

2013 University of Missouri Extension Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

University of Missouri Extension (MU Extension) had a very productive year in achieving its goals set out in the 2013 plan of work. MU Extension's 2013 programs addressed such issues as: the growing obesity problem in Missouri; building a sustained holistic economic development model in Missouri that addresses the need for vibrant communities, retention of jobs, and viable businesses; food productivity and safety in Missouri's agricultural arena; and building tomorrow's leaders through our 4-H Youth program.

Our stakeholders continue to articulate the need for more programming from us at a time of diminishing budget. We continue to incorporate the use of technology in our delivery systems in order to leverage the human capacity that we have. MU is contributing to programming efforts in eXtension and has developed a more comprehensive and accessible website for our stakeholders. We are also seeking alternative funding from grants, gifts, and fee generation to further leverage the resources that we receive from our state, federal, and county partners.

Our goal is to be reliable, responsive and relevant. We accomplished that goal in 2013 by providing research-based knowledge to Missourians that was aligned with their priorities of jobs, health, and education.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	235.3	0.0	0.0	0.0
Actual	214.0	0.0	0.0	0.0

II. Merit Review Process

1. The Merit Review Process that was Employed for this year

- Internal University Panel
- External Non-University Panel

2. Brief Explanation

In addition to reviewing the stakeholder input from all 114 counties, regional and state faculty surveyed current literature to identify state-wide demographics, national and state trends, and discipline specific research related to program effectiveness. Based on this review, state-wide priority needs were identified and programs in response to those priorities were developed by faculty. The program priorities along with their program logic models were then reviewed by the appropriate state program leader to assure that the programs are both relevant and of high quality.

State-wide program priorities will be utilized by regional faculty as they develop a local programming response to their county's identified needs. The resulting proposed county program plan will then be taken to the county council for their acceptance. Once approved, the programming will be delivered and the impact evaluated.

By establishing this ongoing merit review process of: stakeholder needs identification; program response by faculty; stakeholder feedback; and outcome assessment, the quality and relevance of programs will be maintained.

III. Stakeholder Input

1. Actions taken to seek stakeholder input that encouraged their participation

- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Survey of traditional stakeholder groups
- Survey of traditional stakeholder individuals
- Survey specifically with non-traditional groups
- Survey specifically with non-traditional individuals

Brief explanation.

University of Missouri Extension has gathered opinions of Missouri residents in a variety of ways to assist us in determining the critical issues of strategic importance. Our goals in developing the methodologies for the stakeholder input process were to: diversify the audiences in order to gain a better perspective on the reach and effectiveness of our programs; to diversify the gathering process so that we could utilize the feedback for both program prioritization and also to gain knowledge as to preferred delivery methods as well as general awareness of our programs; and finally to gather some program specific information and diversity needs information in a more substantive way in order to gain a better understanding of the issues underlying the needs in order for us to be more effective in our programming response.

The methods used in our stakeholder input gathering were as follows:

- Community Conversations
- Diversity Discussions
- Web-based Survey
- County and Regional Needs Assessments
- Meetings with State Agencies

2(A). A brief statement of the process that was used by the recipient institution to identify individuals and groups stakeholders and to collect input from them

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups

Brief explanation.

See 1.

2(B). A brief statement of the process that was used by the recipient institution to identify individuals and groups who are stakeholders and to collect input from them

1. Methods for collecting Stakeholder Input

- Meeting with traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting specifically with non-traditional individuals
- Survey specifically with non-traditional individuals

Brief explanation.

See 1.

3. A statement of how the input will be considered

- In the Budget Process
- To Identify Emerging Issues
- Redirect Extension Programs
- In the Staff Hiring Process
- In the Action Plans
- To Set Priorities

Brief explanation.

{NO DATA ENTERED}

Brief Explanation of what you learned from your Stakeholders

Our stakeholders continue to articulate the need for more programming from us at a time of diminishing budget. We continue to incorporate the use of technology in our delivery systems in order to leverage the human capacity that we have. MU is contributing to programming efforts in eXtension and has developed a more comprehensive and accessible website for our stakeholders. We are also seeking alternative funding from grants, gifts, and fee generation to further leverage the resources that we receive from our state, federal, and county partners.

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
8029673	0	0	0

2. Totaled Actual dollars from Planned Programs Inputs				
Extension			Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	8029673	0	0	0
Actual Matching	8029673	0	0	0
Actual All Other	0	0	0	0
Total Actual Expended	16059346	0	0	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover				
	0	0	0	0

V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Home Horticulture and Environment
2	Livestock Production System - Global Food Security and Hunger
3	Integrated Crop Management Systems - Global Food Security and Hunger
4	Resource Protection and Management
5	Profit Focused Agriculture
6	Managing Forages for Profitable Animal Production - Global Food Security and Hunger
7	Creating Simple Environments for Positive Youth Development
8	Creating Collaborative Environments for Positive Youth Development
9	Creating Complex Environments for Positive Youth Development
10	Volunteer Development
11	Built Environments and Sustainable Energy
12	Strengthening Families
13	Personal Financial Management
14	Food Safety
15	Nutrition, Health and Physical Activity
16	Ensuring Safe Communities
17	Sustainable and Viable Communities
18	Business Development

V(A). Planned Program (Summary)

Program # 1

1. Name of the Planned Program

Home Horticulture and Environment

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	15%			
205	Plant Management Systems	20%			
211	Insects, Mites, and Other Arthropods Affecting Plants	15%			
212	Pathogens and Nematodes Affecting Plants	15%			
213	Weeds Affecting Plants	15%			
216	Integrated Pest Management Systems	20%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	9.0	0.0	0.0	0.0
Actual Paid Professional	12.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
509079	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
509079	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Master Gardener training remains a major activity under this program area. Online core training was made available to the public in the fall of 2013. Additional areas of focus included advanced Master Gardener training, Garden 'N Grow training and workshops for garden center employees. Other activities include the Plants of Merit and HortLine programs in cooperation with Missouri Botanical Gardens, homeowner workshops, Lifespan Learners Series, Responsible Home Horticulture Series, booths at home shows and fairs, Plant a Row for the Hungry, Horticulture Therapy in Nursing Homes and the Home*A*Syst Program.

2. Brief description of the target audience

Individuals with an interest in gardening are the ultimate target audience of this program. The target audience, however, is diverse and widely dispersed. To reach an audience of this nature, MU Extension will need to use several community multipliers of information. One highly important audience will be the Master Gardener volunteers. After receiving training, Master Gardeners contribute volunteer hours to assist with dissemination of horticultural information through speaking engagements, workshops, information booths, youth programs, Extension Center hot lines, demonstration plantings and other activities. Youth groups including 4-H are another important target audience. Many young people will enroll in the Garden 'N Grow program.

3. How was eXtension used?

MU Extension faculty served on various horticulture Communities of Practice and Answered Ask The Expert Questions. An eXtension grant from the USDA Specialty Crop Grant Program was secured to collaborate with extension specialists at eastern universities to develop and launch a comprehensive apple web site with new content (video, photos, recommendations, 100 FAQ's, Ask an Expert, cultivar and rootstock descriptions, etc.) for commercial producers, extension educators, master gardeners, and home gardeners.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	22502	27461	2082	9740

2. Number of Patent Applications Submitted (Standard Research Output)
Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Provide in-service training session (s) for regional Extension specialists on an annual basis.

Year	Actual
2013	1

Output #2

Output Measure

- Develop or revise guide sheets a year for regional extension specialists to use in producer meetings.

Year	Actual
2013	3

Output #3

Output Measure

- Print and electronic newsletters devoted to pest and horticulture crop management will be developed and distributed to regional specialists and other clientele.

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Year	Actual
2013	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Master Gardeners, garden center employees, retired persons and home gardeners will increase their knowledge of basic plant growth, fertility, plant care, varieties, diseases.
2	Youth will improve their gardening skills and awareness of where food comes from through the Garden & Grow program.
3	Increase the number of Master Gardner volunteers trained and involved in improving the quality of their community.

Outcome #1

1. Outcome Measures

Master Gardeners, garden center employees, retired persons and home gardeners will increase their knowledge of basic plant growth, fertility, plant care, varieties, diseases.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	417724

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The public's demand for gardening knowledge has never been greater. It is both frustrating and discouraging when gardeners selecting poorly adapted plants or follow improper plant care practices for their yards and gardens. Awareness of sources of information on proper plant selection and care will contribute to gardening success and the health benefits derived from it. Also, proper plant selection and care reduces plant stress, which then reduces the amount of inputs necessary to maintain plant health. This can lead to a reduction in fertilizer and pesticides necessary to maintain plant health.

What has been done

Through Master Gardener (MG) training and volunteer activities of MG, newsletter, media releases, Nursery Association Certification training, greenhouse short courses and web guide access, thousands of Missourians received information on plant selection and culture. We hosted a Native Plant Field Day and a Tomato Festival.

Results

During calendar year 2013, there were 417,724 valid hits on internet-based MU horticulture Extension publications. Five of the top six MU Extension guides (based on valid hits) were horticultural in nature. The most popular horticulture guides were on composting, pruning shrubs, raised bed gardening and vegetable production. Thus, thousands of Missourians received information to help them improve their gardening success. If only 15 percent of those who accessed web-based horticulture information increased their purchasing of plants, gardening supplies and landscape services by 100 dollars, this would translate to a \$6.3 million increase in sales.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #2

1. Outcome Measures

Youth will improve their gardening skills and awareness of where food comes from through the Garden & Grow program.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	435

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Gardening programs aimed at youngsters (e.g., Garden 'n Grow), are intended to cultivate strong skills in science through the use of the curriculum. The goals are also for youth to experience gardening in a positive and fun method, to enjoy the feeling of success with their gardening efforts, and to have the satisfaction of sharing their harvested produce with others in need. Youth also learn to produce healthy food and the importance of fresh produce in human nutrition.

What has been done

The 10-week Garden 'n Grow summer program teaches 9 to 13 year old youth to not only learn about vegetable gardening, but also "cultivate" other science, math, and language skills. Adult learners use cooperative teaching skills to educate youth about seeds, transplants, garden planning and design, site preparation, soils, plant growth and development, costs of production, garden pests, plant health care, human nutrition, food value, food needs in the local community, and horticultural career opportunities.

Results

Statewide six counties implemented the Garden 'n Grow program. The goals of the Garden 'n Grow program are for youth to experience the fun of gardening, to enjoy a feeling of success, and

to have the satisfaction of sharing harvest food with others in need. Four hundred thirty five youth statewide involved in the educational program in 2013. Surveys of youth that completed the program found that: 90% indicated that they: ?could plant and maintain a garden on my own or with some assistance,? ?Could recognize a cucumber beetle and a squash bug,? ?could recognize powdery mildew on squash leaves,? ?had learned some ways to cook my produce.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

Outcome #3

1. Outcome Measures

Increase the number of Master Gardner volunteers trained and involved in improving the quality of their community.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	416

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The beneficial effects of gardening on human quality of life are well documented. Among other benefits, home gardening improves nutrition, reduces energy costs, encourages physical activity and contributes to psychological well-being. Missourians who garden are likely to derive these benefits for their entire lives. There continues to be tremendous demand in the general public for gardening information. The Master Gardener Program was designed to educate individuals to serve as paraprofessionals to assist University of Missouri Extension to disseminate research-based information pertaining to gardening throughout their county and to improve the knowledge base among home gardeners in their community.

What has been done

The mission of the Missouri Master Gardener program is to train volunteers to educate others about safe, effective and sustainable horticultural practices that build healthy gardens, landscapes and communities. The program provides 30 hours of in-depth classroom of Core Course Training. Then the Master Gardener?s and MG trainees are required to give 30 hours of volunteer service back in approved University of Missouri Extension activities.

Results

This past year Master Gardener core training was conducted at 23 different locations in Missouri. Additionally, for the first time in 2013, the core MG training was available online. During calendar year 2013, 419 individuals completed the Core Training and became certified Master Gardener?s. Master Gardeners throughout Missouri, both current and the new trainees, provided more than 84,449 hours of volunteer service this past year in support of University of Missouri Extension horticulture activities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

Staffing limitation is still a major factor affecting program outcome. Most state Extension Specialists in Horticulture have responsibilities in Teaching, Research and Extension and, therefore, have limited time to devote to this program. Regional Horticulture Specialists have responsibilities in up to 13 counties and in multiple program areas. Budget constraints due to the poor economy and low tax revenues have restricted extension programming. The economic conditions over the past year have undoubtedly influenced the gardening habits of Missourians.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Master Gardener Trainees were asked to complete an end of course survey. Results of that survey found that the attendees who responded to the survey reported an average knowledge gain of 2.833 on a 1-4 Likert scale, with 4=great deal of knowledge gain.

Attendees were surveyed on knowledge gain related to the various core training topics on a 1-3 Likert scale. The following are some of the selected results: Understanding the botany of seed saving, 1.750; How to maintain pure seed, 2.000; How to collect and handle seed, 1.750; How to store seed, 1.875; Different types of tomato's, 1.633; different types of alliums, 1.750; growing techniques for tomato's, 1.950; and growing techniques for onions, 2.150. The trainees reported a confidence level related to understanding the core topics of: considerable level, 76%; or moderate level, 24%. When asked, "What part of the experience did you benefit from the most?" the most common responses included: Plant diseases and soil building, Learning of new sources of information and Interaction among student and instructor.

Key Items of Evaluation

As a result of Missourians accessing web-based research-based information from MU Extension to educate themselves on how to improve their gardening success. It is estimated, that as a result of this, the consumers made more informed decisions resulting in purchasing of plants, gardening supplies and landscape services and a \$6.3 million increase in sales.

During this calendar year, 419 Missourians completed the Core Training and became certified Master Gardener's. Master Gardeners provide more than 84,449 hours of volunteer service at an estimated value of \$2.03 million this past year in support of University of Missouri Extension horticulture activities.

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Livestock Production System - Global Food Security and Hunger

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
301	Reproductive Performance of Animals	10%			
302	Nutrient Utilization in Animals	40%			
303	Genetic Improvement of Animals	10%			
307	Animal Management Systems	30%			
308	Improved Animal Products (Before Harvest)	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	15.0	0.0	0.0	0.0
Actual Paid Professional	18.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
763618	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
763618	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

(A) The learner-focused outcomes of this program will expand the scope of the Missouri Show-Me-Select Replacement Heifer Program. These outcomes include: 1) Regional Extension Livestock Specialists, veterinarians, farmers, and allied industry representatives will acquire knowledge and skills to aid in the successful adoption and implementation of existing management practices to improve beef heifer development; 2) Regional Extension Livestock Specialists, practicing veterinarians, producers, and future professionals will acquire new knowledge and skills to aid in the adoption of emerging biotechnologies in beef heifer development, including estrus synchronization and artificial insemination; 4) Regional Extension Livestock Specialists, practicing veterinarians and producers will be able to identify and discuss the economic implications of implementing production practices associated with the Show-Me-Select Replacement Heifer Program; and 5) Participating producers will develop a plan that establishes the Show-Me-Select Replacement Heifer Program as a producer owned and managed system.

(B) The MO-Pork program will include the following activities: Promotion of efficient production and management practices (Pork Industry Handbook, MU guide sheets and Midwest Plan Service Handbooks); National Swine Nutrition Guide (NSNG); Use of Manual 144/202 "The Missouri System of Swine Production"; On-farm data collection used to evaluate production and economic endpoints; Focused Management Schools for MO-Pork participants, artificial insemination course, Back to the Basics: Farrowing School, Sow Manager's Conference, Pigs to Plate: Adventures in Meat Quality Seminar, Health Summit, finishing short course, nursery management course, ventilation short course; Delivery of Pork Quality Assurance Program for MO-Pork participants; Delivery of new technologies in the swine industry to MO-Pork participants; Computer models/PDA record keeping programs; World Pork Expo and other conferences; Education about niche production markets and specialization opportunities; Media coverage of the MO-Pork program; Farm visits; On-farm research trials; Workshops; Meetings; and Consultation.

2. Brief description of the target audience

(A) The audiences targeted in this program are farmers across Missouri actively involved in cow-calf production and marketing. There are no limitations placed on the program in terms of farm or size of cow-herd. The program to date has involved herds as small as 8 cows and as large as 6,000 cows. Numerous sectors of the Missouri livestock industry come together as a result of this program, including University Extension, the Division of Animal Sciences, the University of Missouri College of Veterinary Medicine, the Commercial Agriculture Program, the Missouri Beef Cattle Improvement Association, the Missouri Cattlemen's Association, the Missouri Department of Agriculture, and the Missouri Livestock Marketing Association.

(B) The target audience will include people who own swine operations, work on swine farms, or provide technical support to people who own or work on swine farms (e.g., veterinarians, feed dealers). In addition, MO-Pork will target beginning Missouri pork producers, expanding Missouri pork producers, and industry personnel such as Missouri grain producers (interested in adding value to their crops).

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1675	3750	15050	90

2. Number of Patent Applications Submitted (Standard Research Output)
Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	4	2	6

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Provide in-service training session(s) for regional Extension specialists on an annual basis.

Year	Actual
2013	23

Output #2

Output Measure

- Regional and state specialists will conduct demonstrations on an annual basis.

Year	Actual
2013	47

Output #3

Output Measure

- Regional specialists will assist with producer sales.

Year	Actual
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2013

15

Output #4

Output Measure

- Develop or revise guide sheets on an annual basis for regional Extension specialists to use in producer meetings.

Year

Actual

2013

3

Output #5

Output Measure

- Develop or revise manual(s) on an annual basis for regional Extension specialists to use in producer meetings.

Year

Actual

2013

3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Participants will maintain or increase livestock production efficiencies and enhance marketing opportunities resulting in improved economic viability and profitability for their operation.
2	Participants will acquire knowledge and skills to aid in the successful adoption and implementation of existing management practices or emerging technology to improve livestock production efficiency and productivity.
3	Annual economic impact to the state's economy from improvements on livestock production.

Outcome #1

1. Outcome Measures

Participants will maintain or increase livestock production efficiencies and enhance marketing opportunities resulting in improved economic viability and profitability for their operation.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	1340

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Agriculture is Missouri's number one industry. Missouri ranks 6th in the U.S. in total number of beef cows and calves in production and the sale of cows and calves contribute \$1.7 billion to the state's economy. The swine industry represents over \$800 million dollars and 12% of all commodities produced in Missouri. The sale of beef and hogs contributes about 44% to the states cash receipts from all commodities. Missouri's rural economy viability is dependent on these sectors to drive the local economy by creating, maintaining or growing local business resulting in jobs and services that benefit the local communities.

What has been done

Workshops, demonstrations, seminars, web pages, educational materials and short courses have been offered and attended by both cattle and swine producers. The audiences targeted in these programs include Regional Extension Livestock Specialists, veterinarians, and farmers across Missouri that are actively involved in cow-calf production, farrow-to-finish swine operations and marketing. Technology transfer with respect to management practices involved in the program is not size dependent but rather farmer dependent in terms of introducing a fundamental change in approach to management and marketing that impacts a farm's individual profitability profile.

Results

The Show-Me-Select Replacement Heifer Program is the first comprehensive, state-wide, on-farm beef heifer development and marketing program in the U.S. Participation in the program from 1997-2013 involved 111,003 heifers on 776 farms across Missouri, 243 veterinarians, 10 regional extension livestock coordinators, and 17 regional extension livestock specialists. Total net impact on Missouri's economy from the 15 years of the Show-Me-Select Replacement Heifer Program and Sales exceeded \$75M.

