

# 2010 University of Missouri Extension Annual Report of Accomplishments and Results

<b>Status: Accepted</b>
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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 2010 plan of work. MU Extension's 2010 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 2010 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: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	235.3	0.0	0.0	0.0
Actual	250.0	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

<b>1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)</b>			
<b>Extension</b>		<b>Research</b>	
<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
8693972	0	0	0

<b>2. Totaled Actual dollars from Planned Programs Inputs</b>				
<b>Extension</b>			<b>Research</b>	
	<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
<b>Actual Formula</b>	8693972	0	0	0
<b>Actual Matching</b>	8693972	0	0	0
<b>Actual All Other</b>	0	0	0	0
<b>Total Actual Expended</b>	17387944	0	0	0

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

## V. Planned Program Table of Content

S. No.	PROGRAM NAME
1	Watershed Management and Planning
2	Forage Production and Management
3	Home Horticulture and Environment
4	Individual Wastewater Systems-Implications for a New Rural Generation
5	Missouri Crop Management Systems
6	Missouri Woodland Steward
7	Pasture Based Dairy Systems
8	MO-PORK: Increasing Pork Production in Missouri
9	Plant Protection for the 21st Century
10	Profit Focused Agriculture
11	Show-Me-Select Replacement Heifer Program
12	Applying Science and Technology
13	Building Character
14	Choosing Healthy Lifestyles
15	Creating Economic Preparedness
16	Enhancing Community Viability Through Youth Leadership
17	Volunteer Development
18	Improving Communications
19	Building Environments
20	Parenting
21	Strengthening Families
22	Building Better Childcare for Missouri
23	Food Safety
24	Personal Financial Management
25	Nutrition, Health and Physical Activity
26	Aging
27	Facilitating Community Decision Making for Youth and Adults

28	Ensuring Safe Communities
29	Community Leadership Development for Youth and Adults
30	Building Inclusive Communities
31	Creating Community Economic Viability
32	Business Development

**V(A). Planned Program (Summary)**

**Program # 1**

**1. Name of the Planned Program**

Watershed Management and Planning

**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	5%			
111	Conservation and Efficient Use of Water	5%			
112	Watershed Protection and Management	40%			
131	Alternative Uses of Land	10%			
133	Pollution Prevention and Mitigation	5%			
608	Community Resource Planning and Development	30%			
723	Hazards to Human Health and Safety	5%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	6.4	0.0	0.0	0.0
Actual	7.0	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
280829	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
291736	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**

Invite people from Missouri watershed communities to participate in workshops to develop partnerships for watershed management as part of the Heartland 406 (b) USDA grant. Facilitate deliberative sessions with agency partners and others to discuss strategies for expanding collaborative efforts and roles each agency might fill in assisting communities in watershed management activities. Continue efforts to assist communities in the development of watershed management plans.

**2. Brief description of the target audience**

Target audience will consist of local watershed community citizens, elected officials, agency leaders and staff members with a concern or a part to play in watershed management activities. Extension state and regional specialists will have opportunities to attend regional workshops designed to keep abreast of the most current and reliable sources of information relating to a process of working with local communities to develop and implement watershed management plans.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	1400	2250	1000	1000
<b>Actual</b>	1075	1343	942	378

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

<b>2010</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Educational classes will be held to educate agency and Extension personnel to understand the process for involving local communities in the development and planning of watershed management plans.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	0

**Output #2**

**Output Measure**

- Group discussion will be held with the watersheds advisory groups in the developmental stages of watershed planning.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	15	53

**Output #3**

**Output Measure**

- Demonstrations will be held in watershed areas to demonstrate the effectiveness of best management practices for improving water quality.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2	2

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	50 percent of the participants that attend a watershed planning and management educational program will indicate increased knowledge of the process to develop and implement a watershed plan.
2	Increase in the number of communities each year that form advisory committees to be actively involved in the development of watershed management plans.

## **Outcome #1**

### **1. Outcome Measures**

50 percent of the participants that attend a watershed planning and management educational program will indicate increased knowledge of the process to develop and implement a watershed plan.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	700	1022

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Protecting water quality is everyone's responsibility and is directly identified by EPA as a major directive. Long-term water quality protection can provide environmental and economic benefits to rural communities. Watershed communities develop a nine-element management plan to identify ways to protect water quality and to stay economically viable. State and federal programs are available for groups with a plan and can provide funding for implementation of best management practices (BMPs) to support water quality.

