgeable.
- ◆ This had a great effect on more than just my diabetes. I'm grateful for all the help.

Participants receive a book, *Living a Healthy Life with Chronic Conditions* and a *Relaxation for Body & Mind* CD; direction on appropriate exercise; healthy eating, meal plans; how to monitor their blood sugar; how to successfully use action plans to sustain behavior changes; how to prepared for sick days; and how to reduce the complications from diabetes. The classes are free.

**Dr. Pam Duitsman, County Engagement Specialist**

# Youth and Families

## The University of Missouri Family Nutrition Program

The MU Extension Family Nutrition Education Programs (FNEP) bring the latest nutrition information to low-income Missourians. Using the socioecological model to prompt behavior change, MU Extension faculty and staff provide education to youth and adults throughout the state of Missouri.

Whether reaching out to youth and adults through classroom education or working with communities to promote healthy policies, systems and environments, the goal of the program is to help participants make behavior changes to achieve lifelong health and fitness.

Along with statewide education, MU Extension coordinates the Missouri Nutrition Network activities through the Missouri Council for Activity and Nutrition (MOCAN) and collaborates with Operation Food Search to expand nutrition education throughout the state.

FNEP provides programming that meets needs in our community by considering age, culture, reading level and abilities. Lessons with hands-on activities are designed for youth and the adults that support them, pregnant teens, and immigrant populations.

Program success means life-long skills for clients. Often clients tell us how FNEP has impacted their lives, even years after they have participated. A nutrition educator relayed this story:

*A young woman who was a client approached the Nutrition Educator. This client was enrolled in the Program when she was a young child, and is now a mother of three children herself. She asked the Educator to teach her children the same lessons that she had received when she was a child. She said the skills that she learned over ten years ago as a child were now helping her raise her three small children. FNEP Nutrition Educators receive many testimonials from clients. Each day there are new stories that bring home the same important message: FNEP makes a difference, a difference that means better health and fitness for a lifetime.*

**In 2018, FNEP brought \$9,449,699 federal funds to the state of Missouri.** These funds were used to provide nutrition education to 735,541 Supplemental Nutrition Assistance Program recipients and eligible citizens of Missouri. There were 2,932,390 educational contacts. This year we had 2,242,249 indirect educational contacts. Indirect contacts are reached through newsletters, health fairs, food pantries, and the Show Me Nutrition help line. 5,185 of these participants reside in Christian County.

Participants in FNEP 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.

Angie Langston, Nutrition Program Associate

# Youth and Families

During 2018, 3,338 Christian County youth and 4,815 adults participated in FNEP through schools, community groups and agencies.

Schools	Agencies
Sparta Elementary	Least of these Nixa
ESPY Elementary	St. Joseph Catholic - Billings
Highlandville Elementary	Nixa Senior Center (SWMOA)
Matthews Elementary	
The Ozark Preschool	
Nixa Head Start	



Angie Langston, our Nutrition Program Associate, worked with local agencies to provide food tastings to students.

In addition to the numbers, Nutrition Program Associate, Angie Langston shared this success story demonstrating local impact: After struggling with a long history of soda drinking, a client from the food pantry has successfully made the switch to infused water after attending a Healthy Change Workshop.



Left: Angie Langston offering a simple, healthy snack at The Least of These Food Pantry in Ozark .



Right: Angie Langston offers taste testing at a local grocer to encourage shoppers to try healthier, whole food options.

Martha Wood working with a family at The Least of These Food Pantry in Ozark.



In summary, it has been a successful year in Christian County for FNEP. We look forward in 2019 to more programming opportunities and continued progress in helping to improve the lives of Missouri families.

## Angie Langston, Nutrition Program Associate

# Youth and Families



**4-H: Our mission** Engaging youth as valued, contributing members of their communities in partnership with caring adults.

**Our vision** A world in which youth and adults learn, grow and work together for positive change.

## 4-H Clubs

Christian 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 computer science and arts to animal science and healthy living. Clubs also involve youth in community service, camping, and educational trips.

## 4-H'ers Futures

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 2018 Missouri 4-H connected 4,818 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 a bachelor's degree increase annual earnings by \$2 million over their lifetime (U.S. News and World Report, 2011). If 50% of the Christian County youth participating in 4-H events on a college campus receive a Bachelor's degree, 4-H would help young people acquire \$26.5 million more in 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).

Christian County is growing future scientists. 4-H'ers are more likely to pursue future courses or a career in science, engineering, or computer technology. All 53 of Christian County 4-H members were enrolled in science related projects this past year.

**4-H members are supported by 7 youth volunteers and 9 adult volunteers** (Time valued at \$57,936)

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 Christian County 4-H volunteers was worth more than \$36,624 in 2018. More importantly, these individuals serve as role models and mentors for youth.

Jennifer Hancock, 4-H Youth Educator

# Youth and Families

Did you know that 4-H is the largest positive youth development program in our country? 4-H is open to all youth ages 5 to 18. 4-H empowers youth to find their personal strengths and interests through hands-on learning. 4-H teaches youth essential life skills aiding in college and career readiness.



*'To Make The Best Better'*

**4-H Camp** It is long standing tradition that Southwest Missouri 4-H attend camp at Camp Smokey located on Roaring River. Christian County had 9 campers with 2 counselors. The 2018 camp theme was "The Future" with activities such as rocketry and electricity. At the conclusion of camp, an evaluation was conducted using clickers. The questions utilized came from the Life Skills Evaluation Tool supported by Missouri 4-H. Campers were asked several questions that began with: "Because of my participation in 2018 Southwest Missouri 4-H Camp I am able to", and were given four answer choices: No, Sometimes, Usually, yes.

The life skill categories receiving the highest percentage of Yes answers were:

- ◆ I understand it is important to follow through on commitments I have made, 75%;
- ◆ Use my financial resources wisely, 73%;
- ◆ Settle disagreements in ways that are not hurtful, 67%;
- ◆ Take care of my personal belongings, 63%;
- ◆ Work and play with people who are different from me, 60%;
- ◆ Accept responsibility for doing a job, 60%;
- ◆ Follow instructions as they are given to me, 58%;
- ◆ Contribute as a member of a team, 58%;
- ◆ Admit to mistakes I have made, 55%;
- ◆ Use my time wisely, 54%.



Campers were asked about 12 different life skills, and all but 2 areas were above 50% Yes answers. Several activities contribute to the learning that occurs at camp, including a number of group (team) activities; assigned chores at camp (KP, flag raising and lowering, songs, and recreation) and high level of self care that occurs at camp.

Campers were asked the most important thing they gained at 4-H camp this year. Some of the responses include: "making new friends;" "lifelong friends;" "to be more helpful;" "getting along with people;" "coming out of my shell;" "participating;" "how to be honest;" "leadership;" "becoming a more sociable person;" "listening to my elders."

We have 4-H Clubs throughout Christian County—from east to west & north to south—you can find a Club for you and your family! Billings County Liners, Billings; Christian County Go-Getters, Ozark; Deadeyes, Nixa; New Horizons, Sparta; Nixa Extreme Explorers, Nixa!



I pledge my **HEAD** to clearer thinking  
My **HEART** to greater loyalty,  
My **HANDS** to larger service, and  
My **HEALTH** to better living,  
for my club, my community, my country and my world.

Jennifer Hancock, 4-H Youth Educator



# Youth and Families

## Findings from a 2018 evaluation study reveals that Missouri 4-H:

### ***Develops Leadership***

81% of the Missouri 4-H'ers surveyed said they find it easy to speak up in a group.

89% reported feeling comfortable being a leader.

95% said 4-H is a place where they get to help make group decisions.

95% said 4-H is a place where you have a chance to be a leader.

97% said 4-H is a place where you learn about ways to help your community.