Missouri pork producers who have changed dietary composition of feeds based on feed

ingredient quality, acquisition prices and fertilizer value using the National Swine Nutrition Guide, Least Cost diet formulator, and Manure Nutrient optimizer as a result of attending MO-Pork educational programs have realized a huge economic advantage. The use of these tools by Missouri Pork Producers has resulted in an average of 38% reduction of feed costs or, almost \$104 million in savings or economic impact annually.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)

Outcome #2

1. Outcome Measures

Participants will acquire knowledge and skills to aid in the successful adoption and implementation of existing management practices or emerging technology to improve livestock production efficiency and productivity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	235

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Continuation of the low adoption rates of livestock best management practices in the U.S. will ultimately erode the competitive position of the U.S. livestock industry. Other countries are adopting new technologies for animal production more rapidly than the U.S. The adoption and use of new management practices and technology strategies are extremely important for the sustainability of Missouri livestock producers.

What has been done

Workshops, demonstrations, seminars, web pages, educational materials and short courses on best management practices have been offered and attended by both cattle and swine producers.

The management procedures for beef producers focused on practices for replacement beef heifers to assist producers in more effectively managing reproduction, production, and marketing. Missouri pork producers have gained hands-on information on how to evaluate feed ingredients, formulate least cost rations, and apply performance parameters to management strategies.

Results

The Show-Me-Select reproductive goals are aimed at improving breeding performance during the heifers' first breeding period, minimizing the incidence and severity of dystocia, and successful rebreeding of heifers during the subsequent breeding season has resulted in a significant increase in use of estrus synchronization and AI stemming. Producers from 103 of Missouri's 114 counties (91%) have enrolled heifers in the program and sold 26,977 heifers with gross receipts of \$33,419,500. On farm energy management strategies have decreased energy usage by more than 20% resulting in a fuel saving of more than \$0.60 per pig saving over \$180 million. Missouri swine producers who adopted new feeder designs with alternative feed ingredients saw results in the improvement of feed efficiency and a savings of more than \$2 million.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)

Outcome #3

1. Outcome Measures

Annual economic impact to the state's economy from improvements on livestock production.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	1675

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Total net impact on Missouri's economy from the 15 years of the Show-Me-Select Replacement Heifer Program and Sales exceed \$75M. The Value Added measures the economic activity generated over and above the cost of the inputs. By this measure, it is estimated that the swine industry contributes approximately \$314 million to the state GDP.

What has been done

Implementation of these programs involves University campus and regional specialists working closely with producers, and veterinarians to provide the structure through which change can occur. This involves producer workshops, demonstrations, conferences, webinars, phone calls, in-service training, mass media and farm visits.

Results

Total net impact on Missouri's economy from the 15 years of the Show-Me-Select Replacement Heifer Program and Sales exceed \$75M. Swine operations who have adapted energy saving technology have saved over \$180 million. Producers adopting new feeder designs with alternative feed ingredients resulting in an improvement in feed efficiency with a savings of more than \$2 million in feed inputs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
303	Genetic Improvement of Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges
- Other (Marketing Fluctuations)

Brief Explanation

The Show-Me-Select Replacement Heifer Program draws on the fundamental basis upon which Extension and the Land Grant System was founded: The use and application of what we know to create knowledge. Technology transfer with respect to the management practices involved is not size dependent but rather producer dependent in terms of introducing a fundamental change in approach to management and marketing that impacts the profitability profile of a particular farm or ranch. The success of the Show-Me-Select program over the past 16 years has relied largely in reaching this target audience and the associated impact of that connection. Meaningful assessment of this program began with building in evaluation as part of the design. The end result has been a negotiated participatory process involving Regional Extension Livestock Specialists, veterinarians, and the farmers with support from State specialists. Evaluations have shown that a large sector of Missouri's cow-calf producers' still need education and involvement in implementing the

programs management practices. The Program also serves as a conduit in the development of new educational programming areas.

Pork is the most widely consumed meat in the world and the U.S. is the third largest producer after China and the European Union. Historically, Missouri has produced about 5-7% of hogs and pigs in the U.S. In recent decades this percentage has been declining as production in Missouri declined and production expanded dramatically in certain regions of the country, but Missouri's share of hog production seems to have stabilized around 5%. As production systems evolved, many producers have exited the industry while others have expanded. In the process, the areas of the state with the highest levels of production have changed, but the overall importance of the industry has been maintained. Missouri ranks 7th in the U.S. in the total number of pigs marketed at nearly 3.1 million pigs from more than 3,000 operations (Figure 1). There has been a steady decline in the number of swine operations in Missouri; however, the number of pigs (inventory) has not followed this trend and has remained steady for 30 years (Figure 2). Missouri swine production accounts for over 5% of the total U.S. production and over 4% of the U.S. swine operations are located in Missouri.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

The Missouri Show-Me-Select Replacement Heifer Program was designed to improve reproductive efficiency of beef herds in Missouri and increase individual farm income. The program objectives include: 1) a total quality management approach for health and management of heifers from weaning to late gestation; 2) increased marketing opportunities for and added value from Missouri raised heifers; and 3) the creation of reliable sources of quality commercial and purebred replacement females. During the past 16 years, 776 farms enrolled 111,003 heifers in the program. Regional extension livestock specialists serve as coordinators of the program locally and work closely with the 243 veterinarians involved with the program statewide. The marketing component of the program facilitated the sale of 26,977 heifers in 126 sales across Missouri from 1997 through the fall sales in 2013. These sales generated interest from 9,032 prospective buyers that formally registered to buy heifers, and over 3,000 individuals that purchased heifers from the various sales. Heifers from the program have now been sold to farms in AR, AZ, FL, GA, IA, IL, IN, KY, KS, LA, MO, NE, OK, SC, SD, TN and TX. Collectively, 126 sales have generated \$33,419,500 in gross sales. Economic impact in Missouri over the past 16 years resulting from the Show-Me-Select Replacement Heifer Program exceeds \$75M. The Missouri Show-Me-Select Replacement Heifer Program is the first statewide on-farm development and marketing program of its kind in the U.S.

Educational efforts on feed management and feed manufacturing techniques for swine producers focus on farm specific feed budgets, phase feeding programs, and feed intake record keeping. Producers develop an activity based record/accounting program to establish feed production costs. Implementing this program allows swine producers to produce accurate feed intake numbers through the development of an on-farm feed intake assessment technique using a measuring tape with a small washer attached. Incorporating this data into permanent records provides valuable information that can be used to generate diet formulations and feed budgets. Many producers do not keep feed records to determine actual feed efficiency and assume industry averages when an economic analysis is performed. Using actual feed efficiency data can impact profitability and improve the economic analysis of the operation by establishing accurate nutrient requirements of pigs,

so ration nutrients are not overfed. These educational efforts have resulted in pork producers having a feed savings of \$5.00 to \$7.00 per ton for every 0.1% adjustment in nutrient content (lysine) closer to the established requirement.

Key Items of Evaluation

In addition to what has already been listed, the Missouri Show-Me-Select Replacement Heifer Program recently created a Tier Two classification that distinguishes heifers from high accuracy sires. Using data from the past five sales seasons (Fall 2010 through Fall 2013), in which Tier Two heifers sold, we may begin to consider opportunities for producers to add value to their heifers as a result of improvements in genetic merit. For purposes of example, if we use the average sales price of Show-Me-Select qualified heifers carrying a natural-service sired pregnancy as a baseline sale average for heifers we can then make the following comparisons to determine the relative added value that resulted from improvements in genetics of the heifer and/or the pregnancy she was carrying: 1) Show-Me-Select heifers carrying natural-service sired pregnancies sold for an average sale price per heifer of \$1700; 2) Show-Me-Select heifers carrying AI-sired pregnancies sold for an average sale price per heifer of \$1863, adding \$163 per heifer; 3) Tier Two Show-Me-Select heifers carrying natural-service sired pregnancies sold for an average sale price per heifer of \$1825, adding \$125 per heifer; and 4) Tier Two Show-Me-Select heifers carrying AI-sired pregnancies sold for an average sale price per heifer of \$2083, adding \$383 per heifer.

Swine nutrition extension programming has provided technical nutritional updates and ration formulation specifications for all phases of the pig's life cycle. These swine nutrition extension programs have worked with independent Missouri pork producers that market over 200,000 pigs annually and purchase either raw ingredients for on-farm feed manufacturing or complete feed. These pork producers purchase more than \$2 million of feed each year and sales account for more than 70% of the independently produced pigs marketed in Missouri. Cooperative purchase of feed ingredients and other production inputs allows these independent swine producers to effectively compete with larger commercial swine operations. An estimated purchased feed savings of \$100,000 annually is realized by using these economies of scale.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Integrated Crop Management Systems - Global Food Security and Hunger

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	15%			
104	Protect Soil from Harmful Effects of Natural Elements	10%			
205	Plant Management Systems	40%			
216	Integrated Pest Management Systems	25%			
405	Drainage and Irrigation Systems and Facilities	5%			
512	Quality Maintenance in Storing and Marketing Non-Food Products	5%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	21.0	0.0	0.0	0.0
Actual Paid Professional	18.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
763618	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
763618	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Campus-based and region-based faculty members will conduct several regional workshops and short courses in partnership with commodity groups and private industry. Venues include commodity district meetings, soil and crop conferences, regional short courses, field days, and on-line and demonstration projects.

2. Brief description of the target audience

The primary target audiences are crop producers and their advisers and private and commercial pesticide applicators. Programs will be developed for crop producers with a diversity of farm sizes; crops produced, and land resource bases. Crop advisers and service providers are important targets because of their extensive contact with crop and livestock producers, which makes them ideal intermediates in passing on University of Missouri Extension programming to a wider range of producers than could be reached by extension personnel alone. Because the future of Missouri agriculture depends on young professionals replacing retiring farmers and personnel, youth organizations such as FFA, 4-H, Young Farmers, and their teachers will receive specially designed programs.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	24000	500000	5000	50000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	6	34	40

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Provide in-service training session(s) for regional Extension specialists on an annual basis.

Year	Actual
2013	4

Output #2

Output Measure

- Develop or revise guide sheets annually for regional Extension specialists to use in producer meetings.

Year	Actual
2013	8

Output #3

Output Measure

- Develop or revise manuals on an annual basis for regional Extension specialists to use in producer meetings.

Year	Actual
2013	1

Output #4

Output Measure

- Print and electronic newsletters devoted to pest and crop management will be developed and distributed to regional specialists and other clientele.

Year	Actual
2013	32

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Producers and crop advisors improve their knowledge related to crop management practices and systems such as new cultivars, pest control, IPM, irrigation and new practices.
2	Two thousand (2,000) private pesticide applicators will meet the legal need of certification by improving their knowledge of pesticides and their use.

Outcome #1

1. Outcome Measures

Producers and crop advisors improve their knowledge related to crop management practices and systems such as new cultivars, pest control, IPM, irrigation and new practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	7650

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Income from crops represents more than 50% of all agricultural receipts in Missouri. As seen by recent food riots in other parts of the globe, net gains in crop productivity in the US are essential for continued economic development. In addition, use of traditional food crops for biofuel production places additional demands on cropping systems. Our goal is to prevent hungry people worldwide by developing and promoting efficient crop management systems in Missouri.

What has been done

Through a series of conferences, workshops, and meetings (more than 100 events statewide) we continue to train producers and advisors on efficient, responsible, and profitable crop production. Specific topics included fertilizer management, energy savings, disease management, herbicide injury, biofuels, resistant pests, pasture allocation, marketing, row-crop management practices, and weather information. The team of state and regional extension specialists collaborated in each of the regions to provide interactive presentations on the theme of "Crop Management Strategies in an Era of Uncertainty."

Results

The 200 crop advisors who attended the 2013 Crop Management Conference influence decisions on more than 9.5 million acres and will have an impact on production efficiency, economic development and environmental quality. The 7200+ producers who attended regional events grow more than 14.9 million acres of corn, soybean, and pasture. Across all programs, attendees rated our educational content at 8.7 on a scale of 1 to 10. Many positive comments were returned on written evaluation forms pertaining to the use of audience response systems, interactive presentations, and hands-on demonstrations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
104	Protect Soil from Harmful Effects of Natural Elements
205	Plant Management Systems
405	Drainage and Irrigation Systems and Facilities
512	Quality Maintenance in Storing and Marketing Non-Food Products

Outcome #2

1. Outcome Measures

Two thousand (2,000) private pesticide applicators will meet the legal need of certification by improving their knowledge of pesticides and their use.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	5450

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Pesticide applicator training helps reduce the harmful effects of improper pesticide use. The University of Missouri Extension Pesticide Applicator Training Program provides educational outreach for individuals who wish to become licensed pesticide applicators. Licensed applicators must pass an exam and participate in continuing education courses on environmentally sound uses of pesticides.

What has been done

Commercial applicator training was delivered by a cadre of 12 University of Missouri Extension specialists with assistance of personnel from the Missouri departments of Agriculture, Conservation, Natural Resources, and Public Health. Private pesticide applicator training was delivered by either formal training sessions presented by 23 University of Missouri regional extension specialists or by applicators viewing a 2 hour and 15 minute training DVD at county extension centers. Certified commercial applicators are required to recertify every three years and private applicators every 5 years.

Results

In 2013, the University of Missouri Pesticide Applicator Training Program provided more than 75 initial certification training or recertification training sessions for a total of 2,068 commercial

pesticide applicators and approximately 3,650 private pesticide applicators. Clientele evaluations for the commercial training found 98% of those responding gave the program an excellent or good rating. Many comments were received and found the training program to be more focused, more relevant, or more enjoyable to those attended in the past. Commercial applicators trained by category were Ornamental and Turf (666), General Structural/Termite (470), by Right-of-Way (458), AgPlant (339), Aquatic (45), Fumigation (27), Forest (25), Public Health (21), Wood Products (7), Seed Treatment (7) and AgAnimal (3).

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

Brief Explanation

A late-summer drought in Northern Missouri limited crop/pasture yields and leads to concerns about the 2014 growing season. Ground and surface water recharge is low. MU Extension is a sought-after resource for answers to this, and many other questions.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

MU Extension faculty members conducted more than 528 educational programs this past year in partnership with local, state and federal agencies, commodity groups and private industry. Venues included commodity district meetings, soil and crop conferences, regional short courses, field days, and on-line and demonstration projects. Not all of those programs conducted in-depth evaluations but examples of some of the outcomes resulting from those programs were: A phone survey of randomly selected Missouri rice farmers determined that 54% of Missouri's rice acres were scouted by professionals compared to 11% in 1996. Cotton producers hired professionals to scout 94% of Missouri cotton acres for pests compared with 5% scouted in 1982.

Key Items of Evaluation

A total of 2,068 commercial applicators received training through the University of Missouri Commercial Pesticide Applicator Training. Of this total number of commercial applicants, 349 attended certification training and 1,719 attended recertification training. In order to retain a commercial pesticide applicator license, either recertification training or retesting is required. According to the US Bureau of Labor Statistics, the mean annual salary for pesticide workers is \$31,690. Thus, the potential annual earnings of the 349 aspiring commercial applicators are \$11,059,810. Similarly, the estimated economic impact of the

1,719 commercial pesticide applicators receiving recertification training through the Missouri's CPAT program is \$54,475,110.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Resource Protection and Management

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%			
111	Conservation and Efficient Use of Water	15%			
112	Watershed Protection and Management	15%			
123	Management and Sustainability of Forest Resources	15%			
125	Agroforestry	5%			
133	Pollution Prevention and Mitigation	15%			
135	Aquatic and Terrestrial Wildlife	15%			
136	Conservation of Biological Diversity	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	13.0	0.0	0.0	0.0
Actual Paid Professional	8.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
327265	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
327265	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Campus-based and region-based faculty members will, in partnership with commodity groups, conservation partners, general public, and private industry will:

- Conduct workshops and seminars, host field days, assist with planning sessions, establish watershed committees, use mass media (printed, radio, television coverage), to increase awareness and knowledge of Missourians to implement practice and programs that will preserve, protect and sustain the state's natural resource base.

- Develop curriculum-based natural resource management programs, including assessment and evaluation tools, marketing strategies and promotional materials.

- Conduct training workshops for local natural resource teams (University of Missouri Extension, Missouri Department of Conservation, and USDA NRCS) and potential local partners (e.g., Missouri Tree Farm, Conservation Federation of Missouri, Quail Unlimited, Wild Turkey Federation, Ducks Unlimited, Isaac Walton League, and Walnut Council).

Produce up-to-date, science-based information and deliver through guide sheets, newsletters, and websites.

2. Brief description of the target audience

Citizens of Missouri, partners, communities, etc.

3. How was eXtension used?

University of Missouri personnel are listed as part of the Community of Service through eXtension. The Bio-energy curriculum, which has an environmental component, is housed with eXtension.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4475	11900	4500	9000

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	10	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Provide training sessions for Extension specialists and/or state/federal natural resource professionals.

Year	Actual
2013	16

Output #2

Output Measure

- Coordinate delivery of natural resource/watershed management education via 'live' short courses, field days, and workshops.

Year	Actual
2013	14

Output #3

Output Measure

- Assist groups and individuals to develop and implement forest, wildlife, and watershed plans.

Year	Actual
2013	132

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	70% of water resource seminar participants will indicate increased knowledge and 70% of those attending water resource protection and management courses for professional education credits will change behavior based on knowledge gained. Five watershed groups will receive assistance and change their behaviors towards water resource protection and management.
2	75% of farmers and family forest landowners completing a natural resource management plan will have engaged in at least one natural resource management practice within six months of the plan's completion and 50% of them who implement a management practice will see a positive response within 12 months of completion.
3	50% of farmers and family forest landowners participating in either 'live' or distance-learning education events exhibit a knowledge gain in natural resource ecology and management and 30% will have a natural resource management plan in-place after six months.

Outcome #1

1. Outcome Measures

70% of water resource seminar participants will indicate increased knowledge and 70% of those attending water resource protection and management courses for professional education credits will change behavior based on knowledge gained. Five watershed groups will receive assistance and change their behaviors towards water resource protection and management.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	6

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Water quality concerns have increased as pesticide and nutrient loading in vulnerable areas has led to a need for more educational activities. Many of the areas identified as vulnerable have public drinking water reservoirs and have agriculture as their main source of local revenue generation. Watershed planning has become a major tool in helping reduce the risk of watershed pollution. Environmental and public health can be affected by excessive nutrient and pesticide loading in water ways.

What has been done

Educational meetings on watershed management are offered for private citizens and more specific programs have been offered for pesticide management, nutrient reduction loading, and soil erosion control. Group meetings with local producers and one-on-one visits are used to increase awareness and identify available practices that work effectively in reducing pollutant loading. More than 200 watershed residents have attended conferences on watershed planning.

Results

Increased cover crop and precision agriculture practices have helped control runoff and nutrient loading. A series of pesticide management programs are being offered to increase awareness of vulnerable watershed areas. Follow-up surveys with those attending watershed management training, shows a 95% increase in knowledge of water quality concerns in their watershed areas. 75% indicate that they will implement management practices to reduced pesticide and nutrient runoff on their property and 88% will implement practices to reduce soil erosion. By understanding proper management to reduce pesticide loss, farmers in critical watersheds have retained the use of atrazine which keeps pesticide cost to a minimum. Youth education occurred through a series of programs and displays at MU field days where the program ?What do you do

to affect water quality? was offered. More than 9,000 youth attended the series of youth education field days.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

Outcome #2

1. Outcome Measures

75% of farmers and family forest landowners completing a natural resource management plan will have engaged in at least one natural resource management practice within six months of the plan's completion and 50% of them who implement a management practice will see a positive response within 12 months of completion.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	950

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

To be truly effective, the landowner needs to put into practice the knowledge gained.

What has been done

Six-month follow-up surveys, which were sent to the 1,445 farmers and forest landowners who attended an educational event, provided us with valid pre- and post-event assessments, and a mailing address.