#### **What has been done**

Watershed management curriculum-based classes have been held in 10 locations in the state to increase knowledge of the process and components of a nine-element watershed management plan. Field days were held to show BMP use for water quality protection, and one statewide conference was held to bring together watershed groups working on management plans.

#### **Results**

Of the participants in the watershed management plan workshops, 95 percent indicated an increased understanding of the needs for a nine-element management plan. Major areas in which participants reported increased understanding were in the selection of BMPs for water quality protection and for pollutant load reduction. Watershed communities with a nine-element plan can apply implementation funds through the state and federal EPA 319 program, and in selected watersheds they can apply for Mississippi River Basin Initiative funds. The management plan demonstrates that local citizens have thought through the process of identifying a concern and identified what they can do as a community to reduce the potential harm to water quality by implementing different segments of the plan. Areas included in the plan to promote long-term improvement are information/education, monitoring, potential funding sources and community resource development.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
608	Community Resource Planning and Development

#### Outcome #2

##### 1. Outcome Measures

Increase in the number of communities each year that form advisory committees to be actively involved in the development of watershed management plans.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	3	3

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Watershed communities establish an advisory committee to develop a nine-element watershed plan to respond to watershed's environmental concerns. A plan is required to apply for DNR/EPA 319 funds to implement BMPs and to apply for Mississippi River Basin Initiative funds in targeted watersheds. A management plan provides a means of determining what has been done to respond to environmental issues and provides a roadmap to overall plans for long-term-water quality protection.

###### **What has been done**

In this reporting period, 12 communities have established watershed committees that are developing nine-element watershed management plans. The development of the committees and the management plans is accomplished through monthly meetings, consultations, one-on-one assistance, field day/demonstrations and workshops. The communities receive assistance in understanding the components of a watershed management plan and the importance of a representative watershed committee.

###### **Results**

Throughout the life of the project, 31 watershed groups have been formed, 23 of which are in the process of developing or implementing a nine-element watershed management plan. These communities have demonstrated changes in knowledge that should lead to long-term water quality protection and economic viability for the surrounding community. A watershed plan must take into account not only environmental concerns but also the economic aspects of the watershed area and then identify a plan of action for parties involved. By having good representation from the different stakeholders in the community, environmental and economic benefits should be identified and promoted. Development of the plans can become protracted by the need to establish consensus, but consensus provides for local ownership of the plan and commitment to its implementation.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
131	Alternative Uses of Land
133	Pollution Prevention and Mitigation
608	Community Resource Planning and Development
723	Hazards to Human Health and Safety

#### 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

The outcome of the project is subject to various external influences. The importance that government agencies give to water quality, changes in environmental regulations, and in many cases the weather conditions in agricultural communities are external factors that can influence the planning and development work of watershed communities and agency personnel. Basic funding to support the educational process and assistance in the development of representative watershed committees are necessary to get communities started in the right direction. Sufficient funding for implementation of all nine elements in a watershed management plan is critical so that local communities feel supported by government agencies and universities.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

## 1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Case Study
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

## Evaluation Results

Evaluations submitted by participants in the regional workshops showed the following results:  
95 percent increased their knowledge of watershed management plan development and implementation.

92 percent would recommend this class for other local citizens and community leaders.

90 percent said that the field days were valuable for seeing BMPs to improve water quality.

Participants in the statewide conference responded as follows:

100 percent reported an increased understanding of watershed management plan development.

95 percent said the conference was worth their time and should be offered again.

87 percent said they would start developing a watershed plan within the next year.

85 percent said they understood the need for diverse representation on a watershed advisory committee.

72 percent indicated a need for more assistance on determining pollutant loading.

## Key Items of Evaluation

Several key items for NIFA:

Long-term water quality protection

Continued food and fuel production on agricultural land

Accountability of funding for agricultural BMPs

Human health protection through safe surface reservoir drinking water sources.

Water quality concerns play an important role in the economic security of many rural watershed communities. The plan demonstrates that producers realize the cost and necessity of incorporating environmental regulations into day-to-day farming activities. The plan gives credibility and accountability to the decisions being made and the funds used for implementing agriculture management practices. The control of contaminant runoff allows agricultural producers the ability to make decisions on the continued production of crops for food and fuel, and the protection of surface reservoir public drinking water resources.

