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**Staff headquartered in Cole County:** Christal Huber Jane Kempker Kevin Lawrence Ashley Temmen

Diane Temmen Chris Thompson James Quinn Lynda Zimmerman

Staff serving Cole County: Brent Carpenter Renee Christensen Anita Ellis Charles Ellis Joni Ross Harper Letitia Johnson Kent Shannon Patricia Snodgrass Joy Wheatfall-Melvin

Regional Director: Matt Herring What Extension does and why: Our distinct land grant mission is to improve lives, communities and economies by producing relevant, reliable and responsive educational strategies that enhance access to the resources and research of the University of Missouri.

The University of Missouri Extension is a partnership between the University of Missouri, the people of Missouri through county extension councils, the Cooperative State Research, Education and Extension Service of the U.S. Department of Agriculture and other partners and stakeholders.

> Cole County Extension Center 2436 Tanner Bridge Road Jefferson City, MO 65101 573-634-2824 coleco@missouri.edu facebook

#### VICE CHANCELLOR'S OFFICE

**Extension** 

108 Whitten Hall Columbia, MO 65211

PHONE: (573) 882-7477 FAX: (573) 882-1955

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,

Warshall Hevan

Marshall Stewart, Ed.D. Vice Chancellor for Extension

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

# **Cole County Extension Staff 2017 Pride Points**

#### Horticulture – by James Quinn

An activity I am so proud of is the Spring Garden Seminar, which was held for its 7<sup>th</sup> year at our valued partner's Carver Farm (Lincoln University) on the last Saturday of February. This full day educational program has become the mid-Missouri spring garden event to attend, consistently packing in about 150 each year. It is coordinated between our office and the Central Missouri Master Gardeners and was designed for them to 'give back' to the Jeff City community and surrounding counties with an educational program open to all. Its key features have been outstanding presenters (university, industry <u>and</u> <u>Master Gardeners</u>), a wonderful facility and hands on classes. It is the motto of the Master Gardener program-"Helping Others to Grow".

#### Youth – Christal Huber

After practicing hard all year, we had a hippology team consisting of youth from Cole, Callaway, and Osage counties receive first at the state 4-H competition. This qualified them to compete at the Eastern National 4-H Roundup in Louisville KY. Here they represented Missouri 4-H and placed 8<sup>th</sup> in the stations phase, and 13<sup>th</sup> overall which was only 6 points from a top 10 finish.



Missouri 4-H Hippology Team Anna Reinkemeyer – Osage County Taylor Scheulen – Osage County MacKenzie Loesch – Cole County Rachel Hasty – Callaway County



**Fall Festival** – by Jane Kempker My pride point is the Cole County Extension Fall Festival. I have worked for Extension since Oct. 1998. I did not know what the Fall Festival was until I started working for Extension. At that time, I was told I would be coordinating this HUGE event that has been taking place at the fairgrounds, since I was



#### Incubation and Embryology – Diane Temmen

4-H is all about "Learn to do by doing." Our Incubation & Embryology program is a prime example of this slogan. Cole County schools, daycares, and home school families have had a hands-on agricultural experience and an introduction to 4-H for over 25 years. Students experience:

- the reproduction cycle by receiving pre-incubated eggs
- observing the hatching process while maintaining consistent temperature and humidity in their rented incubator
- proper handling and care of the hatched chicks.

Last year, 2709 youth hatched 136 dozen eggs between Feb. 27 and May 19. Many background flocks have their beginnings from this chick hatching experience.

Healthy Schools Healthy Communities (HSHC) Child Care Coaching Project By Lynda Zimmerman

Through a partnership with MU Extension, the Missouri Department of Health and Senior Services, and the Missouri Foundation for Health, the Healthy Schools Healthy Communities Child Care Coaching Project assisted childcare centers in fostering healthy habits in young children. Jefferson City Daycare was one of 31 childcare centers in HSHC communities statewide that participated in Missouri Eat Smart and Move Smart programs with a goal of increasing physical activity and nutrition standards. Jefferson City Daycare completed the coaching project in April 2017. The post-survey showed that Jefferson City Daycare had made significant improvements in 13 child care practices at the end of the program, with 36 of 51 (71%) practices now at Advanced (highest) levels.