Results

Of the 950 responses we received (66% response rate), 635 said they implemented at least one new practice on their land, impacting 87,000 acres. The top three practices were forest stand improvement (10,000 acres), tree planting (6,100 acres), and invasive species eradication (5,200 acres). With regard to forest stand improvement, simple cash flow analysis of net present value (NPV) based upon inventory data from the timbered acreage now being managed can be

summarized as follows: Liquidate forest today yields a NPV of \$1,000/acre; Do not manage and liquidate the forest 40 years from now yields a NPV of \$100/acre; Manage the forest through forest stand improvement and sustainable harvests yields a NPV of \$1,150/acre. Therefore, estimated economic impact of forest management is \$11.5 million (\$1,050/acre) NPV compared to no forest management, and \$1.5 million over liquidating the forest asset today. Of course, in the latter scenario, one has destroyed the natural resource completely!

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
125	Agroforestry
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity

Outcome #3

1. Outcome Measures

50% of farmers and family forest landowners participating in either 'live' or distance-learning education events exhibit a knowledge gain in natural resource ecology and management and 30% will have a natural resource management plan in-place after six months.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Farmers and family forest landowners need to know the latest science-based information to assist them in meeting their land management goals and objectives. Missouri citizens at large also need to gain knowledge in natural resource ecology to support the efforts of these farmers and forest landowners.

What has been done

In FY13, 3,675 farmers, forest landowners and members of the general public attended either a Woodland Steward, Missouri Master Wildlifer, or a Missouri Master Naturalist workshop; quail management field day; or quality deer management workshop.

Results

Of the 3,675 individuals attending the above educational events, we collected 1,445 valid pre- and post-event self-evaluations. The 585 family forest landowners participating in a Woodland Steward workshop showed a 2.2-point knowledge increase as a result of the training. Post surveys of the 860 individuals participating in either Missouri Master Wildlifer or Missouri Master Naturalist short courses showed a 2.1-point knowledge gain of a 5 point Likert scale. This is a 60% gain in knowledge; 10 percentage points above our target of a 50% knowledge gain.

Train 215 new Missouri Master Naturalists, and co-host with the Missouri Department of Conservation the annual MMN State Conference. In FY13, Master Naturalists have contributed over 55,400 service hours for an estimated value of \$1.35 million.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
125	Agroforestry
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

This past year saw extreme weather conditions where there were wet periods before planting, short dry periods and then heavy rains. This increased the potential for nutrient, pesticide and soil runoff. Watershed planning in rural areas is built around the agricultural communities and the timeliness of agricultural activities. These extreme weather conditions create a need for higher management and watershed planning. With a somewhat improved economy, we are beginning to see more interest by Missouri's recreational landowners in managing their land; although management activity is still below pre-recession levels. And with land transfer to younger generations who are not connected to the land as much as the previous generation, it is becoming increasingly difficult to engage these new landowners.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Evaluations show an increase in awareness and knowledge of many of the issues looked at with watershed planning. Surveys show that 75-80% of all participants have increased awareness and knowledge of environmental issues and 70-88% indicated a change in behavior. The increased use of best management practices for pesticide and nutrient management indicates the willingness of producers to make changes once they recognize the economic and environmental benefit of the practices. On-site sewage and on-farm fuel storage are two areas where producers have not worried about the consequences of not maintaining present systems and are now realizing the impact these areas have on protecting environmental and human health. Pesticide and nutrient management in watersheds used for public drinking water.

Key Items of Evaluation

Protection of environmental and human health through increased implementation of management practices to reduce, control or eliminate pesticide and nutrient runoff, soil erosion, on-site sewage system maintenance and on-farm fuel storage containment. New research indicates the benefits of certain practices, such as cover crop use, that haven't been recognized before.

As part of watershed management planning workshops, special classes were held on Spill Prevention Control and Countermeasure (SPCC) regulations. More than 80 producers and agribusiness professionals attended the classes and 100% indicated they had increased awareness, 65% stating they would complete EPA documents for on-farm fuel storage within the next 12 months. Those completing the forms controlled over 40,000 acres of crop land.

In FY13, Master Naturalists have contributed over 55,400 service hours for an estimated value of \$1.35 million. MU Extension launched "My Missouri Woods" (<http://extension.missouri.edu/mywoods/>), a new website for Missouri woodland owners.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Profit Focused Agriculture

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
601	Economics of Agricultural Production and Farm Management	50%			
602	Business Management, Finance, and Taxation	17%			
603	Market Economics	20%			
604	Marketing and Distribution Practices	4%			
605	Natural Resource and Environmental Economics	4%			
606	International Trade and Development	1%			
607	Consumer Economics	1%			
610	Domestic Policy Analysis	2%			
611	Foreign Policy and Programs	1%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	17.0	0.0	0.0	0.0
Actual Paid Professional	18.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
727256	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
727256	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct multisession workshops using curricula or other appropriate material. Participate in or give presentations at meetings, workshops, conferences, seminars. Develop or update curricula or educational materials. Provide individual assistance as follow-up to group activities. Consult with individuals upon request. Develop and distribute information on current issues related to farm/agricultural profitability through newsletters, Internet postings, personal contacts, and media releases. Keep updated and assist farmers with computer and Internet applications. Conduct surveys or develop case studies relevant to improving farm/agricultural profitability. Evaluate the effectiveness of workshops, training, and other activities. Cooperate with agencies and organizations on activities related to the program objectives.

2. Brief description of the target audience

Farmers/ranchers (beginning, primary income, secondary income and transitioning) Landowners (absentee, women, seniors) and agribusinesses/agencies, agribusinesses/agencies (commercial, farmer cooperatives), and agencies/farm organizations (governmental, commodity groups).

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	14973	55000	1139	1171

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	5	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Annual training for regional specialists on curriculum-based MO programs and new programs related to Ag Business Management series teaching programs conducted by regional specialists will be monitored and participants invited to complete evaluations.

Year	Actual
2013	17

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Fifty percent of the participants in Annie's Project will develop a strategic plan. A follow-up survey will be conducted after training is complete.
2	Fifty percent of the participants in Golden Age Framing will develop an estate plan. A follow-up survey will be conducted after training is complete.
3	New value-added collective agricultural business organizations will be established annually. A follow-up survey will be conducted after training is complete.

Outcome #1

1. Outcome Measures

Fifty percent of the participants in Annie's Project will develop a strategic plan. A follow-up survey will be conducted after training is complete.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	80

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Missouri Ag Census data says: 12,754 women farm operators?up 17.9%, and 1.95 m ac. owned by women - up 8.4%. Annie?s Project curriculum covers risk areas: marketing, production, financial, legal & human resource risk. The class empowers farm women to be better business partners. The target audience is farm women. The 18-hour class develops skills and provides tools to make better decisions. The goal is to make farms more profitable, which leads to more economic benefit to the community.

What has been done

Ag business specialists made improvements to Annie?s Project curriculum. Six Annie?s Project classes (18 hrs.) were delivered. Total participants were 80. Extension specialists and professionals taught the classes. Evaluations were reviewed and modified. Classes used evaluations and a six month follow up was sent electronically. Extension specialists met in person to share teaching ideas, curriculum suggestions and creative techniques.

Results

During Annie?s Project classes, participants completed balance sheets to enhance the understanding of current and noncurrent assets and liabilities. Each person also learned about business plans and started/completed a plan. Participants were sent an electronic survey 6 months post class. The response rate was 25%. One hundred said they had shared class information with at least one other person. 35% have visited with their crop insurance agent and another 30% plan to. 75% of those using leases have made modifications to the lease. 60% checked their bank accounts/vehicles for POD and TOD and 35% found they did not have a POD or TOD but added them.

A purpose of Annie?s Project is to empower farm women to be better decision makers. The survey asked if they had made purchasing decisions by themselves or helped farm partners, 85%

yes. This indicates they are applying class information.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
606	International Trade and Development
607	Consumer Economics
610	Domestic Policy Analysis
611	Foreign Policy and Programs

Outcome #2

1. Outcome Measures

Fifty percent of the participants in Golden Age Framing will develop an estate plan. A follow-up survey will be conducted after training is complete.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	74

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Estate and business succession planning is of critical importance to farmers. In 2013 the change in the Federal Estate Tax exemption amounts brought this issue even more to the forefront. However, it can be very difficult due to the complicated terminology, lack of attorneys with expertise in agriculture and the unique issues that ag. producers face. The continuing increases in land and asset values have caused equitable treatment of farm and non-farm heirs to be an even tougher task.

What has been done

A three session estate planning series was developed with assistance from a USDA Risk Management Agency (RMA) grant several years ago. It is designed to assist participants be prepared to develop an estate plan with their attorney and professional advisors after the course. 331 people have gone through this course since its development in 2008 and many more have followed up on an individual basis. The course continues to be updated as laws change and issues are brought up by the classes.

Results

The knowledge gained in this series has increased dramatically between the pre and post series test. The biggest gains were in (a) advantages and disadvantages of probate (b) estate planning tools available and (c) the difference between estate and gift tax. Actions taken as a result of attendance included: 93% checked how their property was titled (36% had done so before the sessions and 77% had communicated their wishes to their heirs compared to 42% before. Several are in process of completing a complete, updated estate plan.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
606	International Trade and Development
607	Consumer Economics
610	Domestic Policy Analysis
611	Foreign Policy and Programs

Outcome #3

1. Outcome Measures

New value-added collective agricultural business organizations will be established annually. A follow-up survey will be conducted after training is complete.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	183

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Farmers and agribusiness personnel were interested in expanding into processing of agricultural products, developing identity preserved products and producing and marketing agriculture commodities that adds incremental value to the farming enterprise.

What has been done

Workshops were done to promote and explore various value added alternative opportunities, training and technical assistance was provided to assist clientele to develop of a business plan for their proposed value-added opportunity, identifying funding sources, and the development and writing grants and exploring other funding opportunities.

Results

A large organic farming operation requested and received assistance developing a strategic business plan for the expansion and funding of their value-added processing facilities. Rice milling and popcorn processing facilities were constructed in 2013. A 44-Kilowatt photovoltaic system was installed at the rice processing facility, to offset the electric expense. Two Extension photovoltaic workshops stimulated increased interest in solar technology in SE MO.

A second set of projects involved assisting farm family owners to plan, acquire funding for the construction of a sweet sorghum processing facility, an organic rice facility, a popcorn facility and expansion of a hydroponic greenhouse. This assistance included developing business plans, assuring the facilities met all local, state and national food safety and worker requirements. Other assistance included organizing them into New Generation Cooperatives and acquiring grant funding. The sweet sorghum processing facility has been constructed; and the hydroponic greenhouse business expanded sales.

A local foods grant was obtained from a non-profit to facilitate the development of local foods systems in the 6 Boot heel counties of Southeast Missouri. Finally local faculty in the 6 Boot heel Counties identified the need to train local food suppliers on the regulatory criteria for marketing to restaurants, schools and groceries. It has been estimated that as a result of these efforts approximately \$120 million has been saved by reducing project failures.

4. Associated Knowledge Areas

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
605	Natural Resource and Environmental Economics
606	International Trade and Development
607	Consumer Economics
610	Domestic Policy Analysis
611	Foreign Policy and Programs

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

The most significant external factor affecting program areas was the worst drought in 25 years. It began in the spring of 2012 and extended through early fall. Missouri's farmland is of various types, with poorer quality land in the southern part of the state - where livestock is the primary agricultural enterprise, with better quality cropland in the northern half of the state and along the major rivers. Hay and pasture production suffered in the drought, and grain production was reduced. The drought caused severe problems for cattle producers and many were forced to reduce herd size due to lack of water and forages and high prices for purchased feed grain. Crop producers experienced reduced production from the drought, but prices for the grains sold remained high. Temperatures in the summer also reached triple digits, causing additional crop and livestock stress. By the fall of 2012 rains had returned in some areas, but groundwater and ponds remained low. In spring 2013 temperatures and rainfall were erratic, but by June weather had returned to a more normal pattern and prospects for normal grain production in 2013. In the fall, pasture conditions began to improve, but the cattle herds would take longer to rebuild numbers to previous levels.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Activities in FY 13 helped Missouri's economy weather the drought and its agricultural industry remain strong. Production expenses increased 23% in 2012 and Missouri's corn yield of 75 bu/ac was the lowest since 1983. A series of seminars was held for agricultural lenders which provided an analysis of economic conditions and expectations for the next year. 13 seminars were held over the state, attended by 354 lenders. Lenders ranked the value of this information to them as 8.8 on a 10 point scale. Tax schools were conducted at 6 locations over the state, attended by 403 tax preparers. Attendees learned details of tax laws and requirements, thus ensuring that clients would avoid unnecessary expenses from incorrect reporting or payment. Attendees ranked the value and usefulness of this information to them as 8.7 on a 10 point scale. Regional AgBusiness extension specialists met with many groups and individuals to explain special state and federal aid programs available for disasters affecting their areas. ITV sessions were also conducted by Regional AgBusiness Specialists across the state on farm leases, fencing laws, and estate planning. These have been well received in previous years, and continue to be quite well attended. Individual follow-up and consultations were also provided.

Key Items of Evaluation

Listed above

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Managing Forages for Profitable Animal Production - Global Food Security and Hunger

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
205	Plant Management Systems	50%			
307	Animal Management Systems	40%			
402	Engineering Systems and Equipment	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	8.0	0.0	0.0	0.0
Actual Paid Professional	12.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
545442	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
545442	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Extension specialists will use multiple delivery methods to reach the target audiences: on-line curriculum, regional grazing schools; core group meetings and "pasture walks"; winter feeding systems and summer pasture program using demos, clinics, and tours, fescue toxicosis and management workshops; conference; Ag. Lenders workshops, demonstration plots, grazing symposium field days at outlying research centers; websites, electronic guides; CDs with prepared presentations; in-service training (ISEs); news releases for the general public; and popular press articles.

2. Brief description of the target audience

The primary target audience includes Missouri forage and livestock producers. These are mainly producers of beef and dairy cattle, although the program does address forages for other livestock, such as sheep, goats and horses, and non-livestock forage producers, such as hay producers and wildlife conservationists. The program also targets industry and government, as it presents current science, technology and training to agricultural business and policymakers.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2700	7200	300	650

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	2	8	10

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Provide in-service training session(s) for regional Extension specialists on an annual basis.

Year	Actual
2013	3

Output #2

Output Measure

- Develop or revise guide sheets on an annual basis for regional Extension specialists to use in producer meetings.

Year	Actual
2013	1

Output #3

Output Measure

- Revise Missouri publication M168, Missouri Dairy Grazing Manual.

Year	Actual
2013	1

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Nine hundred (900) producers will annually attend a management-intensive grazing (MiG) school.
2	Five thousand (5,000) Missouri producers will increase their awareness of stockpiling and summer pasture management for beef cattle.
3	Increase the number of dairy farms that adopt the Missouri Pasture-based model resulting in increased profitability.

Outcome #1

1. Outcome Measures

Nine hundred (900) producers will annually attend a management-intensive grazing (MiG) school.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Management-intensive grazing is based on moving a herd of cattle from paddock to paddock, thereby intensifying the grazing pressure on a small area for a few days before allowing it to rest for several weeks. This practice results in more even distribution of manure, more legume persistence, and less application of commercial fertilizers. The benefit to producers is improved economic and environmental status of a livestock operation.

What has been done

In 2013, the University of Missouri teamed up with the Natural Resource Conservation Service to hold 21 multiday workshops for 577 producers. Also, working with our industry partners, we developed a ?tall fescue alliance? to help drive education efforts and increase adoption of the best management practices for dealing with tall fescue toxicosis. In 2013, we held two, day-long workshops on tall fescue toxicosis.

Results

Based on our evaluations, approximately 98% of the producers that attended the Grazing school plan to adopt various practices taught in these workshops, and half of these producers plan to apply for cost-share funds to improve their fencing and watering facilities. The investments in pasture improvements as a result of this program in 2013 alone, and only on Missouri farms, are likely to exceed \$5 million.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems

Outcome #2

1. Outcome Measures

Five thousand (5,000) Missouri producers will increase their awareness of stockpiling and summer pasture management for beef cattle.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Winter and midsummer feed accounts for about 70% of the cost of producing beef in the north-central United States. Beef producers have little control over output prices, so efforts to substantially improve profitability depend on finding new and innovative ways to reduce input costs, especially those for winter feed and summer pasture. Although the nature of systems-level research is complex, the program strategically attacks the problem from several angles.

What has been done

Winter meetings were conducted to address short feed supplies caused by the drought of 2012 and 2013. The curriculum was expanded to reflect new research results on stockpiled tall fescue for fall calving cow-calf pairs, to the importance of retaining ownership of calves through the stocker phase and ways to cope with high feed prices. In addition, grazing wedge software was developed to help beef producers plan and manage their pasture systems. Additionally, the programmatic efforts on retained ownership of fall-born calves through spring are being implemented on several farms in Missouri.

Results

More than 27,000 producers have adopted the techniques developed through this program. From 1998 to 2006, the percentage of producers using stockpiled tall fescue for winter feeding has doubled, from 26% to more than 54%. The increased use of stockpiled tall fescue and better summer pasture management saved the state's beef producers \$68 million in 2013. Several beef producer groups were formed as a result of the retained ownership programming.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems

- 307 Animal Management Systems
- 402 Engineering Systems and Equipment

Outcome #3

1. Outcome Measures

Increase the number of dairy farms that adopt the Missouri Pasture-based model resulting in increased profitability.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

There is strong interest in alternative systems of dairying that could lower costs of production. Analysis of data from dairy farms has clearly demonstrated that 55% of the variation in profit on a dairy operation relates to the cost of production and management, and the use of pasture systems has been shown to dramatically reduce the cost of production. A critical component of pasture utilization is weekly measurement and evaluation of paddocks if efficiency of the dairy is to improve.

What has been done

Three existing discussion groups met monthly in 2012 to discuss pasture-based dairy systems, forages and grazing management. In addition, a web-based grazing wedge calculator has been improved and made available for any user. An online pasture-based dairy course was developed for students and producers. The Missouri Dairy Grazing Manual is currently under revision to be used in pasture-based dairy educational programming.

Results

The monthly discussion groups have increased the knowledge and understanding of efficient use of pastures. When the project was initiated, about 30 percent of the total dry matter intake in these systems came from pasture, and now certain producers have been able to increase dry matter intake to 74%. The goal is to reach about 50%. Adoption of the grazing wedge has been a major factor in increasing pasture use. This tool, which also generates daily dry matter growth allows producers to make adjustments in sources of dry matter intake and not only increases efficiency, but also affects economic returns by being able to achieve optimum, economical milk production. The dairy grazing conference had 267 attendees from 12 states. The online course was conducted with 26 students in spring 2013.

4. Associated Knowledge Areas

KA Code	Knowledge Area
205	Plant Management Systems
307	Animal Management Systems

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Public Policy changes
- Government Regulations

Brief Explanation

Input costs and prices received for product affect all agricultural enterprises, but environmental conditions can have particularly adverse effects on pasture-based systems. While conditions in 2013 were generally better than in 2012, localized droughts reduced grazing time by almost 40 days, reducing pasture intake by about 1,000 pounds of dry matter. This necessitated the purchase of forages at approximately \$0.09 per pound of dry matter, compared with \$0.025 per pound of dry matter pasture (excluding land costs), costing producers \$65 per cow during this period. Conversely, this reduced profit by this amount, or \$13,000 for the average herd of 200 cows.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Economic conditions in 2013 resulted in more Missouri livestock producers adopting some level of grazing. Producers implementing grazing experienced savings of about \$1.00 per cow per day, with no impact on production. In most cases, production increased slightly. In addition, the University of Missouri pasture-based dairy team used data from the University of Missouri seasonal, pasture-based research dairy to develop forage system models that resulted in more intakes from pastures. Three operations adopted the model and significantly reduced the quantity of purchased feed. Based on discussions at workshops, several other operations will be changing their forage systems to better reflect the environmental conditions experienced in Missouri. This will significantly increase profitability and sustainability of these dairies. Research continues to refine the forage system model that is most efficient in the state.

Key Items of Evaluation

Data has consistently demonstrated that pasture-based dairy systems can produce milk for \$1 to \$2 less per hundred pounds of milk when compared with conventional dairy operations and that they represent a viable system that can have major impacts on the state's economy. The development of the Missouri model for pasture-based systems has been adopted and adapted by several other southeastern states. Educational efforts in Missouri have significantly increased investments in these systems statewide, over \$120 million during the past five years. As experienced here, significant progress can be made in educating potential implementers when land grant universities are willing to invest in this system of dairying. University of Missouri administration has recognized the potential

economic development to the state from pasture-based dairying and has been willing to invest in personnel and programming to some extent. But during tight budget conditions, the full potential of such programs may not be achievable. Enhanced collaboration among states in educational programs to demonstrate the economic viability, sustainability and profitability of pasture-based dairying will have a significant impact on state economies.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Creating Simple Environments for Positive Youth Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual Paid Professional	16.0	0.0	0.0	0.0
Actual Volunteer	2.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
471005	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
471005	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

School enrichment groups meet during school time and use curricula supplied through 4-H. The groups are coordinated by partnerships of 4-H/University of Missouri Extension and school personnel. Most of the groups meet for limited number of classroom hours rather than yearlong. Age guideline:

Youngpeople in grades K-12 or equivalent.

2. Brief description of the target audience

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders) Youth aged 5 - 19.

3. How was eXtension used?

About one-third of campus and field faculty are members of a community of practices pertaining to youth. eXtension allows them to collaborate on science and agricultural science programming for young people.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	3875	127	27938	820

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	5	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of Classroom Teachers trained to use 4-H School Enrichment Curricula.

Year	Actual
2013	1263

Output #2

Output Measure

- Number of Youth Enrollment in 4-H School Enrichment.

Year	Actual
2013	37894

Output #3

Output Measure

- Number of youth enrolled in embryology.

Year	Actual
2013	30476

Output #4

Output Measure

- Number of youth enrolled in special interest/short term programs.

Year	Actual
2013	216666

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Youth will increase knowledge and skills gained as reported by their classroom teacher or adult adviser.

Outcome #1

1. Outcome Measures

Youth will increase knowledge and skills gained as reported by their classroom teacher or adult adviser.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	8577

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Youth today must be prepared to live and work in a world that we can completely envision --- for jobs that do not yet exist, using technologies that have not been yet invented, solving problems that have not been identified. Changes in technology increases the demand for trained scientists and engineers and a broader understanding of technology and science by all citizens. The need for advanced technology abilities cuts across all types of communities, professions and skill levels.

What has been done

Working collaborative, 4-H field and campus faculty along with 7,222 teachers reach 37,894 youth through enriching the classroom environment and 216,666 young people in short term learning experiences focusing on specific interests in science, healthy living and citizenship. The 4-H Center hosts the Missouri After school Network that partners with the state department of education to reach 3,500 after school staff and 28,927 young people annually.

Results

The 4-H Center hosts the Missouri Afterschool Network that works synchronically with the Missouri Department of Secondary and Elementary Education to enhance the afterschool experience of 28,972 youth and 3,500 staff annually. Project Lift Off, a \$1.3 million dollar three-year grant from the Noyce Family Foundation, focuses on building systems to improve and expand STEM education offerings in afterschool and informal settings across Missouri. Leadership for the Missouri Girls Collaborative STEM Initiative to boost science opportunities and confidence of girls and young women in STEM resides with Project Lift staff of the MO 4-H Center. <http://www.moasn.org/#!start-a-program>.

All programs are driving youth outcomes in STEM of the following:

Increase interest in STEM

Increase college majors in STEM

Increase pipeline for careers in STEM

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

The ability to provide volunteer training and educational experiences for youth is dependent on having a well-educated and motivated local and state faculty to guide and support volunteers. In the past year, we have had six vacancies and two turnovers in local faculty. Currently there are two vacancies in the St. Louis Metropolitan area that hamper efforts to recruit, support and train volunteers to reach urban youth.

We are currently evaluating the impact of the 4-H Youth Development Program on alumni that left the program May, 2013. Results of the 4-H alumni study will be shared in next year's report.

We are laying the ground work to train faculty on the 4-H Youth Program Quality Assessment used by the University of Minnesota. Eventually, teams of faculty, volunteers and teens will be assessing their 4-H experience and developing plans to improve quality. Progress on this work will be reported in the future.

In addition, the 4-H Center for Youth Development is transitioning from the 4-H Lifeskills Evaluation System to the Common Measures Evaluation System.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Missouri 4-H Members are twice more likely to have been on a college campus than their non-4-H peers. Annually, MU Extension faculty and staff connect 8,500 youth to campus faculty. MU is by far the campus most frequently visited and 4-H is the second most reported reason to be on the MU Campus (Lerner, 2008). Being on a campus is a predictor of youth going on to higher education (Hoover, 2006).

- Missouri young people ages 5-18 participating in 4-H = 1 of every 5
- These students are more likely to go to college and enjoy:
 - o increased financial success for themselves and their offspring
 - o be better consumers
 - o improve quality of life through more opportunities for leisure and hobbies
 - o improve health for themselves and their children (Porter, 2003)
 - If 10% earn bachelor's degrees, their increased annual earnings will total \$56.7 billion (Porter, 2003).

In 2007, the University of Missouri 4H Center for Youth Development joined the national 4H Study of Positive Youth Development. Funded by the National 4H Council and led by researchers at Tufts University, this longitudinal study began with fifth graders in 2001. By the end of the study in 2009, data had been collected by extension faculty from 6,450 adolescents and over 3,000 of their parents in 45 states.

The advantages of 4-H participation include developing positive attitudes about science and more participation in science-focused activities during out-of-school time. The benefit for girls is particularly important. 4-H girls were significantly more positive on all measures related to science. Missouri girls in 4-H also reported increased interest in science-related topics.

4-H'ers believe in engaging in leadership today rather than waiting for future opportunities. 4-H members report twice the number of leadership experiences than their non-4-H peers.

The 4-H Center hosts the Missouri Afterschool Network that works synchronically with the Missouri Department of Secondary and Elementary Education to enhance the afterschool experience of 28,972 youth and 3,500 staff annually. Project Lift Off, a \$1.3 million dollar three-year grant from the Noyce Family Foundation, focuses on building systems to improve and expand STEM education offerings in afterschool and informal settings across Missouri. Leadership for the Missouri Girls Collaborative STEM Initiative to boost science opportunities and confidence of girls and young women in STEM resides with Project Lift staff of the MO 4-H Center. <http://www.moasn.org/#!/start-a-program>.

All programs are driving youth outcomes in STEM of the following:

- Increase interest in STEM
- Increase college majors in STEM
- Increase pipeline for careers in STEM

Key Items of Evaluation

We are currently evaluating the impact of the 4-H Youth Development Program on alumni that left the program May, 2013. Results of the 4-H alumni study will be shared in next year's report.

We are laying the ground work to train faculty on the 4-H Youth Program Quality Assessment used by the University of Minnesota. Eventually, teams of faculty, volunteers and teens will be assessing their 4-H experience and developing plans to improve quality. Progress on this work will be reported in the future.

In addition, the 4-H Center for Youth Development is transitioning from the 4-H Lifeskills Evaluation System to the Common Measures Evaluation System.

V(A). Planned Program (Summary)

Program # 8

1. Name of the Planned Program

Creating Collaborative Environments for Positive Youth Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	8.0	0.0	0.0	0.0
Actual Paid Professional	20.0	0.0	0.0	0.0
Actual Volunteer	6.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
543468	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
543468	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Developing and delivering youth development curricula to volunteers, staff, community members, parents, etc., to increase their understanding of developmental needs of youth, effective learning strategies and building effective youth/adult partnerships.

2. Brief description of the target audience

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders, non-4-H University of Missouri Extension faculty).

3. How was eXtension used?

Several faculty of the Youth Development Academy are members of eXtension and a couple of them are members of the Community of Practice for Youth and Science.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	6332	5378	9601	4378

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	12	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of adults trained by 4-H field and state faculty with youth development academy curricula.

Year **Actual**
 2013 84

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	80% of adults will report increase in knowledge, skills and attitudes to work with youth as a result of attending workshops or conferences where 4-H field or state faculty deliver youth development academy curricula.

Outcome #1

1. Outcome Measures

80% of adults will report increase in knowledge, skills and attitudes to work with youth as a result of attending workshops or conferences where 4-H field or state faculty deliver youth development academy curricula.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

MU Extension Youth Development Academy provides educational resources and training to prepare individuals to develop skills necessary to successfully work with youth. Professional Development opportunities for individuals working in the youth field are fragmented. The Youth Development Academy provides a comprehensive curriculum for laying a foundation for creating opportunities that promote positive youth development.

What has been done

MU Extension Youth Development Academy combines the teaching component of the 4-H Center with the training, continuing education and course credit needs of Cooperative Extension faculty and staff, other youth development professionals, and college students for work in public, private, or civic sectors. Content is based on the nationally accepted Standards for Professional Development from the USDA and are based upon a wide variety of proven and relevant research-based programs and curriculum.

Results

Of the 84 faculty and staff that completed the youth development academy 100% report that they have improved their knowledge of how youth grow and develop, skills at providing hands-on learning experiences and managing risk in their respective youth organizations and programs.

The Youth Development Academy successfully helps participants gain knowledge in:

?Recognizing and addressing developmental strengths in youth

?Applying non-formal education

?Understanding, respecting and working with all youth

?Evaluating youth programs

?Implementing conflict resolution strategies

- ?Strengthening youth adult partnerships
- ?Planning safe environments and managing risk
- ?Developing community partnerships
- ?Mobilizing volunteers

Testimonials:

- ?I loved the hands-on activities and real-life experiences.?
- ?The variety of facilitators and expertise made for a very active learning process.?
- ?YDA has refreshed and enhanced my knowledge. I know all the pieces to create a program that truly promotes positive youth development.?

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

The ability to provide volunteer training and educational experiences for youth is dependent on having a well-educated and motivated local and state faculty to guide and support volunteers. In the past year, we have had six vacancies and two turnovers in local faculty. Currently there are two vacancies in the St. Louis Metropolitan area that hamper efforts to recruit, support and train volunteers to reach urban youth.

We are currently evaluating the impact of the 4-H Youth Development Program on alumni that left the program May, 2013. Results of the 4-H alumni study will be shared in next year's report.

We are laying the ground work to train faculty on the 4-H Youth Program Quality Assessment used by the University of Minnesota. Eventually, teams of faculty, volunteers and teens will be assessing their 4-H experience and developing plans to improve quality. Progress on this work will be reported in the future.

In addition, the 4-H Center for Youth Development is transitioning from the 4-H Lifeskills Evaluation System to the Common Measures Evaluation System.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Of the 84 faculty and staff that completed the youth development academy 100% report that they have improved their knowledge of how youth grow and develop, skills at providing hands-on learning experiences and managing risk in their respective youth organizations and programs.

The Youth Development Academy successfully helps participants gain knowledge in:

- Recognizing and addressing developmental strengths in youth
- Applying non-formal education
- Understanding, respecting and working with all youth
- Evaluating youth programs
- Implementing conflict resolution strategies
- Strengthening youth adult partnerships
- Planning safe environments and managing risk
- Developing community partnerships
- Mobilizing volunteers

Testimonials:

"I loved the hands-on activities and real-life experiences."

"The variety of facilitators and expertise made for a very active learning process."

"YDA has refreshed and enhanced my knowledge. I know all the pieces to create a program that truly promotes positive youth development."

The 4-H Center hosts the Missouri Afterschool Network that works synchronically with the Missouri Department of Secondary and Elementary Education to enhance the afterschool experience of 28,972 youth and 3,500 staff annually. Project Lift Off, a \$1.3 million dollar three-year grant from the Noyce Family Foundation, focuses on building systems to improve and expand STEM education offerings in afterschool and informal settings across Missouri. Leadership for the Missouri Girls Collaborative STEM Initiative to boost science opportunities and confidence of girls and young women in STEM resides with Project Lift staff of the MO 4-H Center. <http://www.moasn.org/#!start-a-program>.

All programs are driving youth outcomes in STEM of the following:

Increase interest in STEM

Increase college majors in STEM

Increase pipeline for careers in STEM

Key Items of Evaluation

We are currently evaluating the impact of the 4-H Youth Development Program on alumni that left the program May, 2013. Results of the 4-H alumni study will be shared in next year's report.

We are laying the ground work to train faculty on the 4-H Youth Program Quality Assessment used by the University of Minnesota. Eventually, teams of faculty, volunteers and teens will be assessing their 4-H experience and developing plans to improve quality. Progress on this work will be reported in the future.

In addition, the 4-H Center for Youth Development is transitioning from the 4-H Lifeskills Evaluation System to the Common Measures Evaluation System.

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Creating Complex Environments for Positive Youth Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	25.0	0.0	0.0	0.0
Actual Paid Professional	18.0	0.0	0.0	0.0
Actual Volunteer	6.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
525353	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
525353	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

4-H Community Clubs.

2. Brief description of the target audience

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 5 - 19.

3. How was eXtension used?

About one-third of campus and field faculty are members of a community of practice pertaining to youth. eXtension allows them to collaborate on science and agricultural science programming.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	37659	58869	51474	66289

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	9	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of youth enrolled in 4-H community clubs.

Year	Actual
2013	22361

Output #2

Output Measure

- Number of 4-H volunteers.

Year	Actual
2013	11213

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	A sample of Missouri young people participating in the 4-H Study of positive youth development or those responding to the Missouri 4-H Life Skills survey will report they are competent, capable, caring and contributing.

Outcome #1

1. Outcome Measures

A sample of Missouri young people participating in the 4-H Study of positive youth development or those responding to the Missouri 4-H Life Skills survey will report they are competent, capable, caring and contributing.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	500

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Youth today must be prepared to live and work in a world that we can completely envision --- for jobs that do not yet exist, using technologies that have not been yet invented, solving problems that have not been identified. Changes in technology increases the demand for trained scientists and engineers and a broader understanding of technology and science by all citizens. The need for advanced technology abilities cuts across all types of communities, professions and skill levels.

What has been done

Working collaborative, 4-H field and campus faculty with 11,213 volunteers reach 276,921 youth across Missouri with Food, Health and Fitness (217,415), Science (68,446) and Citizenship/Leadership (28,880) programming.

Results

Missouri 4-H Members are twice more likely to have been on a college campus than their non-4-H peers. Annually, MU Extension faculty and staff connect 8,500 youth to campus faculty. MU is by far the campus most frequently visited and 4-H is the second most reported reason to be on the MU Campus (Lerner, 2008). Being on a campus is a predictor of youth going on to higher education (Hoover, 2006).

Our findings conclude there are advantages of 4-H participation for developing positive attitudes about science and more active participation in science-focused experiences during out-of-school time. The benefit for girls is particularly important. 4-H girls were significantly more positive on all measures related to science. Missouri girls in 4-H also reported increased interest in science-related topics.

4-H'ers believe in engaging in leadership today rather than waiting for future opportunities. 4-H members report twice the number of leadership experiences than their non-4-H peers.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

The ability to provide volunteer training and educational experiences for youth is dependent on having a well-educated and motivated local and state faculty to guide and support volunteers. In the past year, we have had six vacancies and two turnovers in local faculty. Currently there are two vacancies in the St. Louis Metropolitan area that hamper efforts to recruit, support and train volunteers to reach urban youth.

We are currently evaluating the impact of the 4-H Youth Development Program on alumni that left the program May, 2013. Results of the 4-H alumni study will be shared in next year's report.

We are laying the ground work to train faculty on the 4-H Youth Program Quality Assessment used by the University of Minnesota. Eventually, teams of faculty, volunteers and teens will be assessing their 4-H experience and developing plans to improve quality. Progress on this work will be reported in the future.

In addition, the 4-H Center for Youth Development is transitioning from the 4-H Lifeskills Evaluation System to the Common Measures Evaluation System.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Missouri 4-H Members are twice more likely to have been on a college campus than their non-4-H peers. Annually, MU Extension faculty and staff connect 8,500 youth to campus faculty. MU is by far the campus most frequently visited and 4-H is the second most reported reason to be on the MU Campus (Lerner, 2008). Being on a campus is a predictor of youth going on to higher education (Hoover, 2006).

- Missouri young people ages 5-18 participating in 4-H = 1 of every 5
- These students are more likely to go to college and enjoy:
 - o increased financial success for themselves and their offspring
 - o be better consumers
 - o improve quality of life through more opportunities for leisure and hobbies
 - o improve health for themselves and their children (Porter, 2003)
 - If 10% earn bachelor's degrees, their increased annual earnings will total \$56.7 billion (Porter, 2003).

In 2007, the University of Missouri 4H Center for Youth Development joined the national 4H Study of Positive Youth Development. Funded by National 4H Council and led by researchers at Tufts University, this longitudinal study began with fifth graders in 2001. By the end of the study in 2009, data had been collected by extension faculty from 6,450 adolescents and over 3,000 of their parents in 45 states.

The advantages of 4-H participation include developing positive attitudes about science and more participation in science-focused activities during out-of-school time. The benefit for girls is particularly important. 4-H girls were significantly more positive on all measures related to science. Missouri girls in 4-H also reported increased interest in science-related topics.

4-H'ers believe in engaging in leadership today rather than waiting for future opportunities. 4-H members report twice the number of leadership experiences than their non-4-H peers.

The 4-H Center hosts the Missouri Afterschool Network that works synchronically with the Missouri Department of Secondary and Elementary Education to enhance the afterschool experience of 28,972 youth and 3,500 staff annually. Project Lift Off, a \$1.3 million dollar three-year grant from the Noyce Family Foundation, focuses on building systems to improve and expand STEM education offerings in afterschool and informal settings across Missouri. Leadership for the Missouri Girls Collaborative STEM Initiative to boost science opportunities and confidence of girls and young women in STEM resides with Project Lift staff of the MO 4-H Center. <http://www.moasn.org/#!start-a-program>.

All programs are driving youth outcomes in STEM of the following:

- ü Increase interest in STEM
- ü Increase college majors in STEM

Increase pipeline for careers in STEM

Key Items of Evaluation

We are currently evaluating the impact of the 4-H Youth Development Program on alumni that left the program May, 2013. Results of the 4-H alumni study will be shared in next year's report.

We are laying the ground work to train faculty on the 4-H Youth Program Quality Assessment used by the University of Minnesota. Eventually, teams of faculty, volunteers and teens will be assessing their 4-H experience and developing plans to improve quality. Progress on this work will be reported in the future.

In addition, the 4-H Center for Youth Development is transitioning from the 4-H Lifeskills Evaluation System to the Common Measures Evaluation System.

The 4-H Center hosts the Missouri Afterschool Network that works synchronically with the Missouri Department of Secondary and Elementary Education to enhance the afterschool experience of 28,972 youth and 3,500 staff annually. Project Lift Off, a \$1.3 million dollar three-year grant from the Noyce Family Foundation, focuses on building systems to improve and expand STEM education offerings in afterschool and informal settings across Missouri. Leadership for the Missouri Girls Collaborative STEM Initiative to boost science opportunities and confidence of girls and young women in STEM resides with Project Lift staff of the MO 4-H Center. <http://www.moasn.org/#!start-a-program>.

All programs are driving youth outcomes in STEM of the following:

Increase interest in STEM

Increase college majors in STEM

Increase pipeline for careers in STEM

V(A). Planned Program (Summary)

Program # 10

1. Name of the Planned Program

Volunteer Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	25.0	0.0	0.0	0.0
Actual Paid Professional	10.0	0.0	0.0	0.0
Actual Volunteer	11213.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
271734	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
271734	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

County, regional and state volunteer workshops and forums, Communications, Program management, Educational Design and Delivery, Interpersonal Skills, and Youth Development; Leadership roles of 4-H clubs, projects, county and state educational events, Letters to New Leaders, and Make the,

Best Better Modules; Web-based instruction; Youth Protection Policies and Procedures (Volunteer Screening).

2. Brief description of the target audience

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 5 - 19.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	39498	63882	504	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	4	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- County, regional and state volunteer workshops and forums, Leadership roles of 4-H clubs, projects, county and state educational events; Web-based instruction; Youth Protection Policies and Procedures (Volunteer Screening).

Year Actual

2013

3101

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	5,000 adults and youth volunteers will increase knowledge and awareness of practices fostering positive youth development.
2	5,000 adult and youth volunteers apply practices of positive youth development through leadership roles.
3	Number of volunteers completing Volunteers: The Foundation of Youth Development.
4	Number of volunteers screened prior to service.

Outcome #1

1. Outcome Measures

5,000 adults and youth volunteers will increase knowledge and awareness of practices fostering positive youth development.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	10709

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Volunteers: both adult and youth are the backbone of the Missouri 4-H Youth Development Programs by teaching skills, managing the work of others, mentoring youth, working with teachers and schools, coordinating county and state events and promoting 4-H.

What has been done

Through workshops, volunteer forums, leadership roles and web-based instruction, state and county extension faculty help adults and youth volunteers gain knowledge and skills to design, deliver and develop interpersonal skills that create learning environments that promote positive youth development.

Results

Of the 1,385 volunteers completing volunteer orientation between September 1, 2012 and August, 31, 2013:

?87% understand that 4-H is protected by U.S. Congress

?99% understand the purpose of 4-H

?82% understand that all state events provide youth with the opportunity to connect with the latest technology at the land-grant university

?63% understand the basic building blocks of positive youth development programming

?95% understand the difference between life skills and content skill development

?98% understand the importance of reflection in experiential learning

?98% understand the importance of using open-ended questions to help kids learn

?80 % understand how kids grow and development over time

?90% understand the 4-H philosophy of competition

?90% understand the concept of mastery

?99% understand qualities of good character and the correlation to being a good role model for youth

?99% understand how to keep kids safe while having fun

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

5,000 adult and youth volunteers apply practices of positive youth development through leadership roles.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	11213

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Volunteers, both adult and youth, are the backbone of the Missouri 4-H Youth Development Programs by teaching skills, managing the work of others, mentoring youth, working with teachers and schools, coordinating county and state events and promoting 4-H.

What has been done

Through workshops, volunteer forums, leadership roles and web-based instruction, state and county extension faculty help adults and youth volunteers gain knowledge and skills to design, deliver and develop interpersonal skills that create learning environments that promote positive youth development.

Results

11,213 volunteers reached 276,921 youth in Missouri 4-H Youth Development programming. 8% were in 4-H clubs and 78% worked with youth in special interest groups. Missouri volunteers report they contribute 200 hours per year. Valuing their time at \$19.00 per hour, the contribution of Missouri 4-H volunteers was worth more than \$42.61 million in 2013!

4. Associated Knowledge Areas

KA Code	Knowledge Area
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806 Youth Development

Outcome #3

1. Outcome Measures

Number of volunteers completing Volunteers: The Foundation of Youth Development.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	8075

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Volunteers, both adult and youth, are the backbone of the Missouri 4-H Youth Development Programs by teaching skills, managing the work of others, mentoring youth, working with teachers and schools, coordinating county and state events and promoting 4-H.

What has been done

Through workshops, volunteer forums, leadership roles and web-based instruction, state and county extension faculty help adults and youth volunteers gain knowledge and skills to design, deliver and develop interpersonal skills that create learning environments that promote positive youth development.

Results

Of the 1,385 volunteers completing volunteer orientation between September 1, 2012 and August, 31, 2013:

- ?87% understand that 4-H is protected by U.S. Congress
- ?99% understand the purpose of 4-H
- ?82% understand that all state events provide youth with the opportunity to connect with the latest technology at the land-grant university
- ?63% understand the basic building blocks of positive youth development programming
- ?95% understand the difference between life skills and content skill development
- ?98% understand the importance of reflection in experiential learning
- ?98% understand the importance of using open-ended questions to help kids learn
- ?80 % understand how kids grow and development over time
- ?90% understand the 4-H philosophy of competition
- ?90% understand the concept of mastery
- ?99% understand qualities of good character and the correlation to being a good role model for

youth
99% understand how to keep kids safe while having fun

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #4

1. Outcome Measures

Number of volunteers screened prior to service.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	8266

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Volunteers, both adult and youth, are the backbone of the Missouri 4-H Youth Development Programs by teaching skills, managing the work of others, mentoring youth, working with teachers and schools, coordinating county and state events and promoting 4-H.

What has been done

Through workshops, volunteer forums, leadership roles and web-based instruction, state and county extension faculty help adults and youth volunteers gain knowledge and skills to design, deliver and develop interpersonal skills that create learning environments that promote positive youth development.

Results

Missouri 4-H Youth Development programs screened 8,266 volunteers prior to service to create a safe environment for the 276,921 youth participants.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

The ability to provide volunteer training and educational experiences for youth is dependent on having a well-educated and motivated local and state faculty to guide and support volunteers. In the past year, we have had six vacancies and two turnovers in local faculty. Currently there are two vacancies in the St. Louis Metropolitan area that hamper efforts to recruit, support and train volunteers to reach urban youth.

We are currently evaluating the impact of the 4-H Youth Development Program on alumni that left the program May, 2013. Results of the 4-H alumni study will be shared in next year's report.

We are laying the ground work to train faculty on the 4-H Youth Program Quality Assessment used by the University of Minnesota. Eventually, teams of faculty, volunteers and teens will be assessing their 4-H experience and developing plans to improve quality. Progress on this work will be reported in the future.

In addition, the 4-H Center for Youth Development is transitioning from the 4-H Lifeskills Evaluation System to the Common Measures Evaluation System.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Of the 1,385 volunteers completing volunteer orientation between September 1, 2012 and August, 31, 2013:

- 87% understand that 4-H is protected by U.S. Congress
- 99% understand the purpose of 4-H
- 82% understand that all state events provide youth with the opportunity to connect with the latest technology at the land-grant university
- 63% understand the basic building blocks of positive youth development programming
- 95% understand the difference between life skills and content skill development

- . 98% understand the importance of reflection in experiential learning
- . 98% understand the importance of using open-ended questions to help kids learn
- . 80 % understand how kids grow and development over time
- . 90% understand the 4-H philosophy of competition
- . 90% understand the concept of mastery
- . 99% understand qualities of good character and the correlation to being a good role model for youth
- . 99% understand how to keep kids safe while having fun

11,213 volunteers reached 276,921 youth in Missouri 4-H Youth Development programming. 8% were in 4-H clubs and 78% worked with youth in special interest groups. Missouri volunteers report they contribute 200 hours per year. Valuing their time at \$19.00 per hour, the contribution of Missouri 4-H volunteers was worth more than \$42.61 million in 2013.

Key Items of Evaluation

We are currently evaluating the impact of the 4-H Youth Development Program on alumni that left the program May, 2013. Results of the 4-H alumni study will be shared in next year's report.

We are laying the ground work to train faculty on the 4-H Youth Program Quality Assessment used by the University of Minnesota. Eventually, teams of faculty, volunteers and teens will be assessing their 4-H experience and developing plans to improve quality. Progress on this work will be reported in the future.

In addition, the 4-H Center for Youth Development is transitioning from the 4-H Lifeskills Evaluation System to the Common Measures Evaluation System.

V(A). Planned Program (Summary)

Program # 11

1. Name of the Planned Program

Built Environments and Sustainable Energy

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
605	Natural Resource and Environmental Economics	3%			
608	Community Resource Planning and Development	2%			
723	Hazards to Human Health and Safety	5%			
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	90%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual Paid Professional	4.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
122240	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
122240	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct hands-on workshops for builders and consumers. Assemble and maintain relevant website and guide sheet information. Create a comprehensive Missouri Guide to Green Buildings. Encourage and support involvement in state, county, and local governments and agencies supporting energy-efficient, green buildings and homes. Assemble and maintain relevant website and guide sheet information on indoor air quality, home pollutants, home safety, and disaster preparedness. Maintain curriculum for K-12 schools and at-risk families. Encourage and support involvement in state, county, and local governments and agencies supporting healthy homes and disaster preparedness. Assemble and maintain relevant website and guide sheet information on housing types, maintenance, renting, home financial management and development. Develop curriculum for advocacy groups, housing agencies and nonprofit organizations. Encourage and support involvement in housing coalitions and agencies.

2. Brief description of the target audience

Government Emergency management departments; Health Agencies; Medical groups and agencies; Day care providers; 4-H programs and Family and consumer science educators; Landlords and tenants; Builders and contractors; Real estate agents and brokers; K-12 educators, students, school districts; Consumers of home appliances; Do-it-yourself consumers; Business owners; Non-profit Energy and Ecological Organizations; Energy Cooperatives and Utilities; First Time Home buyers; Existing and Long-term Homeowners; Non-profit Housing Agencies; Government and State Housing Directors.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1673	5501	1155	847

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total

Actual	0	0	0
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V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of workshops, programs, fairs, and conferences.

Year	Actual
2013	167

Output #2

Output Measure

- Number of unique website visits.

Year	Actual
2013	63245

Output #3

Output Measure

- Number of guide sheets distributed.

Year	Actual
2013	253

Output #4

Output Measure

- Number of in-service opportunities.

Year	Actual
2013	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of participants who have a home disaster preparedness plan.
2	Percent of participants who secure funding to purchase a home.
3	Percent of participants who indicate they feel able to maintain their home.
4	Percent of participants who have implemented energy conservation technologies.

Outcome #1

1. Outcome Measures

Percent of participants who have a home disaster preparedness plan.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	39

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Annually Missourians are severely affected by fire and weather disasters. The possibility also exists that Missourians might be affected by man-made (terror) and/or seismic disasters. Emergency preparedness teaches families how to prepare and cope with these possible disasters; Identify hazards likely to happen to your family; Mitigate against the hazards; Develop a response plan, including evacuation route; Plan for coping after a disaster; Implement drills and family education.

What has been done

Building Environments programs educate consumers, professionals and government agencies about available and affordable housing options (including programs geared toward first-time homebuyers), housing quality, landlord-tenant relations, long-term home maintenance, healthy indoor air quality, healthy homes, home safety, home disaster preparedness (fire, weather, security) and promoting environmentally-sensitive and energy-efficient homes and buildings in Missouri.

Results

39% of program participants developed a home disaster preparedness plan. These participants understood the importance of being prepared and having a plan in place prior to an emergency situation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development

723	Hazards to Human Health and Safety
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #2

1. Outcome Measures

Percent of participants who secure funding to purchase a home.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	94

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Annually Missourians are severely affected by fire and weather disasters. The possibility also exists that Missourians might be affected by man-made (terror) and/or seismic disasters. Emergency preparedness teaches families how to prepare and cope with these possible disasters; Identify hazards likely to happen to your family; Mitigate against the hazards; Develop a response plan, including evacuation route; Plan for coping after a disaster; Implement drills and family education.

What has been done

Building Environments programs educate consumers, professionals and government agencies about available and affordable housing options (including programs geared toward first-time home buyers), housing quality, landlord-tenant relations, long-term home maintenance, healthy indoor air quality, healthy homes, home safety, home disaster preparedness (fire, weather, security) and promoting environmentally-sensitive and energy-efficient homes and buildings in Missouri.

Results

94% of participants in Home buyer Education courses securing funding to purchase a home. Most received a reduced interest rate for their mortgage, which will in turn save thousands of dollars over the term of the loan.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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605	Natural Resource and Environmental Economics
608	Community Resource Planning and Development
723	Hazards to Human Health and Safety
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

Outcome #3

1. Outcome Measures

Percent of participants who indicate they feel able to maintain their home.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Percent of participants who have implemented energy conservation technologies.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Not reporting on evaluation

Key Items of Evaluation

Not reporting on evaluation

V(A). Planned Program (Summary)

Program # 12

1. Name of the Planned Program

Strengthening Families

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
802	Human Development and Family Well-Being	75%			
806	Youth Development	25%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	30.0	0.0	0.0	0.0
Actual Paid Professional	20.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
820751	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
820751	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct workshops, multi-session programs and meetings; develop products, curriculum and resources; provide training; work with media; partnering with other agencies and with other state extensions.

2. Brief description of the target audience

Adults, parents, teens, childcare providers, grandparents, foster parents, professionals, teachers, agency educators, youth ages 5-12.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	19504	25891	8540	4090

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	3	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of workshops, multi-session programs, fairs, and conferences.

Year	Actual
2013	1415

Output #2

Output Measure

- Number of guide sheets distributed.

Year	Actual
2013	805

Output #3

Output Measure

- Number of in-service opportunities.

Year	Actual
2013	5

Output #4

Output Measure

- Number of website visits.

Year	Actual
2013	409422

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of participants reporting improved family relationships.
2	Percent of participants reporting improved family communication.
3	Percent of participants who show increased knowledge of appropriate parenting practices.
4	Percent of participants who have adopted appropriate parenting practices.
5	Percent reporting an increase in awareness of developmentally appropriate learning environments and activities.
6	Percent reporting they implemented age appropriate learning environments and activities.
7	Percent reporting an increased knowledge of how to manage caregiving roles and responsibilities.
8	Percent reporting an increased knowledge of the availability of family elder care.

Outcome #1

1. Outcome Measures

Number of participants reporting improved family relationships.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	3650

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research shows that strong families communicate with one another, spend time together, show each other caring and appreciation, cope with change, and show each other affection. The Strengthening Families Programs will help families find their strengths and learn new skills to build on these strengths. They will be treated as co-learners who have life experiences to bring to the learning process.

What has been done

The Strengthening Families Planned Program has provided families and professionals with information and skills to strengthen families in their relationships, interactions and communications.

Results

3,605 reported improved familial relationships as a result of participating in a Family Strengthening Program. Most participants were from low SES families who would be considered fragile families.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #2

1. Outcome Measures

Percent of participants reporting improved family communication.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	65

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research shows that strong families communicate with one another, spend time together, show each other caring and appreciation, cope with change, and show each other affection. The Strengthening Families Programs will help families find their strengths and learn new skills to build on these strengths. They will be treated as co-learners who have life experiences to bring to the learning process.

What has been done

The Strengthening Families Planned Program has provided families and professionals with information and skills to strengthen families in their relationships, interactions and communications.

Results

65% of Family Strengthening program participants reported improved communication among family members as a result of the skills they acquired.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development

Outcome #3

1. Outcome Measures

Percent of participants who show increased knowledge of appropriate parenting practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	76

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research shows that strong families communicate with one another, spend time together, show each other caring and appreciation, cope with change, and show each other affection. The Strengthening Families Programs will help families find their strengths and learn new skills to build on these strengths. They will be treated as co-learners who have life experiences to bring to the learning process.

What has been done

The Strengthening Families Planned Program has provided families and professionals with information and skills to strengthen families in their relationships, interactions and communications.

Results

76% of program participants demonstrate an increased knowledge about appropriate parenting practices on post-program evaluations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #4

1. Outcome Measures

Percent of participants who have adopted appropriate parenting practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	75

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research shows that strong families communicate with one another, spend time together, show each other caring and appreciation, cope with change, and show each other affection. The Strengthening Families Programs will help families find their strengths and learn new skills to build on these strengths. They will be treated as co-learners who have life experiences to bring to the learning process.

What has been done

The Strengthening Families Planned Program has provided families and professionals with information and skills to strengthen families in their relationships, interactions and communications.

Results

75% of Family Strengthening program participants adopt at least one new positive parenting practice.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #5

1. Outcome Measures

Percent reporting an increase in awareness of developmentally appropriate learning environments and activities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	76

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research shows that strong families communicate with one another, spend time together, show each other caring and appreciation, cope with change, and show each other affection. The Strengthening Families Programs will help families find their strengths and learn new skills to build on these strengths. They will be treated as co-learners who have life experiences to bring to the learning process.

What has been done

The Strengthening Families Planned Program has provided families and professionals with information and skills to strengthen families in their relationships, interactions and communications.

Results

76% of childcare program participants demonstrate knowledge and/or awareness of age appropriate learning environments and activities.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #6

1. Outcome Measures

Percent reporting they implemented age appropriate learning environments and activities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	95

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research shows that strong families communicate with one another, spend time together, show each other caring and appreciation, cope with change, and show each other affection. The Strengthening Families Programs will help families find their strengths and learn new skills to build on these strengths. They will be treated as co-learners, who have life experiences to bring to the learning process.

What has been done

The Strengthening Families Planned Program has provided families and professionals with information and skills to strengthen families in their relationships, interactions and communications.

Results

95% of childcare program participants indicate they have implemented one or more of the age appropriate activities into their care setting.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #7

1. Outcome Measures

Percent reporting an increased knowledge of how to manage caregiving roles and responsibilities.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	95

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research shows that strong families communicate with one another, spend time together, show each other caring and appreciation, cope with change, and show each other affection. The Strengthening Families Programs will help families find their strengths and learn new skills to build on these strengths. They will be treated as co-learners who have life experiences to bring to the learning process.

What has been done

The Strengthening Families Planned Program has provided families and professionals with information and skills to strengthen families in their relationships, interactions and communications.

Results

95% of those completing caregiver training demonstrate understanding of appropriate caregiver roles and practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
802	Human Development and Family Well-Being

Outcome #8

1. Outcome Measures

Percent reporting an increased knowledge of the availability of family elder care.

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No evaluation results

Key Items of Evaluation

76% of program participants demonstrate an increased knowledge about appropriate parenting practices on post-program evaluations. Research indicates that families who are able to communicate effectively have reduced stress, increase the amount of time spent together and reduce the incidence of child abuse and neglect.

V(A). Planned Program (Summary)

Program # 13

1. Name of the Planned Program

Personal Financial Management

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
607	Consumer Economics	25%			
801	Individual and Family Resource Management	75%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual Paid Professional	4.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
174628	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
174628	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

University of Missouri campus and regional specialist will: Work in partnership to identify audience needs; Develop appropriate curriculum and program strategies; and Evaluate the impact of the educational experiences. Delivery strategies will include: Workshops; One-on-one coaching sessions; Training for professionals and elder care providers; Written materials; Educational packets; Newsletters; Newspaper articles; Radio and television spots; and Web-based informational tools.

2. Brief description of the target audience

General population, general adult population, low income families, unbanked consumers, consumers going through bankruptcy, youth from pre-school through high school, college students, young couples, divorcing couples, women, older individuals and the elderly (55 and beyond), and family agencies.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	7986	2041	457	100

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of workshops, multi-session programs, fairs and conferences.

Year	Actual
2013	453

Output #2

Output Measure

- Number of in-service opportunities.

Year	Actual
2013	7

Output #3

Output Measure

- Number of unique website visits.

Year	Actual
2013	175296

Output #4

Output Measure

- Number of guide sheets distributed.

Year	Actual
2013	3

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Number of participants who increased knowledge of debt management.
2	Number of participants who increased knowledge of the benefits of saving on a regular basis.
3	Number of participants who increased knowledge of basic personal financial management.
4	Number of participants who have reduced their debt.
5	Number of participants who began saving on a regular basis.
6	Number of participants who increased the amount of money they save regularly.
7	Number of participants who have established financial goals to guide financial decisions.
8	Percent of participants who check their credit report.
9	Percent of participants who understand their rights under the Fair Credit Reporting Act.

Outcome #1

1. Outcome Measures

Number of participants who increased knowledge of debt management.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	6826

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

MU Extension provides the general public, special target groups, youth, older citizens and agency personnel with basic, unbiased personal finance information. With research-based curricula, we educate consumers to meet financial education requirements for bankruptcy discharge, financial literacy, home buying strategies, estate planning and retirement asset distribution strategies.

What has been done

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school and the elderly. This program area will also address consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

Results

6,826 program participants increased their knowledge of debt management.

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

Outcome #2

1. Outcome Measures

Number of participants who increased knowledge of the benefits of saving on a regular basis.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	6445

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

MU Extension provides the general public, special target groups, youth, older citizens and agency personnel with basic, unbiased personal finance information. With research-based curricula, we educate consumers to meet financial education requirements for bankruptcy discharge, financial literacy, home buying strategies, estate planning and retirement asset distribution strategies.

What has been done

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school and the elderly. This program area will also address consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

Results

6,445 program participants increased knowledge of the benefits of saving on a regular basis.

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

Outcome #3

1. Outcome Measures

Number of participants who increased knowledge of basic personal financial management.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	6893

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

MU Extension provides the general public, special target groups, youth, older citizens and agency personnel with basic, unbiased personal finance information. With research-based curricula, we educate consumers to meet financial education requirements for bankruptcy discharge, financial literacy, home buying strategies, estate planning and retirement asset distribution strategies.

What has been done

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school and the elderly. This program area will also address consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

Results

6,893 program participants increased their knowledge of basic personal financial management.

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

Outcome #4

1. Outcome Measures

Number of participants who have reduced their debt.

Not Reporting on this Outcome Measure

Outcome #5

1. Outcome Measures

Number of participants who began saving on a regular basis.

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Number of participants who increased the amount of money they save regularly.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Number of participants who have established financial goals to guide financial decisions.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	6378

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

MU Extension provides the general public, special target groups, youth, older citizens and agency personnel with basic, unbiased personal finance information. With research-based curricula, we educate consumers to meet financial education requirements for bankruptcy discharge, financial literacy, home buying strategies, estate planning and retirement asset distribution strategies.

What has been done

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school and the elderly. This program area will also address consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

Results

6,378 program participants have established financial goals to guide financial decisions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

Outcome #8

1. Outcome Measures

Percent of participants who check their credit report.

Not Reporting on this Outcome Measure

Outcome #9

1. Outcome Measures

Percent of participants who understand their rights under the Fair Credit Reporting Act.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
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3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

MU Extension provides the general public, special target groups, youth, older citizens and agency personnel with basic, unbiased personal finance information. With research-based curricula, we educate consumers to meet financial education requirements for bankruptcy discharge, financial literacy, home buying strategies, estate planning and retirement asset distribution strategies.

What has been done

Personal Financial Management is delivered through curricula that target low income families, family agencies, the general adult population, college students, women, unbanked consumers, consumers going through bankruptcy, young couples, divorcing couples, youth from pre-school through high school and the elderly. This program area will also address consumer issues such as fraud and identity theft, credit reports, predatory lending and basic consumer decision making skills.

Results

70% of program participants understand their rights under the Fair Credit Reporting Act.

4. Associated Knowledge Areas

KA Code	Knowledge Area
607	Consumer Economics
801	Individual and Family Resource Management

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No evaluation results

Key Items of Evaluation

No evaluation results

V(A). Planned Program (Summary)

Program # 14

1. Name of the Planned Program

Food Safety

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	0.0	0.0
Actual Paid Professional	4.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
192091	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
192091	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Number of Curriculum developed; Number of individual inquiries responded to; Number of trainings for large groups; Number of smaller workshops; Number of guide sheets written; Number of newsletter articles written; Number of media interviews held.

2. Brief description of the target audience

Pre K - 12th grade students, food stamp individuals and households, general adults, older adults, nursing home assistants, daycare providers.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1582	7369	90	85

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013

Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	1	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of workshops, multi-session programs, fairs and conferences.

Year	Actual
2013	155

Output #2

Output Measure

- Number of in-service opportunities.

Year	Actual
2013	2

Output #3

Output Measure

- Number of website visits.

Year	Actual
2013	91184

Output #4

Output Measure

- Number of guide sheets.

Year	Actual
2013	2201

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent reporting an increased knowledge of proper hand washing.
2	Percent reporting an increased knowledge of cooking foods adequately.
3	Percent reporting an increased knowledge of avoiding cross-contamination.
4	Percent reporting an increased knowledge of keeping food at a safe temperature.
5	Percent reporting an increased knowledge of storing foods properly.
6	Percent reporting an intent to adopt one or more safe food handling practices.

Outcome #1

1. Outcome Measures

Percent reporting an increased knowledge of proper hand washing.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	82

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The need is to protect food from contamination by pathogenic microorganisms, parasites and naturally occurring toxins. A large portion of the population is improperly and unsafely handling food in the home, leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses occur annually, resulting in 325,000 hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, day care providers, etc.

What has been done

Food safety education through the University of Missouri Extension involves answering consumer questions and teaching safe food handling concepts, both through regional specialists as well as within the Family Nutrition Education Program. Clients include, but are not limited to, limited resource families, school children, minority families, youth, adults, day care providers, etc.

Results

82% of program participants demonstrate an increased knowledge of proper hand washing techniques.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #2

1. Outcome Measures

Percent reporting an increased knowledge of cooking foods adequately.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	69

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The need is to protect food from contamination by pathogenic microorganisms, parasites and naturally occurring toxins. A large portion of the population is improperly and unsafely handling food in the home, leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses occur annually, resulting in 325,000 hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, day care providers, etc.

What has been done

Food safety education through the University of Missouri Extension involves answering consumer questions and teaching safe food handling concepts, both through regional specialists as well as within the Family Nutrition Education Program. Clients include, but are not limited to, limited resource families, school children, minority families, youth, adults, day care providers, etc.

Results

69% of program participants increased their knowledge of how to cook foods properly.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #3

1. Outcome Measures

Percent reporting an increased knowledge of avoiding cross-contamination.

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Percent reporting an increased knowledge of keeping food at a safe temperature.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	41

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The need is to protect food from contamination by pathogenic microorganisms, parasites and naturally occurring toxins. A large portion of the population is improperly and unsafely handling food in the home, leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses occur annually, resulting in 325,000 hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, day care providers, etc.

What has been done

Food safety education through the University of Missouri Extension involves answering consumer questions and teaching safe food handling concepts, both through regional specialists as well as within the Family Nutrition Education Program. Clients include, but are not limited to, limited resource families, school children, minority families, youth, adults, day care providers, etc.

Results

41% of program participants demonstrated an increased knowledge of keeping foods at a safe temperature.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #5

1. Outcome Measures

Percent reporting an increased knowledge of storing foods properly.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	60

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The need is to protect food from contamination by pathogenic microorganisms, parasites and naturally occurring toxins. A large portion of the population is improperly and unsafely handling food in the home, leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses occur annually, resulting in 325,000 hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, day care providers, etc.

What has been done

Food safety education through the University of Missouri Extension involves answering consumer questions and teaching safe food handling concepts, both through regional specialists as well as within the Family Nutrition Education Program. Clients include, but are not limited to, limited resource families, school children, minority families, youth, adults, day care providers, etc.

Results

60% of program participants demonstrated an increase in knowledge of proper food storage techniques.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

Outcome #6

1. Outcome Measures

Percent reporting an intent to adopt one or more safe food handling practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	81

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The need is to protect food from contamination by pathogenic microorganisms, parasites and naturally occurring toxins. A large portion of the population is improperly and unsafely handling food in the home, leading to potentially lethal illnesses. Seventy-six million cases of food borne illnesses occur annually, resulting in 325,000 hospitalizations and 5,000 deaths. Clients include limited resource families, school children, minority families, youth, adults, day care providers, etc.

What has been done

Food safety education through the University of Missouri Extension involves answering consumer questions and teaching safe food handling concepts, both through regional specialists as well as within the Family Nutrition Education Program. Clients include, but are not limited to, limited resource families, school children, minority families, youth, adults, day care providers, etc.

Results

81% of program participants improved one or more food safety practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Not reporting on evaluation results

Key Items of Evaluation

81% of program participants improved one or more food safety practices.

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

Nutrition, Health and Physical Activity

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
703	Nutrition Education and Behavior	33%			
724	Healthy Lifestyle	33%			
806	Youth Development	34%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	15.0	0.0	0.0	0.0
Actual Paid Professional	12.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
436570	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
436570	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Use direct and indirect methods to provide education and targeted messages on nutrition, physical activity, and self-care management. Some specific methods used will include group education, workshops, train-the-trainer strategies, newsletters, web-based education, and media efforts. In addition there will be community level interventions through partnerships that will be developed. This will include working with local coalitions to develop awareness campaigns.

2. Brief description of the target audience

Adults, youth ages 3 through 18, low-income Missourians, pregnant women, adults 55 and older, volunteers, teachers and community members, school teachers and nurses, other adults interested in improving their quality of life.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	90556	288037	888399	19603

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	5	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of workshops, conferences, multi-session programs and fairs held.

Year	Actual
2013	48194

Output #2

Output Measure

- Number of in-service opportunities.

Year	Actual
2013	22

Output #3

Output Measure

- Number of partnerships formed.

Year	Actual
2013	0

Output #4

Output Measure

- Number of community campaigns conducted.

Year	Actual
2013	2

Output #5

Output Measure

- Number of website visits.

Year	Actual
2013	1094213

Output #6

Output Measure

- Number of volunteers trained.

Year	Actual
2013	0

Output #7

Output Measure

- Number of guide sheets distributed.

2013 University of Missouri Extension Annual Report of Accomplishments and Results

Year	Actual
2013	1287451

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Percent of participants reporting improved attitudes about healthy eating and physical activity.
2	Percent of participants who exhibit increased awareness/knowledge of physical activity recommendations for health.
3	Percent of participants who exhibit increased awareness/knowledge of healthy food choices.
4	Percent of participants who exhibit improved skill in selecting healthy foods.
5	Percent of participants reporting increased self-efficacy about managing chronic conditions.
6	Percent of participants who report improved skills in preparation of healthy foods.
7	Percent that adopt one or more healthy food/nutrition practices.
8	Percent that begin or increase physical activity.
9	Percent that tries and accepts new foods.
10	Percent that increase participation in regular physical activity.
11	Percent that improve behavior changes based on MyPyramid and the Dietary Guidelines.

Outcome #1

1. Outcome Measures

Percent of participants reporting improved attitudes about healthy eating and physical activity.

Not Reporting on this Outcome Measure

Outcome #2

1. Outcome Measures

Percent of participants who exhibit increased awareness/knowledge of physical activity recommendations for health.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	65

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research indicates increased rates of obesity, type 2 diabetes, decreased physical activity, and low consumption of fruits, vegetables and whole grains among both youth and adults. This is a state and national concern due to the economic burden of obesity and the health consequences of chronic disease such as diabetes. Extension programs must provide adults and youth with the knowledge and skills needed to promote healthful eating and develop a lifelong interest in physical activity.

What has been done

MU Extension provides nutrition, health and physical activity education for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management.

Results

65% of program participants exhibit increased knowledge and awareness of physical activity recommendations for health at the conclusion of a multi-session program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
806	Youth Development

Outcome #3

1. Outcome Measures

Percent of participants who exhibit increased awareness/knowledge of healthy food choices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	75

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research indicates increased rates of obesity, type 2 diabetes, decreased physical activity, and low consumption of fruits, vegetables and whole grains among both youth and adults. This is a state and national concern due to the economic burden of obesity and the health consequences of chronic disease such as diabetes. Extension programs must provide adults and youth with the knowledge and skills needed to promote healthful eating and develop a lifelong interest in physical activity.

What has been done

MU Extension provides nutrition, health and physical activity education for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management.

Results

75% of program participants demonstrate increased knowledge and awareness of healthy food choices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

724 Healthy Lifestyle
806 Youth Development

Outcome #4

1. Outcome Measures

Percent of participants who exhibit improved skill in selecting healthy foods.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	68

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research indicates increased rates of obesity, type 2 diabetes, decreased physical activity, and low consumption of fruits, vegetables and whole grains among both youth and adults. This is a state and national concern due to the economic burden of obesity and the health consequences of chronic disease such as diabetes. Extension programs must provide adults and youth with the knowledge and skills needed to promote healthful eating and develop a lifelong interest in physical activity.

What has been done

MU Extension provides nutrition, health and physical activity education for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management.

Results

68% of program participants demonstrate improved healthy food selection skills on post-program evaluations.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
806	Youth Development

Outcome #5

1. Outcome Measures

Percent of participants reporting increased self-efficacy about managing chronic conditions.

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Percent of participants who report improved skills in preparation of healthy foods.

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Percent that adopt one or more healthy food/nutrition practices.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	81

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research indicates increased rates of obesity, type 2 diabetes, decreased physical activity, and low consumption of fruits, vegetables and whole grains among both youth and adults. This is a state and national concern due to the economic burden of obesity and the health consequences of chronic disease such as diabetes. Extension programs must provide adults and youth with the knowledge and skills needed to promote healthful eating and develop a lifelong interest in physical activity.

What has been done

MU Extension provides nutrition, health and physical activity education for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management.

Results

81% of program participants improve one or more healthy food/nutrition practices as a result of educational programming.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
806	Youth Development

Outcome #8

1. Outcome Measures

Percent that begin or increase physical activity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	51

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research indicates increased rates of obesity, type 2 diabetes, decreased physical activity, and low consumption of fruits, vegetables and whole grains among both youth and adults. This is a state and national concern due to the economic burden of obesity and the health consequences of chronic disease such as diabetes. Extension programs must provide adults and youth with the knowledge and skills needed to promote healthful eating and develop a lifelong interest in physical activity.

What has been done

MU Extension provides nutrition, health and physical activity education for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management.

Results

51% of program participants begin or increase their level of physical activity.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
806	Youth Development

Outcome #9

1. Outcome Measures

Percent that tries and accepts new foods.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	96

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research indicates increased rates of obesity, type 2 diabetes, decreased physical activity, and low consumption of fruits, vegetables and whole grains among both youth and adults. This is a state and national concern due to the economic burden of obesity and the health consequences of chronic disease such as diabetes. Extension programs must provide adults and youth with the knowledge and skills needed to promote healthful eating and develop a lifelong interest in physical activity.

What has been done

MU Extension provides nutrition, health and physical activity education for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management.

Results

96% of program participants show an increased willingness to try new foods.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
806	Youth Development

Outcome #10

1. Outcome Measures

Percent that increase participation in regular physical activity.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	65

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research indicates increased rates of obesity, type 2 diabetes, decreased physical activity, and low consumption of fruits, vegetables and whole grains among both youth and adults. This is a state and national concern due to the economic burden of obesity and the health consequences of chronic disease such as diabetes. Extension programs must provide adults and youth with the knowledge and skills needed to promote healthful eating and develop a lifelong interest in physical activity.

What has been done

MU Extension provides nutrition, health and physical activity education for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management.

Results

65% of program participants increased their level of physical activity.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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703	Nutrition Education and Behavior
724	Healthy Lifestyle
806	Youth Development

Outcome #11

1. Outcome Measures

Percent that improve behavior changes based on MyPyramid and the Dietary Guidelines.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	99

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Research indicates increased rates of obesity, type 2 diabetes, decreased physical activity, and low consumption of fruits, vegetables and whole grains among both youth and adults. This is a state and national concern due to the economic burden of obesity and the health consequences of chronic disease such as diabetes. Extension programs must provide adults and youth with the knowledge and skills needed to promote healthful eating and develop a lifelong interest in physical activity.

What has been done

MU Extension provides nutrition, health and physical activity education for adults and youth. These programs provide basic food, nutrition and healthy lifestyle information that promote healthy food choices, physical activity and chronic disease prevention and management.

Results

99% of program participants make positive food behavior changes based on My Pyramid and the Dietary Guidelines.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
724	Healthy Lifestyle
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Other (Participant self responsibility)

Brief Explanation

V(I). Planned Program (Evaluation Studies)

Evaluation Results

No evaluation results

Key Items of Evaluation

No evaluation results

V(A). Planned Program (Summary)

Program # 16

1. Name of the Planned Program

Ensuring Safe Communities

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
805	Community Institutions, Health, and Social Services	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual Paid Professional	4.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
111577	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
111577	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Establish and assist COAD (Community Organizations Active in Disasters). Provide disaster educational materials and workshops to communities and organizations. Build partnerships with local,

state, federal agencies and organizations. Consult with local emergency planning committees and/or citizen councils. Represent extension at meetings of federal, state and local emergency management organizations after disasters. Provide training for preparedness. Assist local entities in identification of funding sources for community emergency management and homeland security, e.g., USDA-RD, fire grants, etc. Provide disaster preparedness and mitigation leadership for extension itself. Coordinate and participate in extension disaster activities.

2. Brief description of the target audience

Targeted audience is all social groups in the community, including low-income and minority, Spanish-speaking, community organizations, local government, home builders, agencies that assist in disaster, businesses and farmers. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc.

3. How was eXtension used?

Faculty participated in professional development related to disaster preparedness and recovery offered via eXtension. Faculty regularly drew upon EDEN to answer questions and find resources not available in Missouri as we responded to the complexities of recovery after flooding, drought, and tornadoes. Several examples included determining guidelines for mold cleanup of various types of structures, working with youth after such traumatic events, family financial guidance, etc. Faculty also contributed to the EDEN eXtension learning community and material development.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	2931	108448	4	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of communities assisted with training and facilitation for disaster preparedness.

Year	Actual
2013	51

Output #2

Output Measure

- Number of partner hours leveraged.

Year	Actual
2013	873

Output #3

Output Measure

- Number of Community Emergency Management Web total page views.

Year	Actual
2013	25012

Output #4

Output Measure

- Number of volunteer hours leveraged.

Year	Actual
2013	2949

Output #5

Output Measure

- Number of views for social media sites on community emergency management.

Year	Actual
2013	1822590

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Average change in mean score of workshop participants' (Likert 5 pt scale with 5 highest) self-reported learning from post-pre-post survey.
2	Number of Community Organizations Active in Disaster (COADs) created and/or functioning to meet local needs.
3	Percent of participants in workshops/training having adopted practices such as disaster plans and kits developed.
4	Number of organizations that make changes after conduct of emergency management exercise in the community.
5	Number of county Extension offices that adopted or reviewed disaster plans and preparedness measures during the past year.
6	Dollar value of resources leveraged (volunteer hours, grants for warning systems, etc.) for emergency management.

Outcome #1

1. Outcome Measures

Average change in mean score of workshop participants' (Likert 5 pt scale with 5 highest) self-reported learning from post-pre-post survey.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Missouri experienced significant flooding and severe weather events resulting in a Presidential Declaration (Public Assistance) for 27 counties. The state also experienced two significant winter storms, resulting in state declarations. Programming also focused on long-term recovery issues for communities that experienced tornadoes, massive flooding, and drought issues from previous years. Long-term recovery is an essential function of restoring communities, families and businesses.

What has been done

We conducted workshops on homeownership, severe weather, safe food and drink in disaster situations and mental health issues associated with the previous years' drought. We distributed information through our offices, county fairs, post-event multi-agency resource centers, TV, web, print services, radio and social media. Extension specialists were primary instructors in Community Emergency Response Teams (CERT) courses and Teen CERT courses.

Results

Participants reported learning about seasonal natural hazards, keeping families well after a disaster through safe food and drink; long-term effects of flood water on arable land; the effects of drought on local food systems, water systems and mental health; roles of non-governmental organizations in COADs and LTRCs; grant management; disaster case management; disaster first aid; business disaster planning and recovery; making home/car emergency kits; using a fire extinguisher; working as a team; the basic tenants of Incident Command Systems; and becoming involved in a CERT.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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Outcome #2

1. Outcome Measures

Number of Community Organizations Active in Disaster (COADs) created and/or functioning to meet local needs.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	74

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The laborious process of long term recovery for farms, business and families affected by the large disaster events of previous years continued during FY 2013 and will continue for several years. These challenges position MU Extension in critically important roles. MU Extension often takes a lead role in forming and supporting COADs and LTRCs. Extension personnel and facilities are often used to facilitate difficult deliberations and support case management for disaster survivors.

What has been done

Extension specialists were called upon regularly to facilitate unmet-needs of committees and COADs/LTRCs. In many cases they comprised the day-to-day leadership and often used extension offices and resources. The coordination of many recovery conversations and planning has been facilitated by extension. In addition, we provided information and other appropriate technical assistance.

Results

Established COADs assisted in mitigation, preparedness, response and recovery activities which contributed to community resiliency to disasters. 74 COADs/LTRCs (an increase of 3 this year) created a greater breadth and depth of disaster resiliency and expanded training, education and disaster exercises for preparedness. The addition and expansion of COADs/LTRCs within Missouri have addressed the community rebuilding efforts of many communities. In addition, several COADs have been successful in obtaining funding to support case management.

4. Associated Knowledge Areas

KA Code Knowledge Area

805 Community Institutions, Health, and Social Services

Outcome #3

1. Outcome Measures

Percent of participants in workshops/training having adopted practices such as disaster plans and kits developed.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	79

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Communities, organizations, and businesses must be prepared for the possibility of a multitude of disasters. Key to addressing current and potential disasters is integration of multidisciplinary research and education into a coordinated mitigation, preparedness, response and recovery that includes collaboration with local, state and federal partners. Knowing about preparedness is important but application of learning is critical to true preparedness.

What has been done

Training conducted included workshops on home ownership after a disaster, CERT, safety, agricultural security and planning, business preparedness, farm recovery and management planning for post-flooding and drought.

Results

After preparedness courses, citizens have reported positive actions including: looking for potential dangers in their homes; writing a family disaster plan and talking with the family about disaster preparedness; developing family, car, and pet disaster kits; purchasing weather radios and disaster supplies and home fire extinguishers; and officially joining local CERT teams or local faith-based programs that support local emergency management programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

Outcome #4

1. Outcome Measures

Number of organizations that make changes after conduct of emergency management exercise in the community.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	8

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Emergency exercises (disaster simulations) are a critical part of better prepared city, county, state, and federal governments. Communities, businesses, and volunteer organizations that assess their capabilities in disaster prevention, preparedness, response, and recovery activities in a risk-free environment are much more able to respond when the disaster occurs.

What has been done

CERT training and other preparedness presentations were conducted in several counties. Several counties conducted exercises to test written plans and procedures. After Action Report Improvement Plans were written by extension specialists and given to exercise participants.

Results

After Action Review/Improvement Plans were developed and given to local jurisdictions for their implementation. Included were qualitative and quantitative descriptions of improvements the jurisdiction could make in the emergency plans and procedures. One county official said, "We are glad you are part of this team and appreciate your efforts.?"

4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

Outcome #5

1. Outcome Measures

Number of county Extension offices that adopted or reviewed disaster plans and preparedness measures during the past year.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Missouri has been and will likely continue to experience a number of disasters. Each is costly in dollars, and can cost lives. Disaster preparedness can help mitigate cost and hasten recovery. MU Extension is a key partner with local state and federal agencies. MU Extension employees and county offices must be prepared for potential emergencies or disasters that affect its employees or places of work.

What has been done

We continue to promote and use the county office based disaster plan template and the MU Extension Emergency Management Guidance. Each year during preparedness campaigns?Earthquake Awareness, Severe Weather Awareness and National Preparedness Months?all offices were encouraged to pull out the plan and review it for refreshing faculty and staff on procedures and make possible changes needed.

Results

All 111 offices have the plan in place. With each significant disaster event, county offices, faculty and administrators have followed the guidance appropriately to secure the safety of individuals and their families, and the offices in order to be able to serve the public.

4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

Outcome #6

1. Outcome Measures

Dollar value of resources leveraged (volunteer hours, grants for warning systems, etc.) for emergency management.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	112031

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Missouri experienced a number of severe weather events with disaster declaration for some. Recovery from these and long-term recovery issues for communities that experienced tornadoes, massive flooding, and drought issues from previous years requires engaging citizens and organizations in disaster preparedness to mitigate cost, hasten recovery, and secure funding for disaster preparedness and recovery efforts that can save money and lives.

What has been done

We trained CERT and faith-based groups and assisted COADs and LTRCs as they worked on tornado and flood recovery and case management of unmet human needs.

Results

As a result of significant and severe Missouri River flooding, two new LTRCs were formed with significant assistance from MU Extension. Through the Buchanan County LTRC, more than 800 volunteer hours valued at over \$15,000 were donated to support recovery efforts in the county and 30 disaster case managers were trained and badged under the county's LTRC. The Atchison-Hold LTRC (two county LTRC) received over \$30,000 in grants and general donations to support LTRC approved home repairs as recommended by the 4 certified case management team.

4. Associated Knowledge Areas

KA Code	Knowledge Area
805	Community Institutions, Health, and Social Services

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

MU Extension faculty have been fully engaged in local, state and federal recovery efforts since the flooding and tornadoes of 2011, the severe and extensive drought of 2012 which impacted crop and livestock sectors, the severe winter storms of 2013, and a Presidential Declaration for severe flooding in the spring of 2013. MU Extension played a major role in creating and assisting in long term recovery committees in counties affected by the flooding on Mississippi and Missouri Rivers and in Joplin (facilitation, community organizing, coordination, extension information, educational programming, and linkages to other agencies and organizations), and with producers severely impacted by the drought. We participated in state level multi-agency meetings (MOVOAD/Partnership) and provided faculty expertise as requested. This engagement continued in FY13, with the addition of three new COADs to address needs of communities impacted by the previous year's events.

MU Extension has always responded to urgent needs of communities and citizens but has created its Community Emergency Management Program to support federal, state and local efforts using only internal financial and human resources. This program is supported by leveraging federal funds and by using very limited internal funds and faculty to support this important program.

While we have an incredible set of teams across the state working on this, we have limitations. Each member of every regional CEMP team has other primary responsibilities to other programs. Hiring freezes, state appropriation cuts during the previous three to four years of 20%, and reduced local funding in some counties - all of which have limited our capacity to deliver local and state programs and develop follow up evaluation. As an organization, we realigned our extension regions during FY13 and also experienced additional retirements without refilling during the year, creating some gaps in our regional community emergency management teams. In addition, considerable time was spent on relationship building with our funding stakeholders. Some of these stakeholders have also been severely affected by state budget cuts. The need to garner grant and contract funding is essential, recognizing that some state monies also funded such contracts.

Therefore, priorities shifted to focus on long-term disaster recovery, with less focus on programming to conduct exercises and some impact collection. We are also working to bring into alignment our reporting system with the impact indicators and provide sufficient training for faculty and staff in evaluation and reporting. This has been a slow process but we continue to improve.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Our post training evaluations were conducted as surveys using a post-pre/post methodology that relied on both quantitative rating using a 5-point Likert scale and open-ended questions to assess learning. Results for workshops regularly resulted in learning and implementation of learning about preparedness and mitigation. Notable results not reported above include:

- 97.5% of participants attending a six-part homeownership series "A Home of Your Own" designed for survivors of the May 22, 2011 Joplin tornado, indicated the information taught during this series gave them additional life skills and knowledge as they transitioned into home ownership.
- 96% of participants attending sessions on drought helped them realize the impact of a drought on their food supply.
- 96% of all participants in workshops and training indicated that they would recommend the program to others.

Case management training was held in the area of the state severely impacted by flooding in 2011, resulting in 28 case managers being badged. A survey evaluation was conducted with a 74% return rate. 65.4 % of the participants stated they plan to be active case managers in the event of a disaster and 100% indicated they would participate in a follow-up case manager exercise.

We also determined from our work and monitoring that effective and functioning COADs and LTRCs are growing in numbers as a result of our work and the demands created by the disasters. Several have accomplished preventative work that will pay off: installation of emergency warning systems in the community, planning for disasters, conduct of exercises to simulate disaster, etc.

Key Items of Evaluation

Community emergency management has been the epitome of a nimble, reliable, responsive and relevant Extension engagement in disaster preparedness, mitigation and recovery. Every bit of previous training and planning was used by specialists over large regions of the state.

Our work contributed to the revival of resilient families, businesses, farms and communities. Communities' disaster recovery periods have been shortened. Lives, jobs and countless dollars in emergency recovery operations have been saved. Whole communities have built a greater sense of cohesion. In follow-up evaluations with severely affected communities, long term recovery committees credited extension for its work in providing educational resources and supporting long term recovery efforts. One striking example of the impact of our long term recovery efforts is a quote from a county clerk commenting on the work of our extension specialist and the LTRC in Northwest Missouri. She said, "This is by far the best working conditions that one of our committees has had over the long-haul. Thank you for leading the charge. We appreciate your minutes and updates on the LTRC activities-both the printed copies and personal visits here at the courthouse."

Documenting impact of the work with COADs, disaster recovery, and community resiliency is difficult, yet we are seeing these longer term efforts yielding more prepared communities and their capacities to respond and recover. Without the work of Extension,

many communities in rural areas would not have systems in place to deal as well as they have with long-term disaster recovery. They are much better at advocating for themselves in the policy arena as well.

Long-term recovery will continue to be our primary focus for communities recovering from disasters, but our CEMP teams will also work with communities in all other phases of emergency management.

V(A). Planned Program (Summary)

Program # 17

1. Name of the Planned Program

Sustainable and Viable Communities

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	37%			
610	Domestic Policy Analysis	3%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	39%			
805	Community Institutions, Health, and Social Services	11%			
806	Youth Development	10%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	20.0	0.0	0.0	0.0
Actual Paid Professional	10.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
466608	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
466608	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

We will form planning committees/advisory panels, facilitate participatory visioning and planning workshops, moderate local issues forums, train moderators and conveners for forums and issue framing, hold community meetings and conduct presentations, gather data and use decision support tools to analyze alternatives for the community with citizens and decision makers, work with communities to address a specific need or issue. We will train trainers, provide analysis, training and consultation for local and state government, and assist with organizational development, fund development, board training, and tailoring content to local community need. We will provide counseling and expertise, coaching, and we will assist with engaging Spanish-speaking populations and other diverse groups.

In addition to conducting training and workshops, we will conduct intensive courses (such as the Community Development Academy and local leadership development programs) and conferences (such as the partnering on the Cambio de Colores Conference) to share state of the art knowledge and research and to integrate research with community needs. Work with media and facilitate partnerships to assist in working to meet needs of Spanish-Speaking and other minority populations.

To facilitate entrepreneurship as an economic development strategy, we will work in selected settings (communities and regions in the state) to develop models of excellent entrepreneurial community practice, community economic development and regional economic development strategies.

We will engage with eXtension, partner with other states for training and delivery, and develop collaborative partnerships with local, state and national organizations for programming and funding (e.g. regional rural development centers, Federal Reserve, state agencies, rural development council, USDA-RD, state economic development organization, etc.). In addition we will engage campus-based faculty (extension and other) with regional extension faculty to work collaboratively and across disciplines to develop and deliver programs that are based on research and best practices while engaging with the community for its development and to inform research and teaching on campus. To the extent possible, we will provide internships for graduate students and class projects that are based in the community, and engage graduate students in evaluation while providing opportunities for research.

2. Brief description of the target audience

Targeted audiences will be all social groups in the community, including low-income, minority, youth, adults, community leaders, local government and policy making groups, and state and local agencies. We will provide no limitation on gender, ethnic or religious diversity, lifestyle choice, etc. Also targeted among adults will be those who are currently serving in a leadership role in an agency, organization, neighborhood, club, community, business or aspire to serve; local and state government officials; and professionals working in community development.

On the collective scale, we will work with organizations, neighborhoods, communities, counties and/or multi-county regions. In particular, we will pay attention to those that have experienced economic, downturn, have few other opportunities, and demonstrate a reasonable amount of motivation, desire and commitment to work toward a viable future for their community.

3. How was eXtension used?

State and regional faculty regularly participated in professional development offered via eXtension, especially webinars jointly sponsored by the North Central Regional Center for Rural Development and those offered as part of eXtension's Entrepreneurship Community of Practice. A faculty member from this program served on the Missouri eXtension committee and participated in eXtension national events as well as actively contributed and participated in the Entrepreneurship Community of Practice. Several faculty members presented training via webinars offered through eXtension and actively participated in providing answers for questions posted to eXtension. Most community development faculty members are registered eXtension users.

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	8578	0	2199	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
 Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	9	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of in-depth leadership development programs conducted.

Year	Actual
2013	13

Output #2

Output Measure

- Number of other conferences, courses, and workshops held.

Year	Actual
2013	95

Output #3

Output Measure

- Number of communities/regions engaged.

Year	Actual
2013	78

Output #4

Output Measure

- Number of organizations we assisted.

Year	Actual
2013	65

Output #5

Output Measure

- Percent of participants in workshops and training indicating they would recommend the program to others.

Year	Actual
2013	99

Output #6

Output Measure

- Mean ranking (Likert scale of 1 to 5, with 5 being highest) of overall value of program by participants in workshops and training.

Year	Actual
2013	4

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Mean response of participants in planning processes (On Likert 5 pt scale with 5 highest) reporting they feel they have an increased voice and opportunity to participate in the community.
2	Average change in mean score of participants' (Likert 5 pt scale with 5 highest) self-reported learning from post-pre-post survey.
3	Number of participants reporting taking on increased, different, or new leadership roles in community.
4	Number of communities/organizations developing or updating a plan.
5	Number of communities/organizations reporting engagement in plan/project implementation.
6	Million dollar value of resources generated/leveraged/or saved by communities and organizations.
7	Number of businesses and new organizations started.

Outcome #1

1. Outcome Measures

Mean response of participants in planning processes (On Likert 5 pt scale with 5 highest) reporting they feel they have an increased voice and opportunity to participate in the community.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	4

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Local officials want to serve citizens, and local citizens want to contribute to and improve their community. Participation is the foundation of democracy. Citizens who are encouraged to participate are more likely to contribute to the community both in actions and contributions. Communities need methods of dialogue on contentious issues without generating deep conflicts.

What has been done

Training, decision-making and planning programs use facilitation methods that allow people to have a voice and encourage diversity of participation that reflects the make-up of community. This was central to leadership development, economic development, planning, and the Community Development Academy offerings.

Results

Planning with Benton County Healthy Community Initiative Partnership and the neighboring Sedalia group: "It was one of the most productive planning sessions I have ever participated in!" Bolivar Vision 2030: "This is a great idea...very encouraging and we all are going to leave here with ideas. I'm thinking of all kinds of things that I have never thought of." Buchanan County Nonprofit organizational planning process: "I really enjoyed tonight. Our future already looks better;" "I was excited by the visioning exercise. I look forward to the next meeting." Community Development Academy: "There are several groups, internally (my university) and externally (the community) that I can use these processes with right away; keeping people more engaged in community groups."

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #2

1. Outcome Measures

Average change in mean score of participants' (Likert 5 pt scale with 5 highest) self-reported learning from post-pre-post survey.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	2

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Many community leaders, local elected officials and volunteers lack an understanding of the factors that influence the community, the local economy, development strategies and a basic understanding of collaboration and impacting the collective future of the community.

What has been done

We offered an array of workshops, training and courses in planning, economic analysis and development, tourism, decision-making and policy, organizational and leadership development, and local government finance. Several foci also included a regional approach, urban neighborhoods, community health, and community food systems, and community arts as well as offering the Community Development Academy.

Results

CDA participants reported increased skills in networking, working with diverse groups, handling conflict and facilitating participatory planning. ?I plan to keep in mind what I learned to try to build peoples sense of self value, so they can become agents of change.?

A typical community youth leadership development participant quote of learning ?Understanding the different personality types is necessary in relating to others. Knowing the strengths of each team member is imperative to its success.? From participants in local government/community curricula for middle schoolers: "I hear my family complain about money issues and how everything comes due all at once. I didn?t know that so many things get payments from their tax bills;" ?How can I make a "good call" on whether someone is doing their job well? If I don?t like them as a person doesn?t necessarily mean they are not doing their job! ?If you want change, what are you doing in your community to make it happen? It takes team work."

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
610	Domestic Policy Analysis
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #3

1. Outcome Measures

Number of participants reporting taking on increased, different, or new leadership roles in community.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	140

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

In order to build sustainable communities, research shows participants need to learn about their communities and build leadership skills. Effective communities provide community leadership programs to build a critical mass of citizens educated about their community to fill leadership roles as they become open over time. Community leadership development is a means of succession planning.

What has been done

Cohort programs with multiple sessions have been designed based on research that in-depth programs increase skill and knowledge acquisition and graduate commitment to leadership roles. Evaluation data has been used for improvement. Programs provide activities for alumni engagement, opportunities to gain additional skills and knowledge. Programs focused on targeted rural, youth, urban neighborhood and low-income community leadership engagement.

Results

Dent County youth participants: "I have gained a better understanding of how I can help my community." "I realized that kids can have a voice in this community and can change things." "I am able to get out of my comfort zone." "I have more respect for my community and I now know

how to make it better."

Michael Powers noted, "The Neighborhood Leadership Academy inspired me to increase my leadership role in St. Louis and to accept a Legislative Director post within the office of the President of the Board of Aldermen." Suzanne Hough, Community Development Officer with Carrollton Bank, puts her leadership skills into practice when teaching financial education classes, providing funding for services, or just talking with people to find out what's needed in the community. She said, "The process of working with all the stakeholders, no matter how cumbersome that may be, is the only way to ensure you really understand the neighborhood's priorities."

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #4

1. Outcome Measures

Number of communities/organizations developing or updating a plan.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	20

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Local governments and community organizations must be able to effectively collaborate and engage constituents in planning for the future in order to leverage resources and initiate projects and serve constituents. Citizens want input into the community or organization. Funding organizations require a proposal to show relation to a plan. For implementation a plan shows the needed sequence for a successful outcome.

What has been done

We provided training through the Community Development Academy, using facilitation methods that allow people to have voice, and technical assistance to build capacity of residents and organizations to engage in planning for community action. We conducted an in-depth series of workshops in community economic development, community tourism, community arts, and several courses in basic economic development fundamentals.

Results

All groups with which we planned developed action plans and goals for implementation. Examples include:

Planning processes conducted for Perry County's Community Conservation Plan for the US Fish and Wildlife Service allowed input that was not just the formal public comment period, resulting in selection of transition board.

The City of Ashland's marketing and public awareness plan is incorporating results from a community survey designed, conducted and analyzed by working with extension and a graduate survey class.

Five communities developed community arts engagement plans for fostering community and economic development. Lexington has engaged in-depth with MU Extension and arts departments to develop a walking tour of its civil war heritage, promote festivals, and host art shows.

The Missouri WIC Association Board developed a new organizational mission statement, 5-year plan, committee structure, and a one year action implementation plan.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #5

1. Outcome Measures

Number of communities/organizations reporting engagement in plan/project implementation.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	14

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Local officials and organizations wish to implement what residents and members want. Organizations want to improve services to clientele. Citizens want input into the community or an organization of which they are a member or clientele. Plans are important as guides for future activity. They serve very little purpose if they are merely written and do not serve as a guide for future community action.

What has been done

Implementation is a long-term commitment and extension works with communities every step of the way. We provided facilitation, technical assistance, resource information and training for communities as they implement plans on a wide range of projects from community gardens to offender re-entry, from economic development to tourism, from preserving historic schools and other buildings to responding to business closures or relocations, from summer youth programs to food access.

Results

Since opening in 2011, the Cass County Children’s Dental Clinic has served almost 3,000 area low-income children.

In late 2011, a great deal of community conflict, lack of communication and engagement existed in Ripley County. Now, groups participate and cooperate. The Planning and Zoning Board has been re-activated. An agreement is nearly completed with Mo. Dept. of Transportation to place signs that direct travelers to the downtown area.

Brookfield’s economic development director: “Everything that is happening here is directly related to our partnership with University of Missouri Extension. The Strategic Doing planning session was key to the success we are having with our Twin Parks and downtown revitalization.”

Old Trails Regional Partnership member: “You provided the structure and leadership, when we didn’t have it, guided us through the planning; provided support and knowledge to help us see what could work; and provided examples of what was working in other places.”

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #6

1. Outcome Measures

Million dollar value of resources generated/leveraged/or saved by communities and organizations.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	12

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Failure of traditional economic development strategies forces communities to seek new ways to spur economic activity. To build sustainable communities, education and facilitation for capacity building has to assist communities and organizations in creating resources through increased volunteerism, nonprofit, private and publicly leveraged investment, and generated efficiencies to create sustained economic value and development.

What has been done

We provided workshops, facilitated implementation of plans, and provided technical assistance for fundraising and grant writing, volunteer and fiscal management to communities and regions, nonprofit organizations and local governments. Leadership programs included economic components. In-depth and sustained work continued with specific communities and regions.

Results

The rural Montgomery County Show Me Shoppe is now a 22-member co-op selling \$7,200 annually.

The redesigned Madison County Back-to-School program entailed more than 1,000 individuals (total population of approx. 12,500) donating \$4,783 and 136 volunteers providing 349 hours to serve 532 youth.

In Burlington Junction, 21 local people invested in the creating of the ChloroPhyll Plant slated to open in later 2013.

Pilot Grove residents continued building of a grocery store and securing an operator to serve the rural area.

As a result of good planning, Hillsboro, Herculaneum, and Arnold continue to grow, improve their infrastructure, and attract new businesses. Herculaneum and Hillsboro obtained over \$10 million this past year. Residents are saying good things about their communities and have consistently begun to be more involved in the work yet to be done. Herculaneum is in the process of building the only All Inclusive Playground in the county. The closest one to us is in Clayton.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services
806	Youth Development

Outcome #7

1. Outcome Measures

Number of businesses and new organizations started.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	66

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Communities are concerned about how unemployment affects local economic wellbeing. While the general economic climate has the largest impact on jobs, communities can look for niches that can create local jobs and economic activity. As the economy expands, nonprofit organizations and businesses might continue to grow. Job creation does not happen rapidly and quality planning and decision-making can facilitate economic vitality and growth.

What has been done

We worked with a variety of communities, organizations and agencies to create decisions that could lead to business/organization creation and build capacity for community and economic growth. Community planning and analysis are an important part of creating capacity for

communities for job and business creation and support. We provided training, facilitation, analysis, mapping and other tools in support of communities, regions and urban neighborhoods.

Results

The Destiny House Homeless Shelter Johnson County, created through collaboration from a \$4,000 grant, took in their first residents on December 19, 2012, and sheltered an average of 20 per night through March. A well-qualified individual has stepped forward expressing an interest in taking over the operation of the shelter on a permanent basis; a nonprofit organization has been established to manage the shelter.

Lexington formed a community arts organization that is spearheading its in-depth engagement with the university. Montgomery County formed a local arts organization. 20 artists at the first art show sold an average of \$60 each. "We have such a wealth of talented artists in the County and it is great to be getting an organization together to help and support them," stated one MCAC Board member.

Since formation of the six-county Mississippi River Hills Association in 2007, 16 businesses have begun, 19 have expanded, and 3 have won state or national awards.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

The principle factor affecting outcomes is the scarcity and reduced resources for development in communities due to the economy. Emergency service programs such as shelters, food pantries, and health clinics are hit particularly hard because they have seen both an increase in demand for their services and a reduction of resources available to support their work. Midsized nonprofits have dwindled through consolidation and the reduction of resources. The mid-sized nonprofits are the organizations that provide the bulk of the human services in small and rural communities. The emerging large organizations are limiting the scope and diversity of their programs, resulting in an explosion of new, smaller, community-based nonprofits with few staff, limited resources

and capacity to provide services. Programs designed to strengthen nonprofits tend to focus on small community-based organizations that have fewer other options for educational resources and support.

In the current economic climate there is both a need for more resources while fewer resources are available. As a result fewer grants are available for communities to access. This requires more careful planning for the use of resources and scaling back of plans to address communities' and civic organizations' issues. The needs for jobs and incomes are acute, but creating them is difficult because all of the macro economic factors are pushing in the opposite direction. The best that can be hoped is for small increases in jobs and income until the macro economy responds more robustly. In this economic climate apparently small outcomes are really great achievements. The number of natural weather disasters in the state has also impacted community and organizational budgets for conducting and implementing plans.

The forces external to the community locality and structure that affect its status and its future are important to take into account in the process of evaluating programs. These forces include: the devolution of authority for action and service delivery to the community; the double bind created by trying to maintain quality with fewer resources; expectations for sharing power and responsibility; interdependence, diversity, collaboration, and communication; and displacement of the developmental paradigm with the globalization paradigm.

Other external factors affecting outcomes include limitations of faculty time and pressures with decreased federal, state and local funding; the fourth year of a university hiring freeze with increased faculty vacancies; limitations imposed by economic downturn for program sponsors; participants and leaders and their demands and interests changing. The impact of resources redirected due to disasters, constraining local and state government, and our time in Extension. Finally tracking communities for outcomes over longer periods of time is both difficult and expensive and the causation effect becomes problematic due to other factors that influence action in the community arena.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Post session or post program evaluations show that programs are well received and valued by communities, leaders, citizens and partners. 98% of participants surveyed would recommend programs to colleagues and other organizations and communities. Ultimately, for small communities a savings or generation of a few thousand dollars can be substantial.

The most recent Community Development Academy follow-up survey showed: value rated as 4.39 on a 5.0 scale; 52% said learning led to new projects; most indicated significant increases in the volunteer hours leverage for communities and organizations. Important to note is that approximately one third of the participants were graduate students at the time they participated, albeit active students on their campuses.

Research shows Community Leadership Development programs are yielding engaged, new, and diverse rural and urban leaders. On average, each local program conducted in the last three-five years resulted in 10 community projects. A path analysis has been developed that connects individual outcomes at participant level to community outcomes.

Over the past eight years, the Extension Community Economic and Entrepreneurial Development program leveraged more than \$340 million in economic value for the communities and regions involved. In addition to job retention and development, new leaders and new networks have emerged to support viable economic development. Participants in the Stronger Economies Together program and similar spin-off programs have developed plans that have translated into stronger collaboration and development of new opportunities in these regions and other areas.

Other long-term results are most often reported from in-depth engagement with communities and nonprofit organizations for planning that involves purposefully including the diverse community voices. The continued attribution and acknowledgment of Extension's role in facilitating the creation of plans for communities as they implement and complete plans and then revise plans is indicative of the role we can play in revitalizing both urban and rural communities. While examples abound, leaders from Herculaneum, Hillsboro, Arnold, Mississippi River Hills, Old Trails, Johnson County, Brookfield, Lexington, Montgomery County, and neighborhood leaders in St. Louis and Columbia are among the most outspoken about the role we have played in their communities.

Key Items of Evaluation

Data collection is consistent with the key outcome indicators developed in the North Central region for CRED programs. Most workshops use a similar survey at the end of the session to assess learning. Protocols have been developed for collection of impact data regarding application of knowledge and changes effected for communities and organizations, such as implementation and results, leverage of resources etc. The numbers reported rely on participant and key informant attribution. In addition, participants in community leadership programs receive follow-up surveys 6-12 months out to determine learning and additional application, using a normed survey developed in concert with several other North Central states. For the Community Development Academy, participants provide in-depth information about their learning on the key topics through daily written feedback and a focus group at the end of each course. An online survey is conducted approximately every three years to determine mid-term and longer impacts.

Our evaluation study of ExCEED (community economic development) shows that formation of the human capital and the social capital is what underpins the empirical data collected about impact in terms of jobs created, businesses started, resources leveraged and generated. The Community Development Academy is a proven model that increases capacity to address complex community issues and work in diverse environments. Participants come from around the US and the world and are applying what they have learned to all five program areas in NIFA.

Community and organizational outcomes generally are accrued in the long term. For example, a planning process is by definition about the future. Over time other factors can intervene which can stop a community or cause it to change its plans. Often it takes a community some time to re-group.

Measuring long-term impact is not a precise science. Little research has been done that can be applied and transferred. Case studies and the ability to tell the story over time are important, as the results are contextual. Rarely are we able to prove causation. Communities and participants report that money was saved, but do not report an amount. In addition to the fact that our numbers are those attributed by leaders and participants (and at that, we don't always sufficiently ask about ongoing impact), the impact in terms of

social and civic value as well as economic value is likely much higher.

V(A). Planned Program (Summary)

Program # 18

1. Name of the Planned Program

Business Development

Reporting on this Program

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
602	Business Management, Finance, and Taxation	100%			
	Total	100%			

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2013	Extension		Research	
	1862	1890	1862	1890
Plan	10.0	0.0	0.0	0.0
Actual Paid Professional	6.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

2. Actual dollars expended in this Program (includes Carryover Funds from previous years)

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
257370	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
257370	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Business counseling and training.

2. Brief description of the target audience

Small business owners, managers and their employees. Individuals who want to start a business. Partners, stakeholders and funding agencies, including elected officials.

3. How was eXtension used?

eXtension was not used in this program

V(E). Planned Program (Outputs)

1. Standard output measures

2013	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	4	210	0	0

2. Number of Patent Applications Submitted (Standard Research Output)

Patent Applications Submitted

Year: 2013
Actual: 0

Patents listed

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2013	Extension	Research	Total
Actual	0	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- Number of counseling clients.

Year	Actual
2013	3169

Output #2

Output Measure

- Training customer satisfaction (scale 1-7 high).

Year	Actual
2013	7

Output #3

Output Measure

- Number of applied research projects.

Year	Actual
2013	0

Output #4

Output Measure

- Website statistics (in millions).

Year	Actual
2013	1

Output #5

Output Measure

- Counseling hours.

Year	Actual
2013	20711

Output #6

Output Measure

- Counseling customer satisfaction (scale 1-7 high).

Year	Actual
2013	7

Output #7

Output Measure

- Training attendees.

Year	Actual
2013	12394

Output #8

Output Measure

- Training events.

Year	Actual
2013	609

Output #9

Output Measure

- Training hours x attendees.

Year	Actual
2013	9589

Output #10

Output Measure

- Number of counseling sessions.

Year	Actual
2013	2907

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increase in knowledge.
2	Business owners will start or expand a business as appropriate to their business goals.
3	Business owners will make or revise decisions about the type of business or business structure as appropriate to their business goals.
4	Business owners will prepare a business plan as appropriate to their business goals.
5	Business owners will develop financial projections as appropriate to their business goals.
6	Business owners will seek start-up funding as appropriate to their business goals.
7	Business owners will develop management systems as appropriate to their business goals.
8	Business owners will investigate legal and compliance issues for their business as appropriate to their business goals.
9	Business owners will develop a marketing plan as appropriate to their business goals.
10	Business owners will commercialize products as appropriate to their business goals.
11	Business owners will inform stakeholders of the outcome of their work with the University of Missouri Extension Business Development as appropriate to their business goals.
12	Number of jobs created.
13	Dollar amount of sales and contracts (in millions).
14	Dollar amount of business investments, including loans and equity approved loans (in millions).
15	Number of new businesses started.

Outcome #1

1. Outcome Measures

Increase in knowledge.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	1

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

The BDP is a vital component of the state's economic development infrastructure because it helps the state's businesses grow, create jobs, increase sales and add economic vitality to Missouri communities. It is important to business owners, economic developers, communities and those who fund the program.

What has been done

Through individualized counseling and coaching and a variety of educational sessions, the MU BDP has assisted thousands of companies in starting and growing, adding to the workforce and providing opportunity. The BDP helps companies refine their management and marketing strategies and access financing to grow markets and expand facilities. Counselors use branded programs, and the BDP has implemented rigorous professional development activities to ensure a constant level of expertise.

Results

602 Results were excellent; goal of 1.0 was exceeded.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #2

1. Outcome Measures

Business owners will start or expand a business as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	253

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Entrepreneurs who wish to start a business care about this outcome, as do local community and economic development leaders, chambers of commerce, area elected officials and BDP funders. New businesses create jobs.

What has been done

The BDP has helped 253 entrepreneurs start a new company.

Results

Excellent, exceeded goals.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #3

1. Outcome Measures

Business owners will make or revise decisions about the type of business or business structure as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

We really do not track this as an itemized outcome measure, but one could assume that every company the BDP counsels make these kinds of decisions. In that light, it matters greatly to the business owner seeking to make the best decision for his company.

What has been done

In counseling and training, the BDP has provided resources, information, coaching and counseling to assist entrepreneurs in making these decisions.

Results

Excellent ? no goal attached, but a discussion of business structure is included in nearly every consultation.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #4

1. Outcome Measures

Business owners will prepare a business plan as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Again, we do not specifically track the number of clients who write business plans, although this is a critically important element in business ownership. Therefore it is safe to say that a large percentage of our client base is assisted in this area.

What has been done

In counseling and training, the BDP has provided resources, information, coaching and counseling to assist entrepreneurs in developing business plans.

Results

Excellent, as this is a key component in business counseling. The BDP focuses heavily in the area of helping owners and managers plan and manage effectively.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #5

1. Outcome Measures

Business owners will develop financial projections as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

This is not a metric that is individually tracked, but history indicates that approximately 40 % of the BDP client portfolio has to do with financial management and corresponding projections.

What has been done

In the past year, BDP staff has been trained extensively on new software that will assist companies with financial projections. In addition, many of the staff has been certified as NDC Economic Development Finance Professionals.

Results

The BDP was responsible for helping clients attract more than \$219 million in new financing this past year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #6

1. Outcome Measures

Business owners will seek start-up funding as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Funding is a good leading indicator of business start-up and growth. Start-ups and expansions are an indicator for job creation.

What has been done

The BDP provides technical assistance to help business owners identify and access financing.

Results

The BDP was successful in assisting companies in accessing \$219 million in financing in 2013.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #7

1. Outcome Measures

Business owners will develop management systems as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Solid management systems are necessary for any business to be successful. Particularly in the case of a growing company, the ability to manage, delegate authority and keep pace with changes in the marketplace is essential.

What has been done

The BDP has provided additional professional development to the counseling staff who works with businesses on management issues, including training on the Baldrige criteria, balanced scorecards and lean management.

Results

While management improvements are difficult to quantify, the success in other areas of the business ? sales, investments and jobs ? can be an indication of improvement in management.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #8

1. Outcome Measures

Business owners will investigate legal and compliance issues for their business as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Business, Businesses need to make sound legal decisions to ensure the best formation for startup and for growth. In addition, many businesses are subject to a wide variety of state, local and federal regulations. Lack of understanding or violation of those regulations can result in business failure.

What has been done

Because BDP staff are not experts in legal issues, offices maintain lists of qualified legal advisors and make frequent referrals for their clients.

Results

BDP staff has excellent local relationships in the legal community that can assist in making appropriate referrals.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #9

1. Outcome Measures

Business owners will develop a marketing plan as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Having a solid marketing strategy is absolutely essential for a successful business. But no businesses are alike, so a customized approach to markets, targeting the best markets for each business and using the most appropriate tactics often requires the assistance of an advisor.

What has been done

Through the use of in-depth market research and a recently added program in economic gardening, the BDP has become even more effective in assisting clients with marketing strategies.

Results

A pilot program in economic gardening has only recently been deployed. Early results are promising.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #10

1. Outcome Measures

Business owners will commercialize products as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

This is an outcome that is important not only to high-technology and innovative entrepreneurs, but also to universities in which many of these discoveries occur.

What has been done

The BDP has had expertise in assisting technology based companies for several years. In the past year, additional training has been offered to counselors to expand their knowledge. The BDP has assisted hundreds of clients who are seeking to commercialize products.

Results

Excellent, as the BDP assists companies in commercializing millions of dollars of technologies each year.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #11

1. Outcome Measures

Business owners will inform stakeholders of the outcome of their work with the University of Missouri Extension Business Development as appropriate to their business goals.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	0

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Because our program is funded with public dollars, it is very important to ensure that funders and other people who invest in the program know of its economic impact and effectiveness.

What has been done

The BDP staff work to build relationships with elected officials and other stakeholders. We regularly communicate the results of our work via mail, email and a variety of publications.

Results

The best results we can use to demonstrate our success in this area is the fact that we continue to be fully funded and in the past year received increased state funding for our programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #12

1. Outcome Measures

Number of jobs created.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
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2013 1987

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Job creation is a vitally important indicator for economic development. It is the measure most citizens use when making judgments about the economy.

What has been done

The technical assistance provided by the BDP supports the creation of jobs by helping businesses start, grow and add employees.

Results

Results are excellent.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #13

1. Outcome Measures

Dollar amount of sales and contracts (in millions).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	36000000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Increased sales and government contracts help companies create jobs. They allow a business owner to better meet the company's financial obligations.

What has been done

The BDP assists thousands of companies each year in growing sales and bidding and performing on government contracts. This is done through training, technical assistance and electronic

nightly bid matching for procurement clients.

Results

Excellent, a tribute to our program since the economy the past year has remained rather soft.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #14

1. Outcome Measures

Dollar amount of business investments, including loans and equity approved loans (in millions).

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	28500000

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Investments are a good indicator of a healthy, growing economy.

What has been done

The BDP routinely assists clients in finding investments. This is best accomplished through individual counseling. Staff is trained and skilled at helping clients prepare loan applications and proposals other funding.

Results

Goals were more than met.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

Outcome #15

1. Outcome Measures

Number of new businesses started.

2. Associated Institution Types

- 1862 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2013	32

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

New business starts are an indication of economic vitality in the business sector, as well as a healthy level of purchasing power among consumers.

What has been done

The BDP provides a great deal of education for start-up businesses.

Results

Results are solid. There is room for improvement however.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation

V(H). Planned Program (External Factors)

External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges
- Populations changes (immigration, new cultural groupings, etc.)

Brief Explanation

The economy is recovering slowly but remains sluggish in some parts of the state, which can hinder economic outcomes. The BDP has done well in spite of that challenge. During this reporting period, funding continued to be an issue and limited our growth and expansion in the program. Tax policy and regulations continue to have an adverse effect on many companies. Uncertainty regarding health care policy and overall strength of the economy has inhibited business owners from growing companies and adding jobs.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Customer satisfaction results for counseling and training are consistently between 6.0 and 6.5 on a 7-point scale.

Key Items of Evaluation

Economic outcomes of new businesses, new jobs, new investments and increased sales coupled with customer satisfaction ratings.