Ninety-five percent of the participants in the program indicated a better understanding of water quality issues and their role in protecting water quality. Producers in the Goodwater Creek watershed implemented management practices that were successful in reducing atrazine runoff. Water tests during the study period show atrazine levels below the EPA trigger values of 38 parts per billion (ppb) at 14 days, 27 ppb at 30 days, 18 ppb at 60 days, and 12 ppb at 90 days.

**V(A). Planned Program (Summary)**

**Program # 2**

**1. Name of the Planned Program**

Forage Production and Management

**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	40%			
307	Animal Management Systems	40%			
402	Engineering Systems and Equipment	20%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	3.2	0.0	0.0	0.0
Actual	4.0	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
140415	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
145868	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

Forage Production and Management will use multiple delivery methods to reach the target audience: regional three-day schools on management-intensive grazing; pasture-based dairying core group meeting and "pasture walks"; winter feeding systems and summer pasture program using demos, clinics, and tours.

Fescue toxicosis and management workshops; Missouri Forage and Grassland Council Forage Conference; field days at outlying research centers; MU forage websites and multistate websites (cooperating with Oregon State University), electronic guides; CDs with prepared presentations; in-service training (ISEs) for regional staff; 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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	6000	10000	500	0
<b>Actual</b>	4012	64000	1800	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	2

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	4	1

**Output #3**

**Output Measure**

- Revise Missouri publication M168, Missouri Dairy Grazing Manual.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	0

**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	Two hundred (200) Missouri farmers will increase their knowledge of fescue toxicosis.

**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	Quantitative Target	Actual
2010	0	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 2010, the University of Missouri teamed up with the Natural Resource Conservation Service to hold 24 multiday workshops for 711 producers.

**Results**

If 2010 is like the previous 11 years, nearly all of these producers will adopt various practices taught in these workshops, and half of these producers will receive cost-share funds to improve their fencing and watering facilities. The investments in pasture improvements as a result of this program in 2010 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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Winter and midsummer feed accounts for about 70 percent 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**

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.

**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 percent to more than 54 percent. The increased use of stockpiled tall fescue saved the state's beef producers \$31 million dollars in 2010. Additionally, the programmatic efforts on retained ownership of fall-born calves through spring are being implemented on several farms in Missouri.

**4. Associated Knowledge Areas**

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

### **Outcome #3**

#### **1. Outcome Measures**

Two hundred (200) Missouri farmers will increase their knowledge of fescue toxicosis.

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Fescue toxicosis costs the Missouri beef industry \$160 million each year. It also costs the Missouri dairy and horse industry, though the economic impact has not been quantified for Missouri. The losses come from reduced calving rate and gain as a result of toxins produced by a fungus living inside the plant. Fescue toxicosis is the most detrimental forage-livestock disorder in Missouri and surrounding states.

##### **What has been done**

Some of the largest conferences in 2010 included long lectures with question/answer sessions regarding this livestock disorder. From January through December, this topic was presented to well over 400 cattlemen and agricultural advisors. In 2011, new programs will be implemented to educate larger crowds.

##### **Results**

This is a new program, and its impact is not yet quantifiable. Based on comments after each presentation, many of the producers planned on adjusting their management to reduce toxicity. Such adjustments included planting clovers and annual lespedeza, testing for the toxic fungus, and ensuring their cattle do not consume seedheads of tall fescue grass. (The seedheads contain high levels of toxin.) In addition, some producers planned to plant nontoxic varieties of tall fescue.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

High feed grain prices have altered the economic landscape such that forage management is more lucrative than ever. Producers using management-intensive grazing techniques are much better positioned than are their confinement counterparts to manage high feed prices.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

### **Evaluation Results**

Listed above.

### **Key Items of Evaluation**

More than 27,000 producers have adopted the techniques developed through their participation in the Winter Stockpiling program. From 1998 to 2006, the percentage of producers using stockpiled tall fescue for winter feeding has doubled, from 26 percent to more than 54 percent. The increased use of stockpiled tall fescue saved the state's beef producers \$31 million dollars in 2010. Additionally, programmatic efforts to encourage retained ownership of fall-born calves through spring are being implemented on several farms in Missouri.

If 2010 is like the previous 11 years, nearly all of these producers will adopt various practices taught in the 24 grazing workshops, and half of these producers will receive cost-share funds to improve their fencing and watering facilities. The investments in pasture improvements as a result of this program in 2010 alone, and only on Missouri farms, are likely to exceed \$5 million.