Dear Citizens, Legislators, Commissioners and Supporters:

As required by Missouri Statue 262.617, we present you with our annual report for the Cole County Extension Center. Please find detailed information about our programs and events that took place during 2017.

We would like to extend a special thanks to the Cole County Commission and United Way for their continued support to the Cole County Extension Center. Sam Bushman, presiding commissioner Kris Scheperle, western district commissioner Jeff Hoelscher, eastern district commissioner

Ann Bax, United Way president

We would also like to thank all of our volunteers who are too numerous to be named. The Cole County Extension Center could not operate to its full ability without your help.

00 Core

Bill Case Cole County Extension Council chair

C. Meredith

Colleen Meredith, Cole County Extension County Extension Council secretary

James Quinn, interim county program director

The office....

Jane Kempker, extension administrative assistant

This Cole County Extension Center started in 1918. Fast-forward 100 years and see how far the world and Extension, has changed.

Extension's mission is the same as it was in 1918. The goal is to reach the public with unbiased information. Please take the time to read this annual report and you will truly understand what I mean by that.

The world has changed with technology, business, youth, agriculture, horticulture, nutrition. Again, check out this report and then send me an email so I can add you to our monthly marketing email list. This way you can find out about programs taking place in Cole County.

My email address is <u>kempkerj@missouri.edu</u> also visit us on Facebook at <u>https://www.facebook.com/ColeCountyExtension/</u>

The Center's 2017 Operating Budget Appropriations/Revenue					
County Appropriations	\$101,797				
United Way	\$9,000				
Council Contribution	\$3,952				
Program Income	\$26,000				
Misc. Income	\$10,170				
Expenses					
Salaries/Wages/Benefits	\$81,173				
Area Staff Travel	\$7,855				
Misc. Expenses	\$12,500				
Telephone Services	\$5,000				
Supplies/Service	\$26,419				
Contract Service/Janitorial	\$5 <i>,</i> 000				
Council Operations	\$1,431				
Equipment Lease/Purchase	\$3 <i>,</i> 500				
Utilities	\$5 <i>,</i> 000				
Insurance	\$3,041				

# Business Development Program (BDP)

Chris Thompson, Business Development Specialist

Programs,	County	What did they learn?	What action did	How does this work to make
Workshops, &	participation		they take?	Cole County and Missouri
Participants				better
Across the entire	62 Cole	Businesses participating	As a result of	As entrepreneurs and innovators,
state MU	residents and	in counseling, coaching	assistance provided	Missouri's small businesses are
Extension,	businesses	or training learned:	by the MU Extension	becoming a diverse group that
business	received	<ul> <li>How to start a business</li> </ul>	Business	• • •
counselors	counseling or	<ul> <li>How to develop a</li> </ul>	Development	continues to make the state's
provided start-up	coaching	business plan	Program Businesses	economy productive. There are
and management		<ul> <li>How to understand,</li> </ul>	in Cole County	approximately 500,000 small
counseling,	248 Cole	analyze and use	during FY2017	businesses in Missouri. In assisting
coaching, training	residents and	financial statements to	generated the	these small businesses, MU
and other	businesses	make fact based	following economic	Extension contributes to the
assistance to	attended	business decisions	impact:	county and state's economic
14,143 individuals	training events	• How to more effectively	<ul> <li>created 28 new</li> </ul>	
and companies.		lead and manage	jobs	development through growth in
		employees	•retained 10 jobs	jobs, sales, technology
Counseling and		• How to use QuickBooks	•started 4 new	development and
coaching address		• How to apply for	businesses	commercialization. For every dollar
just about any		financing	•generated sales	invested in the Business Develop
business topic.		•The conditions &	increases of	Program, \$120 of economic impact
Training events		demographics in their market area	\$1,196,526 • secured new	
Training events included:		market area	investment (loans	is created.
Starting A		The Missouri Business	or owner equity)	
Business		Development Program	totaling \$553,696	Across Missouri, the total impact for
The Basics of		resources include:	• acquired assets	all businesses assisted by the MO
Writing a		- Small Business &	worth \$36,478	Business Development Program
Business Plan		Technology	•government	was:
Financial		Development Centers,	contracts valued at	•198 new businesses
Management		- Missouri Procurement	\$11,852,056	
QuickBooks		Technical Assistance		•3,106 new jobs
Doing Business		Centers		<ul> <li>3,675 jobs retained</li> </ul>
with the Government		<ul> <li>International Trade</li> <li>Center</li> </ul>		•\$478,772,408 in increased sales
Marketing		- Trade Adjustment		•\$403,359,341 in government
Strategic		Assistance Center		contracts
Planning				. ¢01.002.145 in loans and
• Balanced		ALL BERTY AND		<ul> <li>\$91,002,145 in loans and investments in business</li> </ul>
Scorecards <ul> <li>Supervision 101</li> </ul>		KAN MANY 12		•\$3,239,078 in export awards
<ul> <li>International</li> </ul>	Nº 13		E MALEACTE	•
Trade				•\$7,622,000 in research grants awarded
				<ul> <li>3,458 clients/companies receiving business counseling or coaching</li> </ul>
				•10,685 business training/
		A SHOT A SHOT		conference attendees

## YOUTH DEVELOPMENT

# 2017 4-H in Cole County

Christal Huber

Tot	al hours of			How does this make Cole
	vorkshop	What did they learn?	What action did they	County and Missouri
		,,	take?	better?
<ul> <li>274 4-H members in Cole County.</li> <li>2,709 youth participating in school enrichment programs.</li> <li>296 trained youth and adult volunteers.</li> <li>296 trained youth and adult volunteers.</li> <li>Time by out</li> </ul>	ourians een the ages and 18 cipated in a Extension Youth lopment ram in 2016. contributed ur volunteers ued at	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 aerospace and arts to shooting sports and sport fishing. Clubs were also engaged in leadership and service experiences in their communities.	<ul> <li>4-H brings youth and adults together to learn everyday skills with hands-on learning. Activities from animal and plant science to robotics, teach 4-H members problem-solving skills, which makes a positive impact upon their community.</li> <li>4-H helps youth: <ul> <li>Meet the diverse challenges of today's world.</li> <li>Build selfconfidence.</li> <li>Learn responsibility</li> </ul> </li> <li>Make positive decisions.</li> </ul>	better? Missouri 4-H members are twice as likely to have been on a college campus as their non-4-H peers. MU is the campus most frequently visited and 4-H is the second most reported reason to be on the MU campus Being on a campus is a predictor of youth going on to higher education, as a result they are: More likely to go to and enjoy college. More likely to have increased success for themselves and their offspring. Be better consumers. Improve their quality of life through more opportunities for leisure and hobbies. More likely to vote as adults. Youth who earn their earn bachelor's degree increase their annual earnings by \$2 million over their lifetime (NACUBO, 2012). If 50% of the Cole County members participating in 4-H events on the MU Campus go onto earning their Bachelors, 4-H would help young people earn \$30,150,000 more of lifetime earnings.

# **NUTRITION AND HEALTH EDUCATION**

# Healthy Schools Healthy Communities; Child Care Wellness Trainings; Chronic Disease Self-Management; Taking Care of You; Cooking Matters at the Store

#### Lynda Zimmerman

Number of learners	Total hours of	What did they learn?	What action did they	How does this make Cole
	workshop		take?	County and Missouri
	Participation			better?
1 Cole County licensed child care center with an enrollment of 99 children participated in the Healthy Schools Healthy Communities Child Care Grant project	In total, 8 hours were spent in child care provider coaching and training by the center manager	The child care center manager learned about the Missouri Eat Smart guidelines and changes needed in their menus and feeding environment to qualify for recognition as a Missouri Eat Smart Child Care Center	The center made changes in five areas of childcare practices and policies to align with the Missouri Eat Smart Guidelines. After the program, the center had met 25 of 28 (89%) guidelines at the Intermediate level and 17 of 30 (56%) guidelines at the Advanced level. This was an improvement compared to the start of the program, when the center was meeting only 75% of the Intermediate guidelines and 50% of the Advanced guidelines.	When you support MU Extension's Healthy Schools Healthy Communities Child Care Grant project, you help childcare directors and staff increase their knowledge and self- confidence about child nutrition, physical activity, and living a healthy lifestyle. With this research-based knowledge and practical techniques, children, parents and childcare center staff will benefit by preventing or postponing the onset of chronic disease, through healthful eating and active living.
<ul> <li>17 Cole County licensed child care providers participated in Child Care Wellness Trainings:</li> <li>Basic Nutrition for Kids and You</li> <li>Child Obesity</li> <li>The Nutrition Environment</li> <li>Teaching Nutrition to Preschoolers</li> </ul>	In total, 68 clock hours of training were earned by the child care providers	<ul> <li>Evaluations completed by 17 participants at the end of the training showed:</li> <li>17 of 17 (100%) would recommend the trainings to someone else</li> <li>17 of 17 (100%) indicated their knowledge, skills or understanding was "a lot" or "a great deal" after the trainings, whereas 53% rated themselves at these high levels before the trainings</li> </ul>	<ul> <li>After the trainings, 94% of the participants identified action(s) they planned to take, including:</li> <li>Introduce new foods to the kids</li> <li>Eat healthier and pay more attention to nutrition labels</li> <li>Use activities to teach about food</li> <li>Allow the kids to serve themselves</li> <li>Talk with the kids about food during meals</li> </ul>	When you support MU Extension's Child Care Wellness Trainings, childcare providers increase their knowledge and skills for working with children of different ages and stages of development in multiple competency areas. This helps ensure that childcare environments are safe, healthy and nurturing. Communities benefit when young children are well cared for, reducing the risk of child abuse and neglect.

17 Cole County adult learners attended the <b>Chronic Disease</b>	In total, 255 hours were spent in self-	Evaluations completed by 11 participants at the end of the last	At the end of the last session, participants indicated:	When you support MU Extension's Chronic Disease Self-Management
the Chronic Disease Self-Management Program		<ul> <li>session showed:</li> <li>11 of 11 (100%) would recommend the program to someone else</li> <li>11 of 11 (100%) rated their knowledge skills or understanding "a lot" after the program, whereas 2 of 11 (18%) felt they were at this high level before the program</li> <li>9 of 11 (82%) agreed that the program met their expectations and needs</li> <li>9 of 11 (82%) felt more confident in their ability to manage their chronic condition</li> </ul>	<ul> <li>11 of 11 (100%) were better able to deal with problems related to their chronic health condition</li> <li>7 of 9 (78%) had greater independence and were better able to carry out routine daily activities</li> <li>5 of 9 (56%) improved emotional distress (i.e., depression) caused by their chronic condition</li> <li>8 of 8 (100%) had changed their actions due to what was learned or experienced in the program</li> </ul>	Program, you help individuals with chronic conditions learn proven and effective interventions. These interventions can reduce symptoms, increase confidence in managing chronic conditions, improve quality of life and reduce health care costs.
9 Cole County adult learners participated in Taking Care of You: Body-Mind- Spirit	In total, 72 hours were spent in mindfulness stress management classes	<ul> <li>Evaluations completed by 9 participants at the end of the last session showed:</li> <li>9 of 9 (100%) would recommend the program to others</li> <li>9 of 9 (100%) felt the program met their needs "a lot" or "a great deal"</li> <li>9 of 9 (100%) rated their knowledge, understanding or skills in mindfulness as "a lot" or "a great deal" after the program, whereas 2 of 9 (22%) were at this high level before the program</li> </ul>	<ul> <li>At the end of the last session, participants indicated:</li> <li>4 of 9 (44%) were practicing daily the strategies learned in the class; 4 of 9 (44%) were practicing these a few times a week</li> <li>7 of 9 (78%) were using recommended resources, such as books and websites</li> <li>9 of 9 (100%) identified one or more important changes they made, such as living in the moment and breaking free from stressful thoughts</li> </ul>	By supporting MU Extension's Nutrition and Health programming, such as Taking Care of You: Body-Mind-Spirit, people become more active and make healthier lifestyle choices leading to a lower risk for disease and illness. This increases disposable income for families (reduction in medical or pharmacy expenses, fewer days missed from school or work, etc.) and eventually leads to lower long-term medical costs for families and communities.

27 Cole County adult	In total, 40.5	Surveys completed by	After the tours,	When you support MU
learners participated	hours were spent	participants following	participants indicated:	Extension's Cooking
in Cooking Matters	in Cooking	the tours showed 19 of	<ul> <li>13 of 18 (72%)</li> </ul>	Matters at the Store
	Matters at the Store Tours	<ul> <li>21 (90%) learned new information and skills, including:</li> <li>buying fresh, frozen and canned fruits and vegetables on a budget</li> <li>calculating and comparing unit prices to find bargains</li> <li>finding added sugar in packaged foods</li> <li>reading labels for whole grains on breads and cereals</li> </ul>	<ul> <li>planned to compare unit prices to find the best deals on their next shopping trip; 9 were already doing this before the tour</li> <li>9 of 15 (60%) planned to read ingredient lists to find whole grains on their next shopping trip; 12 were already doing this before the tour</li> <li>16 of 19 (84%) planned to compare food labels to make healthy choices on their next shopping trip; 8 were already doing this before the tour</li> </ul>	Program, you help families and individuals who have limited-resources learn to stretch their food dollars, while choosing foods with the highest nutritional value. Encouraging these healthful behaviors may reduce health care costs by helping prevent chronic health conditions during a person's life span, as well as reducing food costs for families and individuals.

# HUMAN ENVIRONMENT SCIENCE

Children in Family Transitions helped through Mandated Class

Number of Cole County learners	Total hours of collective workshop participation	What did they learn?	What action did they take?	How does this work make Cole County and Missouri better?
2 from Cole County	15 hours	Quotes from participants included: • "Very helpful towards understanding the divorce." • "Great Educator!" • "I think every parent should do this!" • "Great Job!!!" On the end of session evaluation, the majority of participants reported that the class worthwhile and helpful.	Missouri passed a law in 1998. Any person, in court for a divorce, motion to modify a decree, or with custody/paternity of children 18 years of age and under, must participate in a parenting class. Focus on Kids is a class that was developed by the Human Development and Family Studies Department at the University of Missouri to fulfill this need.	Focus on Kids was developed to fulfill the mandate and to reduce the number of parents that need to return to court for motions to modify their original decree. This saves money and time for the parents, the courts and therefore the community. With increased knowledge, parents will also be more cooperative and therefore reduce the stress on their children and themselves. With reduced stress, children and parents are more productive in school, work and home.

# HOW TO GET AN "A" IN RETIREMENT

Cynthia Crawford

Number of learners participating	What did they learn?	How does this work make Cole County and Missouri better?
31 participated from Cole County	The course combines research and best practices from both personal financial planning and positive psychology to help people take positive steps to increase their wellbeing in retirement (and in the years leading to retirement.)"This is a <b>polished and</b> <b>professional course</b> based on years of research and experience."	When you support retirement planning education for Missouri residents, people replace worry with action solutions like having more adequate emergency funds and investments for retirement, which serves to reduce financial stress and increase productivity. There is a substantial cost to employers of financially distracted workers.
	<ul> <li>"I have really been pushing folks to sign up for this course as it really is a 'one stop shop' for all things retirement."</li> <li>"I liked the positive psychology the best I think of courses about retirement as financial courses. This one was so much more."</li> <li>"Taking this course and going over what I've been learning with him (my spouse) has brought us both a greater sense of calm."</li> <li>"I find the positive psychology aspect of this class to be very valuable In addition to being financially sound, I want to be happy and healthy in retirement, too, and this is helping."</li> </ul>	

# FAMILY NUTRITION EDUCATION PROGRAM

Number of learners	Total hours of workshop participation	What did they learn?	What action did they take?	How does this work make Cole County and Missouri better?
1,835 contacts 214 Youth 1,621 Adults participated in various Nutrition programming.	Approximately 200 hours were spent teaching Nutrition classes.	Participants in FNEP become more aware of nutrition	Participants 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.

# HOME HORTICULTURE AND ENVIRONMENT- HOTLINE AND WEEKLY GARDEN Q&A COLUMN

Focused program that provides research based horticulture information for gardeners and homeowners. Recaps the benefits of maintaining healthy turf, ornamental, or fruit and vegetable plantings. James Quinn

Number of learners	Total hours of participation	What did they learn?	What action did they take?	How does this wake Cole County and Missouri better?
129 individuals	The average	Unbiased, research-	Dissemination of high	People of all ages and
requested hotline	interaction is 15	based information on	quality, unbiased,	income levels can realize
information in the	minutes, thus:	selecting, planting,	research-based	the benefits of gardening to
following methods:	About 30+	and maintaining fruit,	horticultural	quality of life.
Phone.	hours of	vegetable and	information to a broad	
• Walk-in.	educational	ornamental species	spectrum of	There is a growing
• Email.	interaction.	around the home.	Missourians allows the state's citizens to reap	awareness both among the general public and health
Facebook	Column	Information on	the benefits of	professionals of the
<ul><li>messages.</li><li>eXtension.</li></ul>	readership is not	effective and	improved gardening	importance of plants to the
<ul> <li>In person (away</li> </ul>	quantifiable. An	environmentally	success	physical and psychological
from extension	average column	responsible pest		well-being of people. In
center).	can be read in	management	Advice provided on	addition to aesthetically
centerj.	about 3 minutes,	strategies around the	pest identification,	improving the environment
The weekly garden	thus an avid	garden and home.	prevention or control,	around the home, planting
Q&A column is	follower would		can lead to:	of turf, trees, shrubs,
popular among	spend 2.5 hours	From soil test results,	More judicious use	perennials and flowers
gardeners (based on	over the year.	information or correct	of pesticides	reduces energy costs,
comments		fertilizer amounts and	Less harm to the	provides exercise and a
received), but no		types as well as application timing and	environment	sense of accomplishment and adds value to the
estimate on		methods. Suggestions	An economic	home.
readership is		to improve overall soil	savings with reduced cost or	nome.
available. It appears in the Sunday 'Style'		health.	enhanced	Fresh fruits and vegetables
section. Fifty			protection of a	produced in home gardens
columns ran in 2017.			product of value.	are a healthy supplement
				to the diets of many
			Soil test	Missourians. Gardening
			recommendations, if	also fulfills a need on the
			followed, can lead to:	part of people several
			Better plant	generations removed from
			growth, thus better	the farm to work with the
State M		Sales Contraction	return on \$\$ spent.	soil.
			Less harm to the	
		And the second s	environment from	
H Market		and the second second	fertilizer runoff and	
			soil erosion.	
		and the second second		
	and the second second			
		12 and a		
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### **MASTER GARDENERS**

The mission of this Extension Program is "helping others learn to grow." Throughout Missouri, it promotes and raises public awareness of the University of Missouri Extension as a source of unbiased, research based gardening information.

James Quinn

Number of learners	Total hours of participation	What did they learn?	What action did they take?	How does this make Cole County and Missouri better?
<ul> <li>176 adult learners participated in the Master Gardener program, including:</li> <li>21 took the core training.</li> </ul>	This program requires initial training, then volunteer service: • 630 hours	Participants in the core training attain gardening knowledge and skill. Evaluations document at the time of course completion, that the	Participants report using their training in almost every topic. Most shared their knowledge with others.	When individuals volunteer, they are more likely to be citizens who positively contribute to their community
<ul> <li>140 maintained or achieved active status.</li> <li>10 maintained or achieved advanced status.</li> </ul>	<ul> <li>of training.</li> <li>11,900 hours of volunteer service.</li> </ul>	majority of respondents reported moderate to high levels of knowledge in all thirteen-core curriculum topics.	While a variety of activities encouraged by the program were implemented, the three most frequently reported activities	If they are more educated, as in lifelong learners, they are more likely to make better decisions effecting the community. Specifically, in Cole County,
<ul> <li>73 maintained or achieved emeritus status.</li> </ul>	Jervice.	These topics included landscaping, lawn care, vegetable & fruit growing, and care of trees & flowers.	where participation or use increased were volunteering, use of native plants, and physical activity.	the Master Gardeners maintain over 10 beautification sites, saving these not-profits or public entities both time and money. Their volunteer
		Follow up surveys show this knowledge is largely retained. They also showed an increased appreciation of the University of Missouri, MU Extension and their local county extension	Participants identified one or more economic values gained and over 60 percent estimated having saved at least \$50 in the 1 <sup>st</sup> year. This has been attributed to growing	hours are valued at over \$250,000. They raise their own funds to support these sites and to provide \$3,000 annually in college scholarships to area students.
		center. Lastly, they responded they were more likely to volunteer after completing the core class training.	more of their own food, increased landscape design, reduced yard maintenance costs, and reduced water consumption.	A key partner is Jefferson City Parks and Recreation, positively tying the extension center with another public entity, which strives to beautify the community and keep its citizens active and healthy.
		Continuing and advanced education for active or emeritus Master Gardeners continues the learning process.	Participants are also likely to take an additional extension class, with over 40 percent reporting doing so within a year of the core training.	Research has shown that gardeners, and others in their household, are more likely to eat more fruits and vegetables, thus having a better diet.