### ***Builds Initiative***

92% of Missouri 4-H'ers surveyed said they are willing to try something they might get wrong.

93% said they keep trying until they reach their goals.

97% said they try to learn from their mistakes.

98% said they are willing to work hard on something difficult.

99% reported that they like to learn new things.

### ***Builds Connections for a Bright Future***

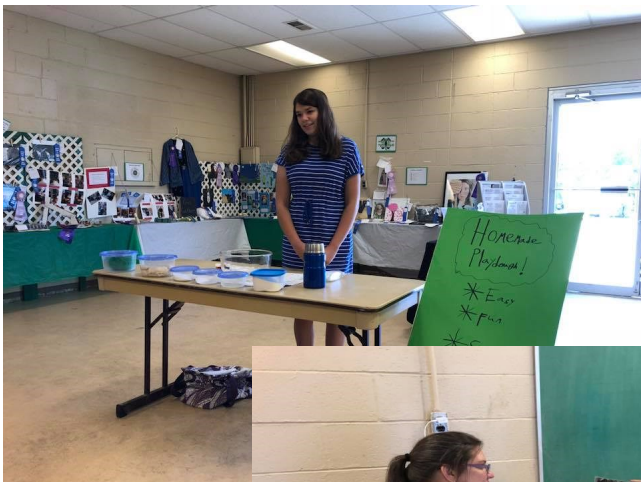
92% said they like to learn about people who are different from them, and get along.

93% said they think about others feelings before they say something.

93% say they think about how their choices affect others.

97% said they treat others the way they want to be treated.

98% said they show respect for others ideas.



Jennifer Hancock, 4-H Youth Educator

# Agriculture and Environment

The total impact of agribusiness in Missouri is nearly \$90B. MU Extension helps sustain productivity and growth by educating farmers and natural resource professionals on the latest tools, technologies, practices, and recommendations for high performance production. MU Extension also works intensively with non-commercial landowners to enhance land management. Academic support for this program comes from the MU College of Agriculture, Food and Natural Resources, in cooperation with county, state and federal governments.

## IMPACT in 2018



**Agricultural Literacy Programs** Christian County producers, high school agriculture education, and 4-H members were part of the 1,621 attendees to the Southwest Research Center annual field day. The focus of the 2018 field day was Weed Management Tips and Tools. “We look forward to bringing students, agricultural producers, and the general public in each year to our field day,” Superintendent David Cope said. “This year, we had a special focus on effective strategies to deal with weeds.” Kevin Bradley, professor in the University of Missouri (MU) Division of Plant Sciences, opened the discussion at 9 a.m. Mandy Bish followed at 9:30 a.m. Bish is a specialist with MU Extension. MU graduate student Gatlin Bunton closed the presentations at 10 a.m. “We are fortunate in that we are very diverse in the types of research done at the Southwest Research Center,” Cope said. “We have cattle and fescue toxicity research, to blackberries and elderberries, to black walnuts, pecans, and pawpaws.” From 11 a.m. to noon and from 1 to 2 p.m. an ‘Ask the Experts’ panel took place where guests can ask questions, as well as having weeds or plants identified. “Oftentimes, producers will come to our field day with questions about specific issues, or they will bring in something to be identified,” Cope said. “We wanted to give them ample opportunity to do both.”

Attendees of the field day also had access to more than 30 speakers presenting during Agriculture Education Day. Those speakers will be touching on subjects such as beef production and nutrition, soil health, food preservation, job opportunities, blackberry production, and elderflower research. “Our Research Centers play a vital role in the CAFNR mission by conducting timely and important research – and taking that research to our farmers and producers,” said Christopher Daubert, CAFNR vice chancellor and dean.

## Jim Spencer Jr., Ag Business Field Specialist

# Agriculture and Environment

Financial lenders from Christian County attended the **2018 Ag Lenders Seminar** in Mt. Vernon, Missouri. Agriculture lenders are in contact with more people involved in agriculture than any other single commercial institution. Many times those working with the financial support of many operations can have a tremendous influence on the management behavior of the producers.

Research-based information is needed for lenders to make sound business decisions for their lending institutions. Lenders must consider many economic forces when making lending decisions and this seminar focuses on key issues affecting those choices.

Topics taught and discussed were: Livestock and Crop Outlooks, Land Prices and Pasture Rent, Farm Tax Changes, Economics of Renovating Fescue Pastures, and Farm Planning budgets. These programs were presented by; Joe Horner, MU Ag Economist, Jennifer Lutes, County Engagement Specialist in Agriculture & Environment and Jim Spencer Jr., Field Specialist in Ag. Business.

Each participant receives a book entitled “Missouri Farm Financial Outlook 2019.” The seminar booklet contains current articles on farm topics such as outlook, management, and budgets for planning next year’s farm operations. Evaluations indicate that the lenders thought the program was very valuable. The participants were asked to rate the program on a scale of 1 to 5 with 5 being very valuable. 88 % of the lenders rated the seminar as very valuable. Participants stated, “Budgets and outlook projections are very valuable to our institution and we use this seminar to estimate cash flow for our clients”.

Left: Jennifer Lutes, MU Extension County Engagement Specialist in Agriculture & Environment – McDonald County covered farm tax changes. Right: Joe Horner, MU Ag. Economist presented the 2019 crop and livestock outlook projections.



Jim Spencer Jr., MU Extension Field Specialist in Ag. Business– Christian County discussed Beef production planning budgets with the loan officers.



## Jim Spencer Jr., Ag Business Field Specialist

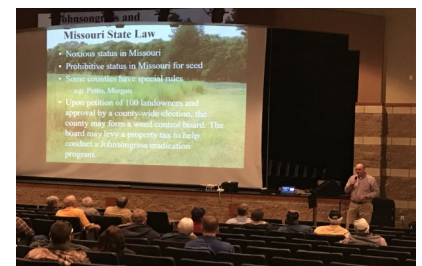
# Agriculture and Environment



55 producers participated in the 2018 Christian County **Livestock and Forage Conference**. County Extension Chair, Walt Martens, welcomed the participants and presented an update on behalf of the Extension Council. Reports were given by FFA representatives on the activities they were conducting throughout the county. Jeremy Wallen, Cody Hull, and Aaron Hoefler, representing Christian County Soil & Water Conservation District and the Natural Resource Conservation Service respectively, presented program options for producers from each of their agencies.

L: Jim Spencer Jr covers the aspects of a proper rental agreement. R: Ryan Shurvington, Clever FFA, updates participants of the chapter activities being conducted.

Developing a proper pasture rental agreement was given by Jim Spencer Jr., Ag. Business Specialist, Christian County, outlining the components recommended in a lease contract. Bob Schulties, Ag. Engineer, Webster County, demonstrated the potential use of drones in production agriculture for the participants. Wrapping up the program, Tim Schnakenberg, Agronomy Specialist, Stone County, shared “The Good, the Bad and the Ugly” of Johnsongrass. Evaluations completed by the attendees of the Christian County Livestock and Forage conference indicated 100% of the participants believed the program either met or exceeded their expectations. Additionally, the evaluations show 84% of the producers gained above average or excellent knowledge on the three farm enterprise segments presented as part of the program.



Left: Jeremy Wallen, Soil & Water informs producers of programs available to them through his office. Middle: Bob Schulties, Ag. Engineer—Webster County demonstrates a drone and the applications to production agriculture. Right: Tim Schnakenberg, Agronomist—Stone County presents the good and the bad of Johnsongrass.

## Jim Spencer Jr., Ag Business Field Specialist

# Agriculture and Environment



**Livestock evaluation** develops a student’s critical thinking, decision making, and public speaking skills as well as their confidence. Students involved in the 4-H livestock judging program learn the “ideal” animal for multiple species and are able to apply these selection principles to their home operation for improved production efficiency.