**V(A). Planned Program (Summary)**

**Program # 3**

**1. Name of the Planned Program**

Home Horticulture and Environment

**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	5%			
205	Plant Management Systems	50%			
211	Insects, Mites, and Other Arthropods Affecting Plants	10%			
212	Pathogens and Nematodes Affecting Plants	10%			
213	Weeds Affecting Plants	15%			
216	Integrated Pest Management Systems	10%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	9.6	0.0	0.0	0.0
Actual	11.0	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
421244	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
437604	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**

Some of the major activities under this program are Master Gardener training (core course), 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**

The ultimate target audience of this program is individuals with an interest in gardening. However, to reach this diverse and highly dispersed audience, 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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	6000	10000	500	0
<b>Actual</b>	6500	600000	320	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	0

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	5	6

**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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	12	15

**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	4-H members & youth will improve their gardening skills and awareness of where food comes from through the Garden & Grow program.
3	Increase the number of Missourians participating in gardening activities.
4	Increase use of soil sampling and plant diagnostic services by home gardeners.
5	Increase the number of Master Gardner volunteer hours and contacts.

## **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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	1000	4500

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Selecting poorly adapted plants for home gardens can lead to frustration and may discourage people from future gardening activity. Awareness of sources of information about proper plant selection will contribute to gardening success and the human health benefits derived from it. Additionally, proper plant selection reduces plant stress, which can lead to a reduced amount of fertilizer and pesticides needed to maintain plant health.

#### **What has been done**

Through Master Gardener training and volunteer activities of Master Gardeners, newsletters, media releases, Nursery Association Certification training, and Web access to extension horticultural guides, thousands of Missourians receive information on plant selection and culture every year. The 2010 program included a Native Plant Field Day and a Tomato Festival. A presentation at the FFA field day reached 175 young people with information on pests that can be spread by firewood.

#### **Results**

Of 1.4 million valid hits on all MU agricultural guides from July 1, 2009, to June 30, 2010, 55 percent were horticulture guides. This is over twice as many hits as for any other category of agricultural guides. Horticultural and pest-management guides together accounted for 0.9 million (62%) of the agricultural guide hits for the period. The most popular horticulture guides were on composting, pruning shrubs, raised bed gardening, roses and vegetable production. Thus, thousands of Missourians received information to help them improve their gardening success. If 10 percent of those receiving home horticulture information increase their purchasing of plants, gardening supplies and landscape services by \$100 due to MU Extension activities, this would translate to a \$6 million increase in sales.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

4-H members & 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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	300	35

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Youth gardening programs, including Garden 'n Grow, are intended to develop strong skills in science through the curriculum. The goals are also for young people who participate in the program to experience gardening as a positive, fun activity, to enjoy the feeling of success with their gardening efforts, and to experience the satisfaction of sharing their harvested produce with others. Young people also learn to produce healthy food and the importance of fresh produce in human nutrition.

**What has been done**

Garden 'n Grow was hosted in three Missouri locations, in which volunteers work with school children to help them plant, manage and harvest vegetable plots.

**Results**

One site was located at a teen pregnancy center, and another program was located at the Sierra-Osage Treatment Center in Poplar Bluff. Twenty girls from low-income backgrounds received horticultural training, and participated in team-building exercises with the Master Gardener mentors. The group designed and planted an annual flower bed displayed at a central location in Poplar Bluff (pop. 17,000+). Master Gardeners contributed more than 80 volunteer hours to the project. Youth surveys demonstrated the nutritional value of the program: 4 out of 5 respondents

reported that after the training they understood why it is important to eat fresh vegetables; 4 out of 5 stated they can grow vegetables in a garden by themselves now. All respondents indicated that "I learned to cook vegetables I didn't know how to prepare and cook before participating in this program."

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems

#### Outcome #3

##### 1. Outcome Measures

Increase the number of Missourians participating in gardening activities.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	2500	3500

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

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 throughout their lives.

###### **What has been done**

Through Master Gardener training, and volunteer activities, press releases, radio spots, Web and printed guides, field days and many other activities, thousands of Missourians gain information that will make them more likely to participate in gardening activities.