# AGRICULTURE

Private Pesticide Applicator Training by Joni Ross-Harper

Number of learners	Total Hours of workshop participation	What did they learn?	What action did they take?	How does this make Cole County and Missouri better?
36 from Cole County	3 hours	<ul> <li>Participants learn to use an Integrated Pest</li> <li>Management plan in order to deal and treat pest issues.</li> <li>They also learn: identifying what kind of pest they have and different ways to treat</li> <li>prevent and eliminate them</li> <li>safe and proper use of pesticides</li> <li>how to read the label, mix, calibrate equipment, application, and clean up</li> <li>about the environmental concerns</li> <li>how to prevent environmental problems.</li> </ul>	Farmers that farm a combined total of 7,140 acres became more informed about the environmental and safety (to themselves, other people, and animals) concerns over pesticide use. The short term outcome of the training is that farmers will handle, apply, and dispose of pesticides in a safe and environmentally sound way.	Participants obtained updated information on new pesticides and use to control current and emerging pests. Proper use of pesticides is important to managing pest control costs, obtaining economic control of pests and protecting the environment. The judicious use of pesticides also helps to prevent resistance building up in the pest population to the pesticide technology. The proper use of the pesticide will minimize the excessive use of any pesticide to provide control at a more economic level and in a timelier manner. These factors combined would provide economic benefit to the producer as well as maintain a more dependable and affordable food supply for everyone.

# Livestock

EAST CENTRAL REGIONAL HAY SCHOOL BY Anita Snell

Number of learners	Total hours of participation	What did they learn?	What action did they take?	How does this make Cole County and Missouri better?
11 learners attende d this program	The program was 7.5 hours. Totaling in 292.5 hours for all participants.	<ul> <li>Topics covered included :</li> <li>Beef nutrition</li> <li>Fertility of soils and forage basics</li> <li>Pest and weed identification and removal</li> <li>Machinery options</li> <li>Economics of stored forages</li> <li>Feeding management</li> <li>Additionally, participants met with sponsors during</li> <li>Implement Showcase to learn about the specific pricing and function of available haying equipment.</li> </ul>	Participants asked questions after each topic and during the showcase. Participants of program make better management decisions.	<ul> <li>This program provides tools and information farmers can utilize to:</li> <li>produce quality hay</li> <li>determine hay quality and match to nutritional needs of livestock</li> <li>maximize harvest, storage and feeding efficiency to reduce hay waste and loss of hay quality</li> <li>to manage hay production and feeding in an environmentally sustainable manner</li> <li>to determine the most cost effective methods for feeding livestock to maximize economic return.</li> </ul>

# Livestock

BEEF CATTLE REPROGENE Anita Snell

Number of learners	Total hours of collective workshop participation	What did they learn?	What action did they take?	How does this make Cole County and Missouri better?
One beef producer attended the program.	The program last for 4 hours. Totaling in 88 hours for all participants.	Producers learned about a variety of topics describing the latest technologies in reproduction and genetics. They also learned how to implement technology in beef herds.	Participants asked questions after each topic and panel discussion. Participants of program make better management decisions.	The cow-calf industry is a very large portion of Missouri's economy and it is critical that it continue to improve. This program focuses on increased adoption rate by farmers in Missouri of management practices that offer potential to improve long-term reproductive efficiency of their herds and resulting profitability.

Cole County Extension Center 2436 Tanner Bridge Road Jefferson City, MO 65101 573-634-2824 <u>coleco@missouri.edu</u> <u>http://extension.missouri.edu/cole</u>

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