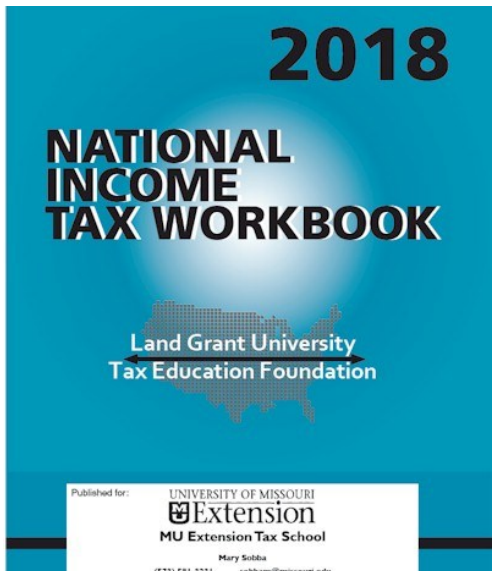
Jim Spencer Jr., Field Specialist in Agricultural Business, served as program leader for a team of students who earned Reserve State Champion Honors at the Missouri 4-H Livestock Judging contest. Kaitlyn Kleiboeker earned 4<sup>th</sup> High individual honors and Brenden Kleiboeker earned 5<sup>th</sup> High individual honors. Additionally, Brenden tied for 3<sup>rd</sup> High overall in oral reasons and Kaitlynn tied for 4<sup>th</sup> High overall in oral reasons. The team earned the honor of representing Missouri 4-H at the National 4-H Livestock Evaluation Contest in November held during the North American International Livestock Exposition in Louisville, Kentucky. The state 4-H livestock evaluation contest consists of eight classes of beef, swine, sheep, goats and three sets of oral reasons. Contestants evaluate each class of four animals and rank them first to fourth. For three of those classes’ contestants prepare a set of oral reasons explaining their reasoning for selecting the animals in their respective order. At the National 4-H contest in Louisville, the team earned 10<sup>th</sup> high team in the sheep and goat division and a silver team-rating overall in the contest. Team members posted their personal best score for the event. The national 4-H livestock contest consists of 11 animal evaluation classes made up of cattle, sheep, goats, and swine. Additionally, contestants present 4 sets of oral reasons defending their placings for specific classes and also have 3 sets of questions over classes of cattle, sheep, and swine. After the animal evaluation portion of the contest, all four team members were only 12 points apart and after the questions and reasons scores were tabulated for the final overall team score, they were only 30 points apart top to bottom.



In preparation for the national contest, the team traveled a couple thousand miles through four states practicing on over fifty classes of animals and multiple sets of reasons given in the hotel at night. “This is awesome group of students”, stated Spencer. “They worked hard and were dedicated to improving their judging and oral reasons skills. It was my privilege to work with this team and I look forward to their impact on the agriculture industry” he concluded. Parents of the 4-H members involved in the livestock judging program stated, “It was a game changer for my son and his interest in livestock” and “We appreciate everything, it was more than judging, you have had a hand in helping them grow up and become responsible. You helped shape the character of these soon-to-be-adults.”

## Jim Spencer Jr., Ag Business Field Specialist

# Agriculture and Environment

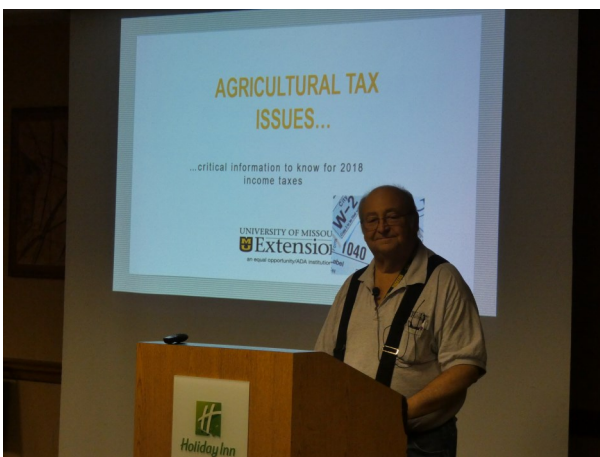


**MU Extension Tax Schools** During 2018, University of Missouri Extension Ag Economics Department and regional Ag Business Specialists worked together to coordinate one summer and six fall Tax Schools. The Schools were designed for those who prepare taxes including: enrolled agents, tax preparers, CPA's, individuals, and attorneys.

The training included new tax legislation (Tax Cuts and Jobs Act), rulings and cases, individual taxpayer issues, IRS rules and regulations, business issues, retirement issues, cybersecurity, ethics, and agricultural and drought topics. Much focus was on the new Tax Cuts and Jobs Act, which is the most tax changes in over thirty years. 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 3,072 hours.

The 2018 School attendance was a total of four hundred fifty-seven people, including participants from Christian County. The Schools were held in Cape Girardeau, Columbia, St. Joseph, and Springfield. 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 2019. Local county residents benefit when local tax preparers have the opportunity to gain knowledge they can use to benefit their clients. The statewide Tax School Coordinator is Mary Sobba, Ag. Business specialist .



Left: Joe Koenen, MU Extension Agriculture Business Specialist– Putnam County covered Agricultural Taxes. Right: Dr. Mike Hardin, OSU Farm & Business Institute, addresses changes in the tax laws for 2018.

## Jim Spencer Jr., Ag Business Field Specialist

# Agriculture and Environment

**Volunteer Income Tax Assistance (VITA)** In 2018, the VITA volunteers assisted over 1,768 low and moderate-income families with free tax preparation at six locations: Christian County Extension Office (Ozark), Taney County OACAC Office (Branson), Taney County Extension Office (Forsyth), Ozarks Technical Community College (Hollister), Stone County OACAC Office (Branson West) and Stone County Annex (Galena).

VITA volunteers prepared 2,801 plus federal and state tax returns for taxpayers in Christian, Stone and Taney Counties. Families received \$873,239 in Federal Income Tax refunds, including \$358,171 in EIC, and \$400,546 in state refunds. In addition, the taxpayers saved \$284,800 in tax preparation fees. The economic impact of the VITA programs to the economy of Christian, Stone, and Taney counties is estimated at over 12.74 million dollars.

VITA Volunteers were recognized for their years of service and contributing over 2002 volunteer hours to the program. According to Jim Spencer Jr., Agricultural Business Specialist with University of Missouri Extension, the economic savings in volunteer time by the VITA Volunteers is estimated at \$48,328.

Taxpayers served by the program received education when getting their tax returns prepared. Education included an explanation of clients' tax returns- credits they received, why they may not have gotten credits and why and how to adjust withholding as well as creating a spending plan and other financial information.

Christian County volunteers included Lorri Binger and Jim Spencer Jr. Shannon Eby is the Christian County VITA site coordinator. Stone County volunteers included John Bornheimer, Linda Bornheimer, Nellie Lamers, Jim Spencer Jr., and Joe Ziegler. Luanna LaVielle-Fullerton, University of Missouri Extension, is the Stone County VITA site coordinator. Taney County volunteers included Robert Davis, Shannon Eby, Val Escalante, Mike Hynes, Kristopher Peters, Lawrence Quinn, April Saunders, and Joe Ziegler. Jody LeMaster, University of Missouri Extension, is the Taney County VITA site coordinator.

Recipient of the 2018 special recognition honor was Joe Ziegler, volunteering in both Stone and Taney counties. In just his second year Mr. Ziegler has volunteered by working 4 days a week with the VITA program.

Special Thanks goes to Lynda LaRocque, Taney County Administrative Assistant and JoEtta Bowling, Stone County Administrative Assistant for their tireless efforts in scheduling clients for tax appointments and many other behind the scene task to help make the VITA program successful.

Christian, Stone, and Taney County Commissioners, MU Extension, Healthy Families Taskforce of Stone and Taney counties, and the Children's Trust Fund were recognized for funding the VITA program and for their time and economic contribution to the families of Christian, Stone, and Taney counties.

Jim Spencer Jr., Ag Business Field Specialist

# Agriculture and Environment

## VITA 2018 Christian County Data

Federal Income Tax Refunds: \$ 58,927	Earned Income Tax Credits: \$ 24,014
State Tax Refunds: \$ 21,789	Total Taxpayers: 107
Tax Preparation Fees Saved: \$ 17,400	FTE Saved: \$ 2,752
Federal + State Returns prepared: 172	Federal + State Refunds: \$ 80,716

**Total Economic Impact to Christian County = \$ 807,160**

**VITA**  
**Volunteer Income Tax Assistance**

**Jim Spencer Jr., Ag Business Field Specialist**



# Agriculture and Environment

**Regional Grazing Schools** Missouri's 7.1 million acres of permanent pasture provide feed for the state's 1.9 million cows. Pasture yield and quality, in turn, drive the productivity of Missouri's beef industry. Over the past 30 years, public agencies in Missouri have devoted extensive effort toward educating and incentivizing more than 18,300 producers to adopt improved grazing management practices. This report details those historical grazing educational efforts, and estimates those efforts raise the economic output of Missouri's beef industry by more than \$125 million every year.



Jim Spencer Jr., MU Extension Field Specialist in Ag. Business—Christian County presented “Economics of Grazing”.

Better utilization of forage and improved livestock operations through enhanced grazing management is the focus of Grazing Schools. Classroom sessions and on-farm tours are used to demonstrate the principles and variations of designing a grazing system. The schools are designed for 3 days, with topics being taught covering soil fertility management, designing fence and water systems, farm resource inventory, wildlife habitat in the system, pasture condition scoring, using a grazing stick, economic considerations for grazing systems, matching livestock and forages, livestock nutrition, grazing system layout and design, pasture growth and plant identification, as well as electric fence construction and demonstration. Producers participate in setting up a grazing paddock for a set of animals for a 24-hour period to give them hands-on experience and to use the knowledge they have gained from the School.

Multiple Management Intensive Grazing Schools were conducted throughout the southwest Missouri region in 2018, which included participants from Christian County. University of Missouri Extension staff along with NRCS, Soil and Water and Missouri Grasslands council members conducted the programs offered within each School.



Grazing School participants learn about graziers arithmetic in order to calculate the amount of forage they have available for their specific livestock. Exercises out in the field allow the producers to practice using the grazing stick in calculating the forage available within a specified pasture.

## Jim Spencer Jr., Ag Business Field Specialist

# Agriculture and Environment



**Regional Drought Survival Meetings** The drought this summer caused headaches for livestock producers who are preparing to feed cattle this winter with little forage and hay on hand. University of Missouri Extension specialists hosted drought survival meetings statewide. Christian County producers attended programs focused on supplementing low-quality hay, pros and cons of feeding cow commodities herd culling

tips, precautions with nitrates and prussic acid, fall forage alternatives, and assessing the price of forages.

Producers brought lower stems of fertilized sudangrass, millet, Johnsongrass and bermudagrass for a quick subjective analysis of nitrates. Various state and regional Agronomy, Livestock and Agriculture Business Specialists from University of Missouri Extension presented at these workshops.



**New Animal Production Technologies** The use of new technologies in bovine reproductive management and artificial insemination offer cattle producers a number of benefits. These practices allow for the use of the industry's best genetics and can facilitate tighter calving seasons and improved calving ease in heifers.

The two night program covered anatomy and physiology of reproduction in the cow, use of timed AI procedures and protocols, economics of timed AI, getting started with timed AI, sire selection, and EPD's – making sense of the numbers. Participants also practiced AI techniques on bovine reproductive tracts at the end of the second night program. The "Focus on Bovine Reproduction and AI" workshop was conducted by Ted Probert, Dairy Specialist, Randy Wiedmeier, Livestock Specialist and Jim Spencer Jr., Ag. Business Specialist.

Jim Spencer Jr., Ag Business Field Specialist

# Agriculture and Environment

**Master Gardener Training** Christian County Extension hosted Master Gardener Training Sessions as part of a new approach to offering certification programs to individuals interested in becoming a Master Gardener. The new Training Program included two sessions held in multiple locations throughout the SW region and the final session for all participants was at the Southwest Research Center in Mt. Vernon. The first class covered learning to propagate, grow, and maintain trees and shrubs, annuals and perennials, cool-season and warm-season lawns, basic equipment use and maintenance, including scientifically verified information on soils and fertility, pest management, plus control of invasive and noxious weeds and pests. These skills apply to organic as well as traditional landscaping and turf. The second course covered propagation, growth, maintenance and harvest of tree fruits, small fruits, and garden crops like tomatoes, vine crops, leaf crops, and root crops. Additional topics were season extension with cold frames, hoop houses and high tunnels as well as organic methods and traditional methods. “Helping others learn to grow” is our mission. The third and final step to becoming a Master Gardener is to learn the best ways to help others learn to grow, taking the certification course, and follow up with hands-on learning at specified Master Gardener projects in the area. This class helps participants learn to be part of a team in delivering horticulture information to the public.

## Agricultural Business Programming

**Young/Beginning Farmer Programs** Offering educational topics that cover developing an enterprise budget, business plan, marketing strategies and other topics as need by producers to assist them in being successful in their farming operation.

**Grow Your Farm – Farm Business Planning** An in-depth 16-week course including 8 evening sessions for 3 hours each as well as 2 farm tours. The class teaches participants how to take an alternative agriculture idea and transform it into a profitable business.

**Your Farm, Your Business, Your Future Farm Succession Planning** A 4-week course meets one night a week for 3 hours discussing how to transition the farm business to the next generation. Topics include communication, business planning, asset transfer, management changes, and retirement planning.

**Leases and Leasing** Seminars and individual counseling are offered on the basics of developing leases for land, machinery, and livestock. Frequently, leased land is owned by senior citizens and/or absentee owners who often need to become familiar with local leasing practices and customs. Informational resources on different lease arrangements and rates is available.

**Workshop or Consultation Topics** These are suitable for various agriculture groups and typically require from 30 minutes to an hour. All topics can be tailored as needed.

- ◆ Agricultural Outlook & Forecast
- ◆ Ag. Business/Operation Management
- ◆ Economics of Grazing
- ◆ Agricultural Marketing
- ◆ Writing Business Plans
- ◆ Other Farm Mgmt. topics as requested

Jim Spencer Jr., Ag Business Field Specialist

# Agriculture and Environment

Ted Koontz, Sparta has been a regular participant in the **Southwest Missouri Beef Cattle Improvement Association's Performance Program** and tested bull sale. He sold one Angus bull in the 2018 sales at Springfield Livestock Marketing Center. Two beef producers each bought a bull in those sales. They were Joe Nelson, Billings and Joe Rozell, Garrison.

The **Show-Me-Select Beef Heifer Development Program** is another opportunity to make improvement in the county's beef operations. Two herds were involved, Dr. Darren Loula, Clever and Sam Schuamann, Billings sold heifers in the May and November sales held at Joplin Regional Stockyards. Buyers of heifers at those sales were: Michael Scarlett and Alan Mooneyham both of Billings and Richard Neal and Leigh Stevens each from Nixa.



Three, nice Red Angus x Simmental heifers sold for \$2000 each at the November 16 Show-Me-Select sale. The sale top was \$2100 paid by Michael Scarlett.

Several county citizens contact me for individual questions on feeding, breeding, and management questions. A few cattlemen request the shirt-pocket size beef cow record book each year in which they maintain production records on their beef cows. Other beef education items were available via a monthly Beef Newsletter; timely news releases; weekly radio program on KKOW; MU Extension web sites; and periodic TV reports.

## Eldon Cole, Livestock Specialist

# Agriculture and Environment

## Animal Health & Production

Program name: **Dairy Production Systems**

This program provides information about dairy management, facilities and herd management, expansion, labor, improved dairy cattle genetics and health, waste management, reproductive health, and techniques in management of dairy records.

Reagan Bluel, Ted Probert, and Tim Schnakenberg partnered to deliver a “Stump the Expert” Q and A session, which 24 attended. Ten dairies were represented. Participants gained knowledge and skills regarding getting control of bulk tank somatic cell counts, calving difficulties, and mastering milk fever.

## Plant Health & Production and Missouri Grown Programs

These programs are geared towards small farm families, educational programs that focus on successful techniques, and marketing high horticulture value crops best suited to Missouri’s climate conditions. Patrick Byers conducted three programs in Christian County in 2018, and also several on-site farm management visits and consultation. Additionally, Patrick offered seven workshops, which were attended by 196 Christian County producers and farmers. Nineteen families received consultation from Byers.

**Individual consultations** are an important service offered to commercial horticulture interests. Patrick Byers conducted several consultations with specialty crop growers in Christian County in 2018. An interesting consultation in 2018 focused on grape production – choosing the best grape cultivars, renovating the trellis in an existing vineyard, weed management, and disease management.



## Plant Health & Production; NRCS and MU Grasslands

Working collaboratively, MU and NRCS will use one-on-one consultations, media offerings, and on-farm demonstrations to teach and assist landowners who want to make sustainable choices for grasslands. This cooperative agreement is made between the U.S. Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), and the Curators of the University of Missouri (MU). Work supported the Farm Bill conservation programs such as: Conservation Stewardship Program (CSP), Conservation Reserve Program (CRP), and Environmental Quality Incentives Program (EQIP). Twenty-two Christian County residents participated in these programs.

Program: Plant Health & Production, Home Horticulture and Environment

These programs provide research-based horticulture information for gardeners and homeowners. Participants learn techniques through workshops, demonstration plantings, newsletters, and horticulture training. The workshops recapped the benefits of maintaining healthy turf, ornamental, or fruit and vegetable plantings. Four events were held with 13 sessions, training 23 Christian County residents.

## Ag Specialists

# Agriculture and Environment

## *“Helping Others Learn to Grow”*



2018 was another busy, rewarding, and fun year for **Christian County Master Gardeners**. We stayed true to **our mission to train volunteers to educate others about safe, effective and sustainable horticultural practices that build healthy gardens, landscapes, and communities**. The Master Gardener program,

administered through the University of Missouri Extension, promotes and raises public awareness of the Extension as a source of unbiased, research-based gardening information.

Leading our chapter were President David McCurdy, Vice President Karen Bell, Secretary Karen Potter, Treasurer Debbie Clithero, and Program Co-Chairs Tina Cackley and Jennifer Ailor. Chairing our different projects and activities were Cynthia Andre, Hotline; Beth Platt, Fairs and Shows; Demo Garden, JJ Leek and Marla Hull; Rotary Garden, Karen Daake; Nixa Community Center, Colleen McMahan; Gardens at Woodfield, Patty and Dennis Baker; Justice Center, Millie Hesington; Spring Plant Sale, Karen Bell; TLC, Virginia Roberts; Publicity, Website and Facebook, Jennifer Ailor; Newsletter, Annie Powers; Scrapbook, Becky Jagears; Hospitality, Karen Daake; Seminars and Advanced Training, Pam Shaver.

**Totals** - Our active members reported 2,363 volunteer hours, 480 education hours and 59 advanced training hours for a total of 2,902 hours. We also reported 681 contacts. Note that emeritus members are not required to report hours, though at least nine of ours do. Our volunteer hours were valued at \$57,042.82!

Of the 58 members listed on our roster, including emeritus members, 24 are inactive, leaving 34 to fulfill the mission of the chapter.

**Passing of Two Emeritus Members** - Our chapter lost **Dorothy Haase**, one of our founding members, and **Donna Singleton**, class of 2006. They will be memorialized with name plates on our memory bench at Gardens at Woodfield. The Singleton family also has donated money for a tree to be planted in Donna's name.

**New Members** - We gained nine new members through both online training (new in 2018), classes conducted in other chapters and a class conducted by Jim Spencer and Tim Schnakenberg of Christian and Stone County Extension, respectively. New members are **Lana Baysinger, Bud Bodey, Laura Burdette, Snookie and Chuck Crosby, Shari Davis, Lisa Putnam, Linda Smith** and **Katie Whitehead**.

**Emeritus Members** - **Tina Cackley** and **Karen Daake** became emeritus members, having served 10 years.

**Hotline** - The trend since 2013 has been a gradual reduction in activity, with fewer emails, walk-ins and phone calls. In 2018, we reduced our coverage to three mornings a week from five, mid-March through mid-October. We received a total of 85 contacts—15 walk-ins, three emails and 67 phone calls, with the most activity on Mondays and Fridays. In 2019, we plan to continue the three-day morning schedule but offer volunteers the option of taking calls at home (forwarded from MU Extension by Kathy Pyeatt).

## Christian County Master Gardeners

# Agriculture and Environment

**Plant Sales** - Our sole source of funding comes from our spring and fall plant sales. By far, the spring sale is the most important. This year, 1,138 plants were donated by members. Sales were \$3,444.73, compared to \$2,577.93 in 2017. The fall plant sale brought in \$329 plus \$199 for sale of “leftovers” at the Ozark Arts and Crafts Show for a total of \$528.

**Fairs and Shows** - Master Gardeners participated in five county events In 2018, providing free seeds, guide sheets and gardening information to the public. At a seed swap at the Christian County Library in February, we

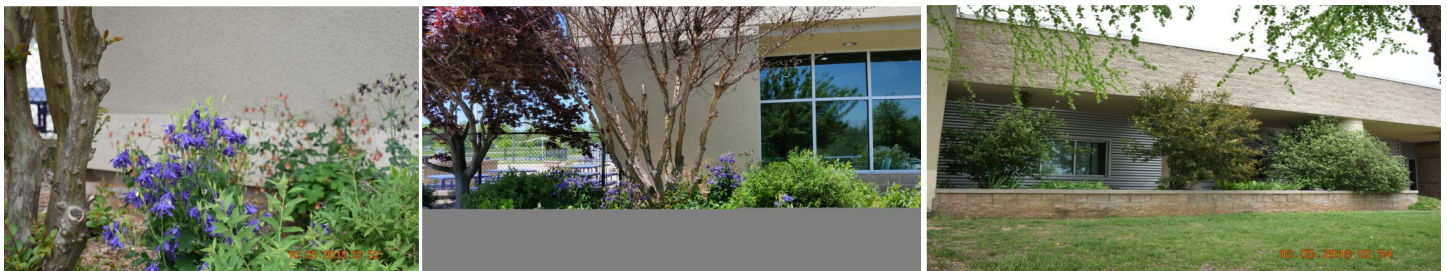


reached three males, eight females, two male children and three female children. At a seed-starting workshop at the library, taught by Master Gardener Marla Hull, in March, we contacted one male, six females, all white. At the Ozark Expo in March, we contacted 11 males and 28 females, all white. At the Christian County Fair in July, we reached 27 males and 45 females, all white. At the Ozark Arts and Craft Show in October, we reached 100 males and 29 females, including one Hispanic, one “other” and the rest white. We also handed out guide sheets and information about becoming a Master Gardener at the two plant sales and three seminars.

**Garden Projects** - Master Gardeners love to plant, and we indulged that passion in the five public gardens we help maintain in Ozark and Nixa.

**Justice Center** - Volunteers worked to keep the grounds as neat and attractive as they could, including weeding, trimming bushes when appropriate, planting annuals to fill in and compliment the perennials and even watering when maintenance had not done enough.

**Nixa Community Center** - Four volunteers replaced plants that did not make it in one of the cement planters in the pool area with existing plants from the other cement planter that did do well. We also replanted the area behind the pool admitting desk, again taking plants from existing planters. All replanted areas did extremely well. By using existing plants, we spent only a little more than \$10. The rest of the season was spent doing regular weeding and maintenance. Our goal for 2019 is to revamp the shade garden at the entrance.



## Christian County Master Gardeners

# Agriculture and Environment

**Gardens at Woodfield** - This year we had eight volunteers and were blessed with a good year weather-wise (no flooding), and the plants in the berms flourished. In April, we had our first cleanup work day with six Master Gardeners and two guests who braved the cool weather to attack the henbit, purple dead nettle and other weeds that wanted to take over the berms. Busy hands made quick work of it, and the gardens looked great with the daffodils in bloom. Lantanas were planted for some extra color and performed beautifully.



The team took turns throughout the season to weed and water. In July, seven Master Gardeners and one guest arrived with shovel, rakes, wheel-barrows and carts to top dress the berms with fresh mulch. These gardens are a delight to many walkers through

the park. Our Master Gardeners are often thanked for keeping our berms looking so well.

**Rotary Garden** - Our team increased by three for a total of six volunteers. The three new ones adopted berms and are transforming these areas. The other three weeded and planted some new things. The shade garden got trampled by some adventure-loving, tree-house-building boys who also played in another berms and broke some tree limbs. In 2019, we will replace the Korean Lilac that died with a credit at Carson's Nursery.



**Demonstration Garden** - We continued our commitment to the OC demonstration garden in Ozark this year. We held annual spring and summer planting sessions, plus finished our keyhole garden as part of an advanced training workshop. We offer examples of several different garden structures for visitors to see, including straw bales, raised beds with different materials (concrete block, timber), modified drums and vertical gardens. We also are growing perennial fruits and vegetables in the garden. The City of Ozark has been



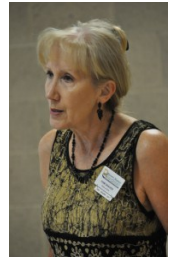
very helpful in partnering with us. In 2019, we hope to partner with FFA and horticultural students from Ozark High School.

## Christian County Master Gardeners

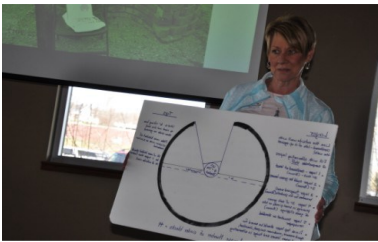


# Agriculture and Environment

**Seminars & Advanced Training** - As part of our Garden Gate educational program, we held three free seminars for the general public and one advanced training workshop for Master Gardeners. In February, "Gardening 101" was designed especially for beginning gardeners — or seasoned gardeners eager to learn something new. This seminar featured CCMG members speaking about the basics of gardening. We covered what, when and where to plant; weeding; watering; tools; supplies; soil; and pests.



Our second event, "The Keyhole Garden," in April was an advanced training workshop. After the speaker, Master Gardener Marva Ramsey from Master Gardeners of the Ozarks, gave the history of keyhole gardening and discussed the construction methods, ingredients, and planting and maintenance ideas, Master Gardeners moved to our demonstration garden outside at the OC and helped layer the keyhole "shell" with various growing media.

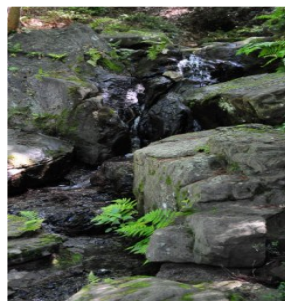


Our second seminar featured Master Gardener Mark Bernskoetter with Greene County Master Gardeners on "Planting to Attract Pollinators" and Jasmine Bass, with Bees Alive Club on "The Honeybee, a Gardener's Friend."



Our final seminar in November featured Katie Keith with the Springfield-Greene County Botanical Center on "Bare Necessities & Living Accessories in Garden Design" and Bill Eskes with Grimes Horticulture on "What's New & Exciting for Your Spring 2019 Garden." Katie covered the importance of hard scape, lighting, permanent landscaping and plants that make an Ozark winter garden beautiful. Bill shared ideas for new flowers and vegetables in 2019. In total, we reached 121 people through seminars and AT of which 30 were male, 91 female, 119 Caucasians and 2 Asian.

**Field Trip to Arkansas** - A busload of 49 Master Gardeners from four area chapters plus guests toured the nationally known P. Allen Smith Moss Mountain Farm in May. We enjoyed a three-hour tour of the terrace and vegetable gardens, rose garden, poultry village and the Smith home. We stayed overnight in Little Rock and attended the Murray's Dinner Playhouse Theater for a performance of "Southern Fried Nuptials." The next day we visited Garvan Gardens on Hamilton Lake near Hot Springs. The property includes 210 acres of Botanical Gardens of the University of Arkansas and 44 landscaped acres.



## Christian County Master Gardeners

# Agriculture and Environment



**Statewide Missouri Master Gardener Conference in Branson** - Eight CCMG active and emeritus members attended the state conference hosted by Master Gardeners of the Ozarks in September at Chateau on the Lake. Activities included bus tours to public and private gardens, Persimmon Farm, Crystal Bridges, Bonnibrook and other venues, as well as a banquet, vendor booths, shopping market and a wide variety of educational presentations. We also raffled a hand-made

dollhouse, for which we had sold tickets throughout the year, and raised additional dollars for our scholarship fund.

**A Newsletter Revived** - Annie Powers, who joined CCMG in 2017, revived our newsletter, "From the Garden Gate," from earlier years. The newsletter is emailed to members and posted on our website quarterly.

**Scholarships Awarded** - Funded by our plant sales, two \$500 scholarships awarded in 2018 to Will Hitchcock, a College of the Ozarks student.

**Goals & Objectives for 2019** - At an appreciation and planning meeting Jan. 14 for past and present project leaders and officers of CCMG, we agreed on our overall goal and some chapter-wide priorities for 2019. In doing so, we kept in mind our mission to educate ourselves and others about best gardening practices.



Our **goal** is to support the educational mission of Missouri Master Gardeners through our monthly programs, speakers bureau, exhibits, garden projects, plant sales, hotline, seminars, advanced training, field trips, newsletter, social media, website and other activities. Our **objectives** are:

- ◆ Look for learning opportunities in all we do.
- ◆ Utilize our new Member Advocate to guide us in mentoring new members and reconnecting with inactive emeritus members.
- ◆ Be represented and recognized in the Missouri Master Gardener Association and take advantage of its benefits and programs, including its chapter awards and scholarships to attend the state conference.
- ◆ Regularly recognize and applaud members who support our projects, offer creative ideas and "step up" to lead.
- ◆ Update our bylaws regarding terms of office and other matters.
- ◆ Increase public awareness of CCMG through improved social media, publicity and media coverage, including at least four features on TV, radio or print. Implement greater rapport and engagement at monthly meetings through introductions, greeters, readings, recognitions, show-and-tells and helpful gardening tips that provide learning opportunities.
- ◆ Offer a PowerPoint training workshop for members interested in improving presentation skills and tools.
- ◆ Add signs and information boxes to our garden projects where needed.

## Christian County Master Gardeners

# Health and Safety

Educating professionals to preserve and protect the health and safety of Missourians, MU Extension partners with the University's schools and colleges to offer many of these programs as noncredit continuing education courses. Programs and trainings are available in a variety of professional trades that contribute to the success of public-sector organizations and private industries throughout Missouri and the nation. Some examples:

- ◆ The Law Enforcement Training Institute
- ◆ Community Emergency Management Program
- ◆ Continuing Medical Education and Physician Lifelong Learning—MU School of Medicine
- ◆ MU Fire & Rescue Training Institute—training & education to fire and emergency service professionals
- ◆ Missouri Training Institute (MTI) provides training & consulting services to improve business performance & organizational effectiveness for public, private, and not-for-profit organizations. Examples of courses include: Leadership Development, Supervisory Skills, and Organizational Change.
- ◆ Nursing Outreach offers continuing nursing education

**Law Enforcement Training Institute (LETI)** brings certified, professional training to law enforcement officers and continuing professional education to other criminal justice and public safety professionals. For more than 60 years, the institute has been the state's leader in providing vital training and education services to Missouri's 17,000 in-service personnel and police recruits annually. Working with national, state and local agencies from 31 states, LETI also provides basic and advanced animal cruelty investigations training. LETI presents to civic organizations, churches and businesses throughout the state on a variety of topics, including personal safety and armed intruder response. <http://leti.missouri.edu>

**Fire and Rescue Training Institute** MU Extension's Fire and Rescue Training Institute (MU FRTI) provides comprehensive continuing professional education and training to Missouri's fire service and emergency response personnel. The institute has a direct impact on the well-being and protection of Missouri's 29,000 firefighters and the 6 million citizens they serve. Courses prepare firefighters for medical emergencies, hazardous materials response and disaster preparedness and mitigation, as well as fires. In FY 2018, MU FRTI provided more than 11,000 hours of instruction to 13,494 fire and emergency responders. <https://www.mufrti.org>

**Missouri Training Institute (MTI)** provides continuing education, custom-designed training programs and consulting services for business and industry, public and nonprofit organizations and educational institutions. Training programs include subjects such as human resource management, supervision, management, leadership, team building and other business-related topics. The institute's consulting services include curriculum design, human resources, strategic planning, board development and facilitating meetings and retreats. In FY 2018, 3,700 people enrolled in the institute's 180 programs. <http://mti.missouri.edu>

IMPACT in 2018

# Health and Safety

**Continuing Medical Education and Physician Lifelong Learning (CME/PLL)** serves MU Extension and the MU School of Medicine by educating physicians and other health care professionals and enhancing the standard of health care delivery statewide. Through health education, wellness promotion and health care quality performance initiatives, the program improves the health of Missourians. CME/PLL also facilitates and manages health care quality improvement projects for the University of Missouri Health Care system and the MU School of Medicine Springfield clinical campus. In FY 2018, CME/PLL offered 1,726 noncredit programs, courses and educational activities to more than 25,700 participants. <https://extension2.missouri.edu/programs/continuing-medical-education>

**Veterinary Medical Extension and Continuing Education (VMECE)** focuses on issues that impact Missouri veterinarians and livestock owners, such as disease risks, rising input costs and increasing regulations. VMECE provides up-to-date information and consultation to better prepare them to address these challenges. VMECE also provides continuing education for veterinarians renewing their veterinary licenses. Team members also present information about production-related topics and animal disease at meetings across the state. <https://extension2.missouri.edu/programs/continuing-veterinary-education>

**MU Nursing Outreach** Keeping Missouri nurses up to date with the knowledge and skills they need to provide effective care and fully participate in the state's health care efforts is a primary goal for Nursing Outreach. A full 92 percent of Nursing Outreach's Missouri participants reside outside the metropolitan St. Louis and Kansas City areas. Nursing Outreach brings high-quality, affordable continuing education programs to this audience using face-to-face, web-based and online delivery methods. In FY 2018, the program reached more than 4,300 health care professionals. <http://nursingoutreach.missouri.edu/>



# Health and Safety

Continuing education unit	Number of activities	Attendance total	Individual hours of instruction	Student FTE
Continuing Medical Education	1,726	25,731	2,332	216.0
Fire & Rescue Training Institute	643	13,494	11,500	580.0
Labor Education	1	1	0	0.0
Law Enforcement Training Institute	100	2,145	1,943	130.0
Missouri Training Institute (MTI)	180	3,768	806	63.0
MU Nursing Outreach	68	4,345	281	41.3
Osher Lifelong Learning Institute	124	2,976	878	70.3
Veterinary Med Ext & Continuing Education	1	4	4	0.1
<b>MU Conference Office</b>				
Agriculture, Food and Natural Resources	18	5,820		
Arts and Science	1	43		
Business	2	95		
Engineering	1	424		
Human Environmental Sciences	3	243		
Journalism	3	1,235		
MU Administration	5	2,065		
MU Extension	9	1,880		
Veterinary Medicine	1	84		
Conference Office Hosted	21	8,228		
<b>Conference Office Totals</b>	<b>64</b>	<b>20,117</b>	<b>1,079</b>	<b>1,207.0</b>
<b>TOTALS</b>	<b>2,907</b>	<b>72,581</b>	<b>18,823</b>	<b>2,307.7</b>

This table includes noncredit activities reported through MU continuing education units and does not include contacts by cooperative extension specialists.

## Educational Contacts – FY 2018

Impact area	Direct contact total	Indirect contact total	Total contacts
Agriculture and Environment	33,450	102,895	136,345
Youth and Family (HES)	677,464	350,822	1,028,286
Business Development	29,210	206,632	235,842
Community Development	21,486	7,096	28,582
4-H	137,411	178,928	316,339
Conferences & Institutes (MTI)	141	157	298
<b>TOTALS</b>	<b>899,162</b>	<b>846,530</b>	<b>1,745,692</b>

Direct contacts refer to participants who engaged in programs, courses or activities individually or with a group. Indirect contacts include people reached at public events and through printed and online materials or content.

## In the Office

**Agricultural & Horticultural Soil Testing** — Soil testing assists landowners with understanding the nutrient needs of their soils. Soil tests are analyzed through MU Extension testing facilities. These tests help producers determine the best course of action for fertilizing pasture and crop ground and enables producers to determine the best investment for profitability. Producers received recommendations for fertilizer, soil liming, weed control, and cropping options to rebuild their soil fertility. The lab reports outline soil chemical characteristics and also include management recommendations. Clients used the soil test reports to plan fertility management and to apply only needed fertilizers. While they saved money by reducing unneeded fertilizer applications, they also reduced the problems associated with fertilizer movement away from target areas, which impacts water and soil quality. In particular, storm water quality issues are impacted by excess fertilizers.

**Private Pesticide Applicator Training** — This program educates farmers about the safe and proper use of agricultural pesticides. In order to purchase and apply restricted-use pesticides, producers in Missouri must attend a training session or view a training video. Additional training was offered to educate on the safe and proper use of agricultural pesticides.

**Pressure Canner Testing** — A frustrating gardening season caused by inclement weather throughout the spring and early summer, reduced the output of garden produce, making what was raised even more valuable. Pressure gauge testing helped reduce the number of faulty gauges that can lead to food spoilage and food poisoning.

## IMPACT in 2018

**Soil tests:** 264; **Environmental Analysis:** 1; **Forage (Hay) tests:** 33

**Private Applicator License Training (PPAT):** 29 video & 19 class

**Canner Dial Gauge Inspections :** 9+

**Equipment (soil auger & hay probe) usage:** 30

Also, within MU Extension we hold Annual Events to honor our County community!



**Annual Meeting**—as required by Missouri State Statutes, includes: the swearing in of officers; setting meeting dates; and key items of financial oversight. The event also affords an opportunity to feature speakers, program plans for the upcoming year, recognize faculty, staff, and volunteers, and distribute the Annual Report for the past year. A special highlight of the Annual Meeting is the celebration of Leaders Honor Roll recipients – community leaders who embrace MU Extension’s mission to benefit the residents of Christian County.

**Annual Picnic**—which celebrates the agricultural achievements in our county including recognizing Century Farms and State Fair Farm Families.

# University of Missouri Extension

MU Extension is responsible for generating substantial and wide-ranging impacts for the economy, for society, for communities, for families, and for individual Missourians. An assessment of University of Missouri Extension in 2017 revealed that our MU Extension's economic impact on the state was over \$945 million (from an annual investment of \$86 million in 2016). The figure below summarizes many key impact benefits from MU Extension, measured across the state..



# Christian County



## UM System Footprint in the county in 2018



### Fall county students

**246 students**

- 186 Undergraduates
- 60 Graduate and professional students
- 209 Full-time students
- 37 Part-time students
- 49 Pell grant recipients (aid year 2018)



### County employees and retirees

**44 people employed by UM**

- 40 Campuses
- 4 UM Health Care

22 UM retirees and beneficiaries

UM salary and retirement income: \$2.5 million

UM state tax revenue: \$101,802

UM federal tax revenue: \$386,942



### County alumni

**Selected school alumni**

- 47 Medicine
- 85 Nursing
- 43 Health Professions
- 38 Dentistry
- 52 Pharmacy
- 10 Optometry
- 33 Veterinary Medicine
- 77 Agriculture
- 214 Engineering
- 62 Law

**Alumni teaching K-12**

- 40 teachers
- 4% of all district teachers



### County breakdown

**MU**

- 118 students
- 781 alumni
- 38 employees

**UMKC**

- 42 students
- 240 alumni
- 1 employee

**Missouri S&T**

- 82 students
- 195 alumni
- 0 employees

**UMSL**

- 4 students
- 71 alumni
- 1 employee



### Construction projects

- \$138,735 remitted to 1 county vendor, for 5 projects



### County properties and offices

MU Extension in: Christian County



County population: 82,053



### County services provided

**Health care**

- 460 patients seen at UM Health Care, with \$30,707 of uncompensated care
- 21 patients seen at UMKC School of Dentistry with a statewide average of \$53.20 per patient in uncompensated care
- University of Missouri Health Care's Missouri Telehealth Network provided services to 4 patients at 1 site

**Extension**

- 10,362 Total educational contacts from MU Extension to residents of district counties, including:
- 123 contacts related to productive farming, better gardening, and managing natural resources
- 9,726 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development
- 489 contacts related to starting businesses, developing community leaders, or renewing the local economy



# Christian County



## UM System Statewide Footprint

### Economic and Community Development Highlights

- Business development specialists worked with small businesses and entrepreneurs statewide to create 11,559 jobs.



For every dollar invested in University of Missouri Extension \$11 of public value is returned; generating \$945 million in direct and economic benefit to Missouri in 2016.

- Between FY2012 and FY2017, UM System brought Missouri more than \$1.1 billion in federal and private research funds, funded primarily from outside the state but spent within the state.



In 2018, the university was issued 39 patents and filed 78 patent applications.

- In 2018, the UM System construction projects resulted in a total investment in the state of \$122.7 million.



In FY 2018, Missouri Telehealth Network brought the expertise of University of Missouri Health Care physicians to underserved areas—2,164 patient consults in 43 counties.

### Education and Training Provided



72,581 police, fire fighters, and medical professionals attending continuing education



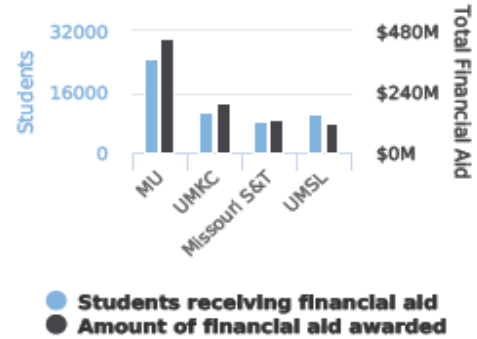
Agriculture and natural resource programs served 136,345 farmers and related businesses



316,339 youth and stakeholder educational contacts in 4-H clubs, schools, camps and other programs

### Education Highlights

#### Financial Aid Awards



65% of the UM System's 84,168 Fiscal Year 2018 students received financial aid totaling \$898 million in Fiscal Year 2018



UM System's MOREnet (Missouri Research and Education Network) provides internet connectivity, access, support and training to 58 higher education institutions (275,000 students), 493 K-12 school districts (831,000 students) and 121 public libraries (serving nearly 3 million Missourians) in 2017

- UM System awarded 52.2% of Missouri's 33,373 bachelor's or higher degrees from four-year public institutions in 2017.
- In 2018, UM System's \$30.3 million in National Science Foundation (NSF) grants represented 92.5% of all NSF grants made to Missouri public universities.

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 2018, based on the best available and most recent data. Data Sources include: Missouri Office of Administration • UM IR • Office of Social and Economic Data Analysis (OSED) • 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



# CHRISTIAN COUNTY



## CHRISTIAN COUNTY COMMISSIONERS

Ray Weter, Presiding Commissioner

Ralph Phillips,

Eastern District Commissioner

Hosea Bilyeu,

Western District Commissioner

## University of Missouri Extension Office



**MU Extension Office is located at:**

105 N 2nd Street Ozark, MO 65721

**Office hours:**

Monday-Friday 8:00–4:30

Office Closed for Lunch 12–12:30

**Contact us: Phone: 4717-581-3558**

E-mail: [christiano@missouri.edu](mailto:christiano@missouri.edu)

Web: [extension.missouri.edu/christian](http://extension.missouri.edu/christian)



# 2018 Financial Statement

## Federal, State, and County Funding for MU Extension

University of Missouri Extension programs in Christian County are funded by county, state, and federal appropriations, grants and contracts, user fees, and private donations. Local funding for support of the Christian County Extension Office is expected to provide for office space, clerical salary, communications, office supplies and equipment, building maintenance, and travel expenses of MU Extension specialists who conduct educational programs in Christian County.

A special acknowledgement and appreciation is given for the financial assistance from the Christian County Commission and the county residents and businesses who donated their time and funds for MU Extension Office operations in 2018.

Christian County Extension Office  
 105 N. 2nd St..  
 Ozark, MO 65721  
 Phone: 417-581-3558  
 E-mail: christianco@missouri.edu  
 Web: extension.missouri.edu/christian

## Christian County MU Extension 2018 Financial Summary

<b>Income</b>	
<b>County Appropriations</b>	95,929.93
<b>Working Capital</b>	8,012.60
<b>Miscellaneous Income</b>	187.99
<b>Total Income</b>	<u>104,130.52</u>
<b>Expense</b>	
<b>Personnel Wages</b>	51,289.68
<b>Payroll Expenses</b>	3,018.30
<b>Travel</b>	4,230.89
<b>Postage</b>	896.95
<b>Phone Expense</b>	3,176.26
<b>Advertising</b>	854.07
<b>Rent/Lease Space</b>	14,820.00
<b>Copier</b>	3,125.98
<b>Supplies/Services</b>	1,972.87
<b>Professional Services</b>	399.00
<b>Utilities</b>	3,199.93
<b>Insurance</b>	434.13
<b>Extension Council Election</b>	186.24
<b>Annual Council Meeting</b>	144.16
<b>Working Capital</b>	15,702.68
<b>Repairs/Maintenance</b>	162.00
<b>Furniture/Equipment</b>	517.38
<b>Total Expense</b>	<u>104,130.52</u>
<b>Net Balance</b>	<u><b>0.00</b></u>

*The University of Missouri does not discriminate on the basis of race, color, national origin, ancestry, religion, sex, sexual orientation, gender identity, gender expression, age, genetic information, disability, or protected veteran status.*