###### **Results**

Of 1.4 million valid hits on all MU agricultural guides from July 1, 2009, to June 30, 2010, 55 percent were horticulture guides. This is over twice as many hits as for any other category of agricultural guides. Horticultural and pest-management guides together accounted for 0.9 million (62%) of the agricultural guide hits for the period. The most popular horticulture guides were on composting, pruning shrubs, raised bed gardening, roses and vegetable production. Thus, thousands of Missourians received information to help them improve their gardening success.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
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 #4

##### 1. Outcome Measures

Increase use of soil sampling and plant diagnostic services by home gardeners.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

A recent summary of urban soil samples from the St. Louis and Kansas City areas showed that the majority of samples tested high or very high in soil phosphorus, which poses a threat to water quality. Increased soil testing will reduce the unintentional over application of fertilizer. Workshops to enhance environmental stewardship by homeowners and by lawn-care and horticulture industry professionals help to reduce unnecessary use of pesticide and fertilizer.

###### **What has been done**

MU Extension has developed Healthy Yards for Clear Streams, a program that focuses on training regional specialists to educate homeowners and lawn-care professionals to change management practices of lawns, gardens and landscapes. This program, in addition to Master Gardener outreach efforts, media releases and Web access to extension horticultural guides encouraged environmentally responsible gardening activity.

###### **Results**

The number of lawn and garden soil samples submitted to the MU Soil and Plant Testing Lab in 2010 was approximately 10 percent less than during the previous year, possibly due to economic

conditions. The number of plant diagnostic samples was reduced by 80 percent from the previous year, due to the resignation of the lab director and a delay in refilling the position.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
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 #5

##### 1. Outcome Measures

Increase the number of Master Gardner volunteer hours and contacts.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	2500	44581

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

There continues to be tremendous demand in the general public for gardening information. Many individuals enroll in the Master Gardener class to have access to this type of training. Once Master Gardeners are trained, they disseminate research-based information throughout their county and improve the knowledge base among home gardeners in their community.

###### **What has been done**

Master Gardener Core Training was offered in 25 counties in Missouri with 450 new Master Gardeners being trained.

###### **Results**

Newly trained Master Gardeners are aware of the resources of the University of Missouri and MU Extension and are able to promote their use. They become better educated and more environmentally aware as gardeners. They also actively promote the purchase of plants from local garden centers and nursery businesses. Master Gardeners contributed over 44,000 volunteer

hours to assist MU Extension in outreach and to benefit horticulture in their communities. With speaker's bureaus, newsletters, booths as home shows and many other venues, Master Gardeners contacted nearly half a million Missourians to provide research-based gardening information.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
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

While MU Extension made significant progress in hiring regional horticulture specialists, staffing limitations are 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. While sales of vegetable seeds are up, purchase of higher cost items such as trees and shrubs has declined, despite extension programming to encourage their planting.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)

##### Evaluation Results

Surveys are collected at the end of nearly all Master Gardener core training series asking participants to evaluate program effectiveness and impact on their likelihood of adopting improved gardening practices. On a scale of 1-4 with 4 best, the average rating is 3.75.

##### Key Items of Evaluation

It is evident from the reception by the gardening public of programs such as Master Gardener, Show Me Yards and Neighborhoods, and Healthy Yards for Clear Streams that there is a tremendous demand for information about gardening. Home gardeners are increasingly concerned about the effects of their gardening activities on environmental quality. Furthermore, it is apparent that, given high quality, understandable information, gardeners tend to be willing to change their practices to be more environmentally responsible based on this information. Curricula developed for the Healthy Yards for Clear Streams program will be available for use in any program focused on environmentally responsible landscape and garden management.

**V(A). Planned Program (Summary)**

**Program # 4**

**1. Name of the Planned Program**

Individual Wastewater Systems-Implications for a New Rural Generation

**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%			
111	Conservation and Efficient Use of Water	5%			
112	Watershed Protection and Management	15%			
133	Pollution Prevention and Mitigation	20%			
723	Hazards to Human Health and Safety	30%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	15%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	2.4	0.0	0.0	0.0
Actual	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
105311	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
109401	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**

Field days will be offered to show how to properly install and maintain on-site sewage systems. A core curriculum is developed for training in on-site sewage system basics and site selection. Workshops will be offered to increase awareness and skills for selection of on-site systems and site location. Professional education credit classes will be offered to keep real estate professions, home inspectors and installers updated and trained on the latest technologies and alternative systems available. Media (printed, radio, television coverage) are used to increase awareness of programs and classes.

**2. Brief description of the target audience**

The primary audience for this program is on-site sewage system installers, inspectors, home-loan inspectors, lenders, real estate appraisers and real estate professionals. This course is being offered to agency personnel to assist them in understanding site selection limitations and alternative on-site systems that can be used in environmentally sensitive areas.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	500	1500	0	0
<b>Actual</b>	152	575	0	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- A core curriculum will be produced and used for the PEC courses.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	6	0

**Output #2**

**Output Measure**

- University of Missouri Extension will offer classes totaling between 4.5 and 6 hours of professional education credit each year for real estate professionals, home building inspectors, and others.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	6	4

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Five hundred (500) on-site sewage installers, real estate professionals, home inspectors and agency personnel will increase their awareness and knowledge related to on-site sewage technologies.
2	Five hundred (500) class participants will incorporate information about human health risk and environmental quality when evaluating site selection and on-site system design during inspections and land transfers.

## **Outcome #1**

### **1. Outcome Measures**

Five hundred (500) on-site sewage installers, real estate professionals, home inspectors and agency personnel will increase their awareness and knowledge related to on-site sewage technologies.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	400	145

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The Missouri Department of Natural Resources and the Department of Health see on-site sewage systems as a major problem area with both human and environmental health concerns. Nutrients and bacteria from improperly functioning septic tanks create concerns in waterbodies and degrade aquatic habitat. Whole-body water sports and activities can be seriously limited by the presence of bacteria and sewage. This can result in lower property values, reductions in tourism and an increase in human health concerns.

#### **What has been done**

Extension has offered educational classes for private citizens on proper care and maintenance of on-site sewage systems. Cost-share programs have been offered for the pumping of septic tanks and in some cases the replacement of private systems. Educational programs for the Small Flows Organization have been used to promote maintenance planning by installers and builders. Field day demonstrations have been used show how a septic tank should be pumped and what happens when it is not properly maintained.

#### **Results**

Through educational efforts and cost-share programs, more than 300 septic tanks have been pumped. Field day demonstrations proved to be effective in showing people the concerns associated with lack of maintenance of a septic tank. Testing before and after the Small Flows Organization conference showed a gain in short-term knowledge and understanding of the importance of regularly scheduled maintenance. Educational activities with different watersheds associated with waterbodies on the 303 (d) list of impaired waters saw a change in attitude and behavior as more septic tanks were pumped and several new systems were installed.

### **4. Associated Knowledge Areas**

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

**Outcome #2**

**1. Outcome Measures**

Five hundred (500) class participants will incorporate information about human health risk and environmental quality when evaluating site selection and on-site system design during inspections and land transfers.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	250	145

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Failing on-site sewage systems have been identified by the Missouri Department of Health and the Department of Natural Resources as an area of concern. Human and environmental health can be affected by systems that place raw sewage, nutrients and bacteria into the environment. Excessive nutrients cause heavy algae growth that can destroy aquatic habitat. Algae and bacteria can create human health issues. On-site sewage education becomes critical to mitigate concerns.

**What has been done**

Training for agency personnel, on-site sewage installers and homeowners has been provided to increase awareness and understanding of on-site sewage systems and the maintenance needed to keep them working properly. Field days were used to show levels in septic tanks with and without general maintenance. Tests given to homeowners before and after training indicate a short-term gain in knowledge of the care and maintenance of on-site systems.

**Results**

Results of testing among those who received training show a 67 to 86 percent increase in knowledge of on-site sewage systems. About 300 septic tanks in targeted areas have been checked and pumped. Resource materials were distributed at the Small Flows Conference after a

presentation on what homeowners should know about on-site sewage systems. Agency personnel within the pilot area have reported an increase in questions regarding how to find a certified septic tank installer and pumper and those wanting private well test kits. The number of inspections on septic tanks has increased in the pilot area.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

#### V(H). Planned Program (External Factors)

##### External factors which affected outcomes

- Economy
- Government Regulations
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)

##### Brief Explanation

Several external factors have affected the outcomes of the project. Increased awareness of bacteria levels in waterbodies caused heightened interest in the project and prompted excellent attendance. Changes in environmental regulations related to bacteria levels in lakes and streams increased the need for bacteria regulator information. A slower economy reduced available funds for many homeowners and may have hampered the levels of success seen in the pilot area. More people retired and moved into the pilot area, causