



Buchanan County 2017 Annual Report

EXTENSION

UNIVERSITY OF MISSOURI

2017 - 2018 Extension Council

Tom Knadler, chair,
Devin Ferguson, vice chair
Donnie Miller, treasurer
Tamala Simmons, secretary

Susan Barton
Joyce Bollman
Bill Brinton
Ed Brown
Sandi Brown
Chris Danford
Larry DeShon
Rosie Haertling
Joe Hamera
John Hickman II
Ron Hitchings (Farm Bureau)
Rhanda Hitchings Shreve
Ron Martin
Judith Moore
Josh Ray
Larry Werthmuller
Jim Yount, (MFA)

Mark Mallon
City of St. Joseph

Ron Hook
County Commissioner

Ron Hitchings
Farm Bureau

From The Buchanan County Extension Council

We are pleased to present you with a copy of the 2017 annual report from the Buchanan County Extension Council. This report is a brief overview of the educational programs conducted for the citizens of Buchanan County. Current programming efforts statewide focus on agricultural profitability and viability, building family and individual strengths, building human resources, business, community and economic development, enhancing health and nutrition, environmental quality and stewardship and youth development. The success of University of Missouri Extension programming in Buchanan County would not be possible without the help and support of individual volunteers, groups, organizations, businesses, local and county government officials, and the research-based information provided by the land-grant university system.

We appreciate the continuing support that you have provided to extension as we strive to enrich people's lives. We hope that this report provides a greater understanding about University of Missouri Extension programming efforts.

Sincerely,

Katie Pemberton

Katie Pemberton
County Program Director

Tamala Simmons

Tamala Simmons
Council Secretary

BUCHANAN COUNTY

4125 Mitchell Avenue
St. Joseph, MO 64507
816-279-1691

Monday-Friday 8:00 AM to 4:30 PM

E-MAIL: BUCHANANCO@MISSOURI.EDU
WEB: EXTENSION.MISSOURI.EDU/BUCHANAN



Top, left: to right: Horticulturalist, Tom Fowler, presenting at Tomato Fest; Nutrition Education Program Associate teaching nutrition in the schools; new council members being sworn in
 Middle, left to right: a Garden 'n Grow students posing in front of their garden; Extension display for various events
 Bottom, left to right: Buchanan County extension office; the Pony Express Therapy Dog Group

On the Cover

Top row, left to right: Pictures from our Beef and Forage Production; a Buchanan County 4-H group with 4-H Specialist Cindy Wells; One of dogs part of the Pony Express Therapy Dogs Group

Bottom row, left to right: Participant attending the Tomato Fest and enjoying vegetables from the garden; the tomato research plot located at the Buchanan County Office; a couple Garden and Grow participants working in the garden

Content

Council letter	2
Letter from the Vice Provost.....	4
Business Development.....	5
Agriculture and Natural Resources.....	5,7,10,14
Nutrition and Health Education.....	6,11
Community Development.....	8-9
4-H youth Development.....	12-13
Recognition.....	14-15
Human Development.....	15
Faculty and Staff/Financial Statement.....	16-19
Continuing Education.....	20

December 4, 2017

Dear County Commissioners and Friends of MU Extension:

For much of the past year, MU Extension was focused on a long-overdue assessment of statewide needs and a deep look at how we respond to these needs with programs and resources.

We crisscrossed the state to gather input from 42 community conversations with 1,200 people and reviewed analysis and recommendations from a range of external experts. As a result, MU Extension is working on a variety of changes in the interest of providing better university engagement with your communities.

We are steadfast in our resolve to help local communities and the state meet grand challenges associated with economic opportunity, educational excellence and healthy futures. These challenges reflect what Missourians from every corner of the state told us they were most concerned about.

As you read your county's annual MU Extension report, I believe you will be pleased to see the results that have been accomplished through county-based University of Missouri faculty. These faculty members work in response to input received from local extension councils.

At the state level, local MU Extension efforts really add up. Though we have long known extension funds were leveraged, an independent review revealed that MU Extension created more than \$945 million dollars of public value from the \$80 million it received from federal, state, county, grant and contract partners. A public value ratio exceeding 11:1 even surprised us.

As we go about implementing changes based on the recently completed needs assessment and review of our organization, I am confident that our ability to create value at the local level will be even greater.

I encourage you to read the attached annual report from your MU Extension county center to gain an understanding of how MU Extension has worked this past year to serve your community.

Your support of MU Extension and your efforts in your community is greatly appreciated. As always, I welcome input on how the University of Missouri can better serve your community and its people.

Sincerely,



Marshall Stewart, Ed.D.

Vice Chancellor for Extension and Engagement

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

EQUAL OPPORTUNITY/ADA INSTITUTIONS



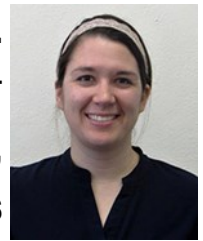
Tom Fowler

Number of Learners	Topic	What Did They Learn?	Program benefits?	How Does This Work Make our area and Missouri Better?
<p>The Garden 'n Grow program this year had 19 youth ages 9-13 enrolled.</p> <p>Throughout the season we also had 26 Master Gardener Volunteers and the youth parents and guardians who assisted.</p>	<p>The Garden 'n Grow garden is in St. Joseph near the Buchanan County Extension office on the West campus of Missouri Western State University.</p> <p>Garden 'n Grows goals include the experience of vegetable gardening. A feeling of success and satisfaction of sharing harvested food with others in need.</p>	<ul style="list-style-type: none"> Vegetable garden planning and design Site preparation and maintenance Stages of Germination/growing from seeds Weeds, disease, insects of Vegetables Photosynthesis Garden soil composition- Sand, Silt or Clay? Parts of a flower/pollination Hardiness zones- cool season and warm season plants To Pick or Not to Pick? When to harvest your crop. What's if Worth? The dollar value of the vegetables. Food Nutrition Sharing the harvest 	<p>The youth of the Garden 'n Grow garden received knowledge in the area of vegetable/food production, nutrition and helping others. The knowledge they gained can be used to educate others and for their own use.</p> <p>Participating in a local Garden 'n Grow gardening program provides education for area youth. Each meeting covered an educational subject and cultivating/maintenance of the garden. There were opportunities to work as a team for a common goal of growing food for family and community.</p> <p>Following the 17 planned sessions the youth and families continued to maintain and harvest. Just over 500 pounds of produce was used by the families or donated to the second harvest food bank.</p>	<p>By teaching youth about vegetable gardening we are insuring that the next generation of gardeners has the skill set needed to produce food for their families and others in the community.</p>

Jerry Baker, Amie Schleicher, Jessica Trussell, Cindy Wells

Supervisory Skills Training

Number of Learners	Total Hours of Collective Workshop Participation in 2016	What Did They Learn?	What Action Did They Take?	How Does This Work Make Buchanan County and Missouri Better?
<p>One hundred twenty six individuals participated in the supervisory skills training.</p>	<p>Participants received a collective total of 275 hours of training in supervisory skills.</p>	<p>Participants learned how to be a more effective supervisor. Through trainings focused on relationship building, leading effective teams, legal responsibilities, and coaching, participants gained valuable insight into being an effective leader within their organization. Additionally, participants learned the art of effective communication.</p>	<p>Participants took the skills learned in the supervisory training and applied them directly to their work environment. Participants became better listeners and provided appropriate feedback. They became aware of non-verbal behavior and adjusted how they act and react around employees. They reviewed job descriptions and policies to ensure that they were an accurate representation of job duties. Participants used information from generation and personality differences training to build stronger relationships with subordinates and peers as well.</p>	<p>Effective supervisors impact the success of a business or organization. Better supervisors lead to higher productivity, reduced turnover, higher employee satisfaction, and overall improved organizational health.</p>



COOKING MATTERS FOR TEENS

Number of Learners	Topics	What Did They Learn?	What Action Did They Take?	How Does This Work Make Buchanan County and Missouri Better?
<p>15 teenagers serving time at Buchanan County Academy in St. Joseph. The group consisted of 2 females and 13 males all between the ages of 13 and 16.</p>	<p>Basic cooking skills and food safety habits</p> <p>How to read a food label</p> <p>The importance of choosing fruits, vegetables and whole grains</p> <p>Making healthy choices when eating out.</p> <p>How to plan meals and eat healthy on a budget</p>	<p>The participants learned important cooking skills including how to read a recipe, safe knife skills, and various cooking techniques.</p> <p>Their abilities in the kitchen and their confidence grew immeasurably over the course of the 6-week program.</p> <p>Participants are more aware of what is in the food they eat and can make healthier choices.</p> <p>Participants learned how to keep food safe with proper handwashing and food handling.</p> <p>Participants learned how to make healthy choices and save money at the grocery store.</p>	<p>All participants claimed that they were more interested in and confident in their abilities to cook for themselves and their family members when they return home. 10 out of 15 participants felt more confident in their ability to pick healthier and cheaper options when grocery shopping. All participants received a book that contains many healthy recipes that they can cook at home.</p>	<p>Cooking Matters for Teens teaches crucial life skills to teens that fewer and fewer are learning at home. In this program, they learn how to cook, make healthier choices, save money when at the grocery store and increase physical activity.</p> <p>These new behaviors can lead to a healthier individual which can reduce healthcare cost, saving taxpayers money in reduced public healthcare benefits and insurance premiums.</p> <p>I believe this program is extremely valuable for teens of all backgrounds, but especially so for the teens we reached at Buchanan County Academy. Many of the kids in my group come from unfortunate home situations where they may not have the best care from their guardians. This program teaches them the skills and the confidence to be able to cook and provide for themselves and potentially even discover a love for cooking that could turn into a career. It was a very rewarding experience for me personally to see the growth in these kids over the course of the program.</p>

Agronomic Programs

**Agronomy
Specialist**



Wayne Flanary

Programs	Topic	What Did They Learn?	What Action Did Participants Take or How Did	How Does This Work Make The County and Missouri Better?
<p>The value of all crops including row crop, forages and commercial horticulture is \$406 million in Holt, Atchison, Andrew, Nodaway, Clinton, Buchanan, DeKalb.</p> <p>To maintain a competitive, viable agriculture requires the latest research, education and resources to continue its growth.</p> <p>Management of Genetically Improved Crops</p> <p>Mo Crop Management Systems</p> <p>Plant Protection</p> <p>Nutrient Management Planning</p> <p>Forage Production and Management</p>	<p>Crop management</p> <p>Forage management</p> <p>Fertilizer management</p> <p>Pest management</p> <p>The agronomic programming focused on timely delivery of crop management information and research to the seven counties in Northwest Region. The programming effort is accomplished through media such as radio, newspaper and newsletters. Other methods include meetings, research and demonstration plots and directly answering grower's questions.</p>	<p>New precision ag technology and biotechnology and how technology fits into a grower's operation</p> <p>New hybrids and varieties through our testing program</p> <p>Improved weed control research and teaching</p> <p>New weed, insect, and disease pests that potentially can attack crops and utilizing our pest monitoring program</p> <p>Product evaluation to determine if the product is effective and how to adopt and utilize this in a grower's operation</p> <p>Pesticide safety</p> <p>Product costs and determining their cost effectiveness</p> <p>Choosing and applying fertilizers</p>	<p>Formal surveys of growers' attitudes to teaching in formal meetings as follows:</p> <p>During the last eight years, the value of the agronomic meetings rated a 4.25 on a scale of 1 to 5 with 5 being excellent and 1 being poor.</p> <p>Also, data summarized over past eight years indicated that growers would recommend this meeting to other growers rated a 4.38 average on a scale of 1 to 5 with 5 being excellent and 1 being poor.</p> <p>As to speaker being knowledgeable, data summarized was 4.58 on the same scale.</p> <p>Agronomic programs vary with methods of delivery. The result is an action or a decision and knowledge is gained by growers. Also, growers request what the research indicates, what are the advantages and disadvantages of using a product, a strategy, or sometimes how to address a situation or problem.</p>	<p>Winter Ag Update meetings focus on critical topics for row crop and livestock producers enabling them to be competitive.</p> <p>Private applicator training provides growers with the knowledge to apply pesticides safely while protecting the environment.</p> <p>Cooperation with commodity groups helps growers expand markets and produce food not only locally but also globally.</p> <p>Certified crop adviser meetings provide technical information to crop advisers resulting in scientifically sound recommendations when they work with area growers.</p> <p>Graves Chapple Research Center and Hundley-Whale Research Center provides the latest research to help growers remain competitive and provide an economic driver for northwest Missouri.</p> <p>As world population continues to increase, the need for food production continues to grow. It is critical to continue to increase crop yields while maintaining competitiveness to increase food production in an environmentally responsible manner.</p>

COMMUNITY DEVELOPMENT SPECIALIST

BEVERLY MALTSBERGER

SERVING THE COUNTIES OF: BUCHANAN, CALDWELL, CARROLL,
CLINTON, DEKALB, LAFAYETTE, RAY AND SALINE



Number of Buchanan County Learners	Total Hours of Collective Workshop Participation in 2017	What Did They Learn?	What Action Did They Take?	How Does This Work Make Buchanan County and Missouri Better?
<p>Three hundred eighty-nine participated in the Independence Sugar Watershed Project</p> <p>Forty-one adults and ten children attended the St. Joseph Bi-National Health Fair (BHF) on October 14, 2017.</p>	<p>Participants invested one thousand one hundred sixty-seven hours in this project</p> <p>Fifty-three volunteers and partners contributed a total of two hundred sixty-five hours of service to the BHF conducted during Bi-National Health Week. There were nine sponsors and twenty-two exhibits and screenings. Participants spent an average of four hours at the event for a total participant contact time of two hundred four hours. Fourteen International students from Missouri Westers State University provided interpreter services for nine different languages. They also shared music, games and cultural experiences for participants.</p>	<p>Participants learned: Basics of their watershed Resources in the watershed Contaminants in the watershed Laws impacting MO Waters Best Management Practices How to work with others in the watershed To understand the urban/rural connection</p> <p>Participants learned about the importance of health screenings and healthy lifestyle. They learned about diabetes, cholesterol, blood pressure and BMI They received flu shots and had the opportunity to have hepatitis and HIV screening. Participants learned that many poisons look like food and that they need to be very careful, especially if they cannot read the English labels on products. They learned that every home should have an emergency plan and emergency supplies. They learned about wind chill, how it is determined, and the importance of dressing appropriately for winter weather. Healthy foods and healthy eating information was provided in English and Spanish. In addition, they learned how to access community resources including health services, how to use the bus service, fire safety, seatbelt safety, where to go for legal assistance and opportunities to learn English.</p>	<p>Watershed residents identified five priority areas, defined each area, and developed strategies for addressing those needs. They are working with members of the training team to begin developing a Watershed Protection Plan and securing resources to implement the plan.</p> <p>Thirty participants received cholesterol screenings. Twenty-six individuals received flu shots. Thirty-one blood sugar screenings were completed. Forty people received blood pressure readings and body-mass-index numbers. Dr. Alemán, a Bilingual speaking Family Practitioner from North West Health Services, provided information and made appointments for those needing care.</p>	<p>Watershed planning helps maintain a high quality water supply for residents in the watershed and for those who use the watershed. Watershed planning addressed activities within the watershed, their impact on the resources in the watershed, and protection measures that must be implemented.</p> <p>Early detection of illness helps individuals seek needed health care in a timely manner. This is only accomplished through increased public awareness, understanding, and knowledge of services available at the local level, regardless of health insurance coverage or immigration status. This reduces the cost of health care for the individual and improves the health of the overall community. The Bi-National Health Fair provides free screenings, referrals, and immunizations targeted at the immigrant community of St. Joseph. Many participants indicated that attending the Bi-National Health Fair was their only opportunity to receive health care.</p>

COMMUNITY DEVELOPMENT SPECIALIST

BEVERLY MALTSBERGER

SERVING THE COUNTIES OF: BUCHANAN, CALDWELL, CARROLL,
CLINTON, DEKALB, LAFAYETTE, RAY AND SALINE




Number of Buchanan County Learners	Total Hours of Collective Workshop Participation in 2017	What Did They Learn?	What Action Did They Take?	How Does This Work Make Buchanan County and Missouri Better?
<p>The Buchanan County COAD (Community Organizations Active in Disaster) is actively moving forward to insure community readiness.</p>	<p>Volunteers invested over two hundred volunteer hours in COAD development and one hundred forty-five hours in workshop trainings.</p>	<p>COAD members are building a strong disaster recovery network in cooperation with the Buchanan County and City of St. Joseph emergency management directors.</p>	<p>COAD members attend regular meetings. The COAD is working to expand community participation and understanding of the role the faith-based community plays in preparedness and disaster recovery.</p>	<p>Through Extension's Community Emergency Management Program, community organizations, nonprofit organizations and faith-based groups come together to plan and coordinate disaster response and recovery actions that greatly reduce the recovery period for citizens. This saves countless dollars in disaster recovery programs, loss of jobs, loss of revenue, and prevents citizens from becoming permanently reliant on government social programs. For every dollar invested, three dollars and untold lives are saved.</p>
<p>The Solar Eclipse provided an opportunity to develop new technology to utilize drones in both traffic observation and crowd observations.</p>	<p>20 volunteers donated 960 hours and 6 partners invested 192 hours in training and actual monitoring during the event</p>	<p>Solar Eclipse Technology Team</p> <p>There was no curricula for this type of event. This pilot project is a model for using drones to assist emergency managers in addressing situations where thousands of people are expected to congregate for an event. Drone pilot volunteers were recruited and screened for participation in the project. They were very involved in developing the protocols and procedures for flying the observation drones. We learned, in order to successfully execute this process, protocols and permissions must be in place. The most important partnership is that with the local emergency management director.</p>	<p>The Buchanan County COAD sponsored two workshops for faith-based leaders. Due to the overwhelming response, a follow-up training will be developed to assist faith-based leaders in facility security planning.</p> <p>Pilots conducted observations from two locations: the Buchanan County Extension Center and the Buchanan County maintenance facility. Observations began at 8AM and continued through 4 PM. All observations were stored in the Cloud and fed into the Emergency Operations Center. The team was in constant communication with the emergency operations center and the local emergency management director.</p>	<p>Our Buchanan County team developed procedures for flying drones to assist in emergencies. The experienced drone flyers that we were able to recruit were invaluable in developing the protocols. Through their experiences and guidance, we were able to develop successful procedures that were tested and worked during this event. Our end goal is to develop a statewide network of drone operators who are trained to respond in an emergency and will work as a team with local emergency managers to build the needed support infrastructure to respond quickly and professionally to emergencies across Missouri.</p>
				



Beef and Forage Production Education

Serving: Andrew, Buchanan, Caldwell, Clinton, DeKalb and Ray counties in

Number of Learners	Topic	What Did They Learn?	How Did Participants Benefit?	How Does This Work Make Our Counties and Missouri Better?
<p>200 plus Cattle and Forage Producers</p>	<p>In total approximately 400 hours were spent in learning beef cattle production, forage production and utilization, nutrition management and ration balancing by area participants.</p>	<p>Strategies to optimize beef production and improve costs on their operations, including managing feedstuffs, pregnancy checking females, documenting individual animal performance throughout the entire production phase, including what determines value on each animal.</p>	<p>Beef and forage producers are better prepared to make informed decisions on their operations, regarding animal health, genetic selection, nutrition, as well as income and expenses that affect the bottom-line for their respective operations. Including reducing feed wastage and marketing low or non-productive animals in a more-timely manner.</p>	<p>Many beef producers contacting me are looking for answers to questions specific to their operation. By taking a total quality management approach for each operation we can help producers get the information and resources they need in a timely manner to improve the bottom line for their operations. When we support beef and forage production in our area, participants learn high quality unbiased research based production strategies which result in increased success for producers in reaching their production and financial goals. By maintaining or improving soil health and water quality through better distribution of nutrients on our forage and beef cattle operations, we ensure future generations will have safe and plentiful natural resources.</p>
	<p>Strategies to best determine the value of their forages, the variation in quality of forages and how best to manage these feedstuffs, while maintaining productivity, maximizing nutrient utilization, while minimizing soil and nutrient losses and other negative impacts on the environment.</p>	<p>Strategies to best determine the value of their forages, the variation in quality of forages and how best to manage these feedstuffs, while maintaining productivity, maximizing nutrient utilization, while minimizing soil and nutrient losses and other negative impacts on the environment.</p>	<p>Furthermore individual feeding programs were designed based on feedstuff availability, nutritional analysis and cost structure for each operations animal's production stage requirements.</p>	<p>With over 80,000 head of beef cattle in the area a viable agriculture economy has a positive impact on our area and plays a key role in our local, regional, state, national and world economies.</p>
<p>450 plus Youth participants</p>	<p>In total approximately 700 hours were spent by area youths learning conservation, water cycles and good agricultural production practices.</p>	<p>Strategies area beef producers are using to optimize their operations while minimizing soil and nutrient losses and other negative impacts on the environment.</p>	<p>By having a better understanding of the research-based information and good production practices producers utilize on their operations, youths will be better able to understand why they as producers themselves need to be good stewards of their land and resources.</p>	<p>Well-informed youths are better prepared to make good management decisions based on research-based results. Youths are our future and provide great opportunities for our area.</p>

Nutrition Education Program Associates

Debbie Bennett and Gina Ripley



Number of Buchanan County Learners	What Did They Learn?	What Action Did They Take?	How Does This Work Make Buchanan County and Missouri Better?
<p>University of Missouri Extension's Family Nutrition Program (FNP) reached 2,375 participants directly and 5,295 indirectly with nutrition education in Buchanan County during 2017 a significant percentage of which were low income. FNP provides information on nutrition, food safety, and physical activity for lifelong health and fitness by working with qualifying schools, community groups and agencies.</p>	<p>Youth from Pre-school to 8th grade learned through kid-friendly, hands-on lessons and activities. Activities include opportunities for taste-testing healthy foods and practicing skills that lead to good health. Education for adults also includes nutrition, food safety, and physical activity, as well as food resource management.</p>	<p>Nutrition Program Associates (NPA's) go into schools and other grant eligible locations and interact with community members to help them make healthier choices and build healthy habits. They see the difference the program makes in people's lives.</p>	<p>The Family Nutrition Program (FNP) brought \$9,681, 129.00 federal funds to the state of Missouri. These funds were used to provide nutrition education to 838,295 Supplemental Nutrition Assistance Program recipients and eligible citizens of Missouri. There were 3,831,270 educational contacts. This year we had 3,064,781 indirect educational contacts. Indirect contacts are reached through newsletters, health fairs, food pantries and the Show Me Nutrition help line 7,670 of these participants reside in Buchanan County. Participants in FNP become more aware of nutrition, make healthier meal and snack choices, eat breakfast more often, are more willing to try new foods, increase their physical activity and in general make healthier food choices. Those who practice healthy eating and activity behaviors are more likely to enjoy a high quality of life as an adult and into old age. A healthy labor force is critical to attracting and keeping jobs in Missouri. In addition, this important programming effort serves to reduce healthcare costs over the participant's lifetime, saving taxpayers money in reduced public healthcare benefits and insurance premiums.</p>



Success Stories

NPA, Debbie Bennett, taught a series of Healthy Change Workshops at Second Harvest. The lesson "Plan to Make a Change" Workshop focuses on shopping wisely to save money when purchasing healthy foods. As I was sharing this information, one of the participants mentioned that she didn't know how to cook. I helped her install the Seasonal and Simple app on her smart phone and showed her how to use it to find recipes and to search for recipes using different types of produce she might pick up at the food pantry. Seasonal and Simple is a valuable tool she can use to encourage healthy lifestyle changes. The Seasonal and Simple app was created by students, faculty and staff at University of Missouri as a guide to finding, selecting, preparing and storing fresh fruits & vegetables. This free app also includes recipes and a list of Missouri Farmers Markets.

While assisting Nutrition Specialist, Sarah Wood, with 'Cooking Matters for Teens' classes at Buchanan County Academy, I noticed youth participants learned about nutrition, smart shopping/smart food choices and also prepared a 3-course meal. During the first class, we observed that very few students knew how to use a knife to cut or chop foods of any kind. By the last Cooking Matters lesson, these kids were able to chop foods like sweet potatoes, onions, green peppers, cilantro, green onions, tomatoes, garlic, and cucumbers with very little help. They also learned to safely handle, cut and cook meat. It was very rewarding to help teach these important life skills to a group of kids who might not get that knowledge without our programs-by Debbie Bennett

NPA, Gina Ripley shares, while reviewing the vegetable lesson from the week before, a Kindergarten boy at Lindbergh Elementary, St Joseph, shared that his grandmother had purchased grape tomatoes for him to snack on. He had tried them during one of our food tastings and knew they would be a healthy after school snack.



Cindy Wells



Buchanan County Participants	Collective Hours of Participation	Participant Programs: What Did They Learn?
98 Traditional 4-H Club Members	11,760 4-H'er Learning Hours	<p align="center">2017 4-H in Buchanan County</p> <p>A community of 98 youths building life skills, engaging in science and contributing to the community, five Buchanan County 4-H clubs offer long-term educational experiences in which members learn life skills such as decision making, public speaking, working with others, experiential learning and encouraging community service. Clover Kids or 4-H Youth ages 5-7 also learned important life skills by attending monthly meetings and a County Clover Kid Mini Camp.</p> <p align="center">School Enrichment</p> <p>4-H school enrichment programs are short-term educational experiences which are also supplementing learning in the classroom and teaching critical life skills. STEM 4-H learning activities were offered in 12 Buchanan County schools reaching over 200 youth during the current 4-H year. Embryology was the most requested project and many schools have requested this project again for the upcoming year.</p> <p align="center">4-H LIFE</p> <p>The 4-H Living Interactive Family Education (LIFE) Program is a nationwide mentoring initiative addressing the needs of families and children affected by incarceration. Over 50 youth and adult mentors participated in the 4-H Life Program in Buchanan County. Critical life skills are fostered using experiential learning to prepare incarcerated youth to become contributing members of society and lessen recidivism. Family members are also mentored and participate in monthly "Family Days".</p> <p align="center">Tech Wizards</p> <p>72 Buchanan County students were provided a safe environment to explore and learn about Computer Science concepts with 10 Teen mentors. They learned about robotics, computing, physics and other STEM skills. Mentees and Mentors are able to learn from each other as they explore together. Along with the important technology skills needed to succeed, students learned vital life skills including teamwork, communication and critical thinking.</p>
229 School Enrichment Participants	9160 School Enrichment Hours	
10 Day Camp Participants	40 Day Camp Hours	
72 Tech Wizard Program Members	5760 STEM Learning hours with Title I youth	
37 4-H LIFE Youth	5920 Learning Hours with Incarcerated Youth	
446 Total 4-H Youth Participants		
64 Adult Volunteers	6,400 Adult Volunteer Hours	
27 Youth Volunteers	1,350 Youth Volunteer Hours	
10 Teen Mentors	1000 Teen Mentor Hours	
101 Total Volunteers		
<p align="center">One of every five Missourians between the ages of 5 and 18 participated in a MU Extension 4-H Youth Development program in 2016.</p>		



Cindy Wells

JOIN | THE REVOLUTION OF RESPONSIBILITY

What Action did Participants Take?	How does this benefit Buchanan County and Missouri citizens?
<p>In the 2016-2017 4-H Year, Buchanan County 4-H members achieved the following:</p> <ul style="list-style-type: none"> The first annual STEM Expo was held at the East Hills Mall. A County 4-H Council member served on the State 4-H Council. County 4-Hers attended State Legislative Academy, interacting with legislators from across the state and learning governmental life skills. County 4-H members competed in the state public speaking contest. County 4-H members competed in the state fashion revue. County 4-H teams qualified for state and horse judging contests. A County 4-H member earned the MFA Saddle Award, one of the top state horsemanship awards. County 4-Hers qualified to display their projects and do their demonstrations at the Missouri State Fair. County 4-Hers participated in the Washington Citizenship Focus trip County 4-Hers participated in the Garden and Grow program. County 4-H members participated in Move Across Missouri, promoting physical activity. County 4-H Members participated in First Lego League competitive Robotics events. <p>In Buchanan County, youth were engaged in 617 science or STEM related projects and experiences.</p> <p>4-H youth are equipped with the knowledge, skills, attitudes and health for the 21st century workforce. 4-H youth are engaged in programs anchored in science (Arnold, Bourdeau, & Nott, 2013).</p> <p>A study from Tufts University reports that young people in “4-H far outperform their non-4-H peers” in developing the skills, leadership and interest in science and science careers that drive our nation’s future. In fact, 4-H’ers are more likely to pursue careers related to science, engineering and technology because they spend more time engaging in science programs (Lerner & Lerner, 2011). It is not surprising that 4-H youth are three times more likely to go into science related careers than similar peers (Lerner & Lerner, 2008).</p> <p>The U.S. needs young people prepared to live and work in a world that no one can imagine – jobs that do not yet exist, using technology that has not been invented, solving problems that have not yet been identified.</p>	<p>Being on campus is a predictor of youth going onto higher education (Dalton & St. John, 2016). 4-H youth are nearly twice as likely to go to college compared to their non 4-H peers (Lerner & Lerner, 2011). MU Extension 4-H connects 5,176 young people to University of Missouri campuses.</p> <p>Youth earning bachelor’s degree, increase annual earnings by \$2 million over their lifetime (NACUBO, 2012). If 50 percent of Buchanan County members participating in 4-H events on the MU campus earn their bachelor’s degree, 4-H will help these young people earn \$24 million more in their lifetime.</p> <p>Volunteers create, support and are part of the 4-H community. Missouri 4-H volunteers responding to a survey report they contribute on average 100 hours per year. Valuing their time at \$24.14 per hour (Independent Sector, 2017), the contribution of Buchanan County 4-H volunteers was worth more than \$211,225 in 2017. More importantly, these individuals serve as role models and mentors for youth helping them transition into adulthood.</p> <p>Furthermore, volunteers are mentors for youth helping them transition into healthy, productive adulthoods, which is priceless. 4-H youth report three times more opportunities than non-4-H peers to engage in community leadership roles. Members learn by doing with the guidance of adult volunteers, in projects ranging from robotics and arts to veterinary science and shooting sports. Local 4-H Clubs also involve youth in community service, and educational trips and activities.</p>



Tom Fowler

Number of Learners	Topic	What Did They Learn?	Program benefits?	How Does This Work Make our area and Missouri Better?
<p>The Great Plains Growers Conference is in its 21st year of continued education for vegetable and fruit growers in 2017. There was average of just over 350 who attended each day with 65 presenters and 73 exhibitors who represented 52 businesses and organizations. We had 91 famer/ participants from Northwest Missouri who attended with 18 from Buchanan County.</p>	<p>The Great Plains Growers Conference is for vegetable and fruit growers in a five state area (KS, IA, MO, NE, and SD) plus growers from many other states attend. It is the annual meeting for the vegetable growers associations from Kansas, Missouri, Nebraska and the Mid-America Fruit Growers Association and Missouri Horticulture Society. The three day conference includes day long workshops the first day.</p>	<p>Soil Health, Mushrooms, Greenhouse/Hydroponics, Tree Fruit, Honey Bees, and Food Safety Modernization Act certification was the focus for the workshops on the first day of the conference. The following days offered six concurrent sessions each day that featured topics that included: Vegetable Integrated Pest Management, Farm Mechanization, Tree Fruit, Advanced Organic, Farm to School and Research Updates. There was a general session with a keynote presentation that presented how to grow better, not bigger, in order to optimize the cropping system making it a more lucrative and viable in the process.</p>	<p>Participants of the Great Plains Growers Conference and Trade Show received knowledge in the area of vegetable and fruit production, food safety, technology and marketing. The knowledge they gained will improve their farm operation.</p> <p>Participating in the Great Plains Growers Conference and Trade Show growers indicated they: learned new planting techniques, avoided unnecessary pesticides, grew new crops, are using cover crops and drip irrigation, are utilizing high tunnels for production, will add new crops such as cut flowers and elderberries added value added products, developed a Facebook page with updates about the farm etc.</p>	<p>By providing educational opportunities to area vegetable and fruit growers we are insuring that a abundant, safe and nutritious local food supply is available to all citizens. A conference and trade show that brings over 500 people to Northwest Missouri in January is an economic boost.</p> <p>For more details about the 2017 conference and past years conferences go to: greatplainsgrowersconference.org</p>

2016 Buchanan County Century Farm Families

Buchanan County had four applications that were approved and received designation as Century Farms in 2017. The LaFollette farm, the Rotterman Trust farm, the Synder farm, and the Tillery farm were selected.

To qualify, the same family must have owned the farm for 100 consecutive years. The line of ownership from the original settler or buyer may be through children, grandchildren, siblings, and nephews or nieces, including through marriage or adoption. The farm must be at least forty acres of the original land acquisition and make a financial contribution to the overall farm income.

2016 Buchanan County State Fair Farm Family

John and Joan Hickman and family of St. Joseph were among the families honored during the 59th annual Missouri Farm Family Day, Aug. 14 at the Missouri State Fair. The Hickman family was selected as the Buchanan County Missouri Farm Family by the Buchanan County Extension Council and local Farm Bureau. The Hickman family operates a large row crop farming operation

Each year, the fair sets aside a day to recognize farm families from across the state who are active in their communities, involved in agriculture, and/or participate in local outreach and extension programs such as 4-H or FFA. The annual event is sponsored by five partner agencies: the Missouri Farm Bureau, the Missouri Department of Agriculture, the Missouri State Fair and Commissioners, the University of Missouri College of Agriculture, Food and Natural Resources, and University of Missouri Extension.

One hundred twelve of Missouri's 114 counties were represented this year, with two counties still dealing with the aftermath of the recent flooding in southern Missouri. The event showcases the impact Missouri Farm Families have on the economy and heritage of the state.

"These families are involved in agriculture activities in their communities, and are active participants in local outreach and extension," said Missouri State Fair Director Mark Wolfe. "As the showcase for Missouri agriculture, the Missouri State Fair is most certainly the appropriate place to celebrate these families."



Front row: John and Joan Hickman

Also pictured with family: Mark Wolfe- Missouri State Fair Director Sherry Jones- Missouri State Fair Commissioner Garrett Hawkins-Deputy Director, Missouri Department of Agriculture

Barbara Hayden-Missouri State Fair Commissioner

Marshall Stewart-Vice Chancellor for MU Extension and Engagement Lowell Mohler-Missouri State Fair Commissioner Christopher Daubert-Vice Chancellor and Dean of MU CAFNR Blake Hurst-President of Missouri Farm Bureau



PONY EXPRESS THERAPY DOGS

KATIE PEMBERTON, M.S.

HUMAN DEVELOPMENT & FAMILY SCIENCE SPECIALIST
SERVING ANDREW, ATCHISON, BUCHANAN, CLINTON, DEKALB,
GENTRY, HOLT, NODAWAY AND WORTH



Number of Learners	Topics	What Did They Learn?	What Action Did They Take?	How Does This Work Make Buchanan County and Mis-
10 visits per month to multiple different locations such as schools, nursing homes and libraries The group began visits in August 2017.	In nursing homes, the dogs make visits to the residents In schools and libraries, they provide emotional support. During library visits, children have the opportunity to read to the dogs to make reading a fun event.	Research has shown that therapy dogs can provide emotional support and even lower stress levels. The group has seen many improvements in the patients they visit. The confidence levels improve and it gives the individuals something to look forward too. The dogs also provide children a partner that they can read to which can improve their confidence in their ability to read out loud.	A young boy at Noyes Home was afraid of dogs and very shy. By the end of the visit he was petting the dogs with a smile on his face. The caretakers were amazed and felt that was a big step for him "My day is much better since the dogs showed up." Activity directors made comments about the positive impact the dogs are having on the patients The group attended Stress Less Fest at Missouri Western and the students mentioned that the dogs were a nice relief from the stress of finals.	This interaction can improve the emotional well-being of individuals, and lower stress. These new behaviors can lead to a healthier individual which can reduce healthcare cost, saving taxpayers money in reduced public healthcare benefits and insurance premiums. The group that visits the library is helping our youth have someone they feel comfortable reading to which can improve the reading skills of our youth. This can then lead into a more successful life and being able to contribute to society.

Buchanan County Staff

Katie Buchs Pemberton, human development and family studies
and county program director

Debbie Bennett, nutrition program associate

Sarah Wood, nutrition and health education

Tom Fowler, horticulture

Beverly Maltsberger, community development

Cindy Wells, 4-H youth development

Linda Hodge, office manager

Maranda Acton, office assistant

Susan McNickle, 4-H youth program associate

Staff Serving Buchanan County Headquartered in Other Counties

Jim Crawford, natural resource engineering

Wayne Flanary, agronomy

Jim Humphrey, livestock

Regina Ripley, nutrition program associate

Amie Schleicher, livestock specialist

University of Missouri System Impact on Buchanan County

UM Employees and Retirees Residing in Buchanan County

- 26 – People employed by UM
- 13 – UM Retirees and Beneficiaries

UM Alumni Teaching K-12 in Buchanan County

- 64 – teachers - 7% of all county teachers
- 10 principals / administrators - 23% of all county principals and administrators

Alumni residing in the Buchanan County

- 1,593

UM Students from Buchanan County

- 250 students

Tax Revenue and Income Generated by UM Employees and Retirees Residing in Buchanan County

- \$746,518 in salary and retirement income returning to the county
- \$22,949 State Tax Revenue
- \$111,552 Federal Tax Revenue
- 28,403 contacts with MU Extension through MU Extension events held in district counties

2017 County Appropriations Budget

	<u>Jan - Dec 17</u>	<u>Budget</u>	<u>\$ Over Budget</u>	<u>% of Budget</u>
Income				
0200 · Governmental Appropriations	94,999.92	95,000.00	-0.08	100.0%
Total Income	<u>94,999.92</u>	<u>95,000.00</u>	<u>-0.08</u>	<u>100.0%</u>
Gross Profit	94,999.92	95,000.00	-0.08	100.0%
Expense				
2700 · Persnnl Serv - Salaries & Wag	49,942.45	60,000.00	-10,057.55	83.24%
2800 · Payroll Expenses	10,169.36	12,260.00	-2,090.64	82.95%
3100 · Travel	4,503.97	6,000.00	-1,496.03	75.07%
3600 · Postage	66.95	100.00	-33.05	66.95%
3700 · Telephone Serv - Local	3,050.01	2,500.00	550.01	122.0%
3800 · Telephone Serv - Tolls	645.50	600.00	45.50	107.58%
3900 · Advertising	1,453.75	1,400.00	53.75	103.84%
4300 · Rent/Lease Space	75.00	150.00	-75.00	50.0%
4401 · Postage Meter Rental	324.00	300.00	24.00	108.0%
4800 · Reproduction/Copy Services	2,208.83	1,000.00	1,208.83	220.88%
5100 · Supplies/Services	2,785.71	2,700.00	85.71	103.17%
5900 · Utilities	2,760.00	2,760.00	0.00	100.0%
66900 · Reconciliation Discrepancies	0.00			
6800 · Insurance	392.00	392.00	0.00	100.0%
7000 · Miscellaneous	67.77	150.00	-82.23	45.18%
7020 · Office Subscriptions	327.94	295.00	32.94	111.17%
7300 · Repairs/Maintenance	0.00	500.00	-500.00	0.0%
7700 · Furniture/Equipment	<u>739.78</u>	<u>3,893.00</u>	<u>-3,153.22</u>	<u>19.0%</u>
Total Expense	<u>79,513.02</u>	<u>95,000.00</u>	<u>-15,486.98</u>	<u>83.7%</u>
Net Income	<u>15,486.90</u>	<u>0.00</u>	<u>15,486.90</u>	<u>100.0%</u>

University of Missouri's Contribution to County Extension Programs

The University of Missouri provides salaries and benefits for the extension specialists and also supplements most of the youth program assistants' salaries throughout the state. The University provides a research base, in-service training expenses, including travel and lodging for staff, and funds for computer equipment costs and maintenance. Access to the resources of the entire University of Missouri System are available to the citizens of Buchanan County through their local extension center.



Buchanan County



UM System Footprint in the County in 2017



Students

250 County students

- 178 Undergraduates
- 72 Graduates
- 195 Full-time students
- 55 Part-time students
- 44 Pell grant recipients (aid year '17)



Employees and retirees

26 people employed by UM

- 25 Campus
- 1 UM Health Care

13 UM retirees and beneficiaries

UM salary and retirement income: \$746,518

UM state tax revenue: \$22,949

UM federal tax revenue: \$111,552



Alumni

Selected school alumni

- 42 - Medicine
- 85 - Nursing
- 34 - Health Professions
- 49 - Dentistry
- 42 - Pharmacy
- 2 - Optometry
- 17 - Veterinary Medicine
- 135 - Agriculture
- 123 - Engineering
- 103 - Law

Alumni teaching K-12

- 64 teachers
- 7% of all county teachers
- 10 principals and administrators
- 23% of all county principals and administrators



Breakdown by campus

MU

- 136 students
- 1,004 alumni
- 16 employees

UMKC

- 90 students
- 499 alumni
- 7 employees

Missouri S&T

- 24 students
- 75 alumni
- 0 employees

UMSL

- 0 students
- 15 alumni
- 2 employees



County population: 89,561



Services provided

Health care

- 123 patients seen at UM Health Care, with \$87,878 of uncompensated care
- 107 patients seen at the UMKC School of Dentistry with an average of \$54 per patient in uncompensated care

Extension

- 28,403 total educational contacts from MU Extension to residents of county, including:
 - 1,974 contacts related to productive farming, better gardening, and managing natural resources
 - 25,723 contacts related to healthy eating and aging, strengthening families, personal finance, or youth development
 - 706 contacts related to starting businesses, developing community leaders, or renewing the local economy



UM System Statewide Footprint

Economic and community development highlights

- Business development specialists worked with **small businesses and entrepreneurs** statewide to create **8,149 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 FY2011 and FY2016, 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 2017, the university was issued **49 patents** and filed **74 patent applications**.

- In 2017, the UM System construction projects resulted in a total investment in the state of **\$136.7 million**.



In FY 2017, Missouri Telehealth Network brought the expertise of University of Missouri Health Care physicians to underserved areas — **2,270 patient consults in 42 counties**.

Education and training provided



42,576 police, fire fighters, nurses, and doctors attending continuing education

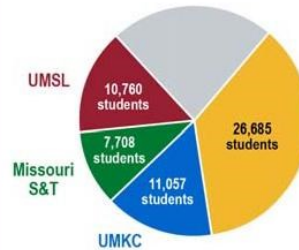


Agriculture and natural resource programs served **94,830** farmers and related businesses



190,300 youths served in 4-H clubs, schools, camps and other programs

Education highlights



77% of the UM System's 72,877 students receive some financial aid totaling **\$910.6 million**.

- UM System's MOREnet (Missouri Research and Education Network) provides internet connectivity, access, support and training to **59 higher education institutions** (267,000 students), **502 K-12 school districts** (828,900 students) and **116 public libraries** (serving nearly 5 million Missourians) in 2016.
- UM System awarded **54%** of Missouri's 32,575 bachelor's or higher degrees from four-year public institutions in academic year 2015-2016.
- In 2017, UM System's **\$34.5 million** in National Science Foundation (NSF) grants represented **97%** of all NSF grants made to Missouri public universities.



The cost of supporting full-time students in the UM System is **27% less than peer institutions**.

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 2017, 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



MU Extension Continuing Education

Missouri University Conference Office

The MU Conference Office provides full-service meeting management for a variety of noncredit educational programs. In FY 2017, the MU Conference Office organized 72 conferences for more than 20,000 people in teacher education in math, science and writing; crop management and agricultural lending, as well as statewide youth leadership programs, generating \$3.2 million in revenue. muconf.missouri.edu

One seventy nine Buchanan County residents attended non-credit education programs offered through the University of Missouri Conference Office. For more information, visit muconf.missouri.edu.

Fire and Rescue Training Institute

In FY 2017, MU FRTI celebrated its 85th anniversary of providing continuing professional education and training to Missouri's fire service and emergency response personnel. In addition to fire training, courses prepare firefighters for medical emergencies, hazardous materials response and disaster preparedness and mitigation. In FY 2017, MU FRTI trained 11,319 firefighters and emergency responders from 932 departments, organizations and agencies throughout all 114 Missouri counties. mufrti.org

A total of one hundred and five fire and emergency responders from Buchanan County received continuing education and training from the Fire and Rescue Training Institute.

Law Enforcement Training Institute (LETI)

LETI provides training and education for Missouri's 17,000 personnel and police recruits and presentations to community and civic groups, as well as collaborative programs with agencies from 31 states. In FY 2017, LETI reached nearly 2,000 police and emergency responders. With MU's Human Environmental Sciences department, LETI piloted Taking Care of You and Mental Health First Aid for Law Enforcement, helping participants better understand mental illness and how it impacts their work. Other programs include advanced animal cruelty investigations training and armed intruder and personal safety response. Students receive over 700 hours of basic training and certification, with other topics and certifications like Crisis Intervention Team Training available.

leti.missouri.edu

Nine officers from Buchanan County received professional training through the Law Enforcement Training Institute.

Missouri Training Institute

The Missouri Training Institute provides continuing education programs in business, as well as customized training programs and consulting services for business and industry and public, nonprofit and educational organizations and institutions. In FY 2017, 10,630 people enrolled in the institute's 371 programs that cover diverse business practices, such as human resource management, team building, decision-making, strategic planning and leadership.

mti.missouri.edu

One hundred ten residents of Buchanan County participated in the Missouri Training Institute continuing education program.

MU Nursing Outreach

Nursing Outreach serves mainly rural health-care workers with high-quality, affordable continuing education programs using face-to-face and online delivery methods; 92 percent live outside the St. Louis and Kansas City metro areas. In FY 2017, nurses from 77 Missouri counties and the city of St. Louis attended continuing education programs. Another 867 nurses and 1,986 health care professionals — including social workers, nursing home administrators and psychologists — were served through multidisciplinary programs. nursingoutreach.missouri.edu

Twelve Buchanan County nurses received education from nursing outreach programs. For more information visit, nursingoutreach.missouri.edu.

Center for Continuing Medical Education and Physician Lifelong Learning (CME/PLL)

CME/PLL serves MU Extension and the MU School of Medicine by educating physicians and other health care providers to improve the standard of care in Missouri. In FY 2017, CME/PLL offered 1,678 noncredit programs, courses and activities, serving 27,345 people, as well as 14 accredited medical conferences, including the annual Missouri Telehealth Network Summit on trends in this emerging healthcare arena; an Ellis Fischel Cancer Symposium on holistic approaches to cancer care; and one of the world's largest multidisciplinary conferences on dialysis. CME/PLL also provided online training for 6,400 state mandated child protection reporters in 20 occupational fields. medicine.missouri.edu/cme

Veterinary Medical Extension and Continuing Education (VMECE)

Veterinary Medical Extension provides information and consultation to veterinarians and livestock owners on issues such as disease risks, rising input costs and regulations that impact farming operations. In FY 2017, VMECE provided 17 continuing education events for veterinarians needing credit to renew their licenses. Twelve events addressed antibiotic label changes that went into effect on January 1, 2017, and how to write a veterinary feed directive. The rest dealt with preventing and responding to disease outbreaks in Missouri livestock operations. The VMECE team also presented at more than 40 meetings across the state, educating animal owners about the antibiotic label changes. VMECE also taught food animal production medicine to MU College of Veterinary Medicine students and collaborated in research that addressed bovine reproduction. vmth.missouri.edu

Labor Education

The Labor Education Program works with members and leaders of workplace-based organizations across Missouri to help them develop skills, act effectively in the workplace and be informed and active participants in their communities. In FY 2017, the program offered 35 courses and conferences to 952 participants, most of whom are leaders of organizations representing the economic interests of more than 20,000 working people in Missouri and surrounding states. labored.missouri.edu

Five Buchanan County residents received Labor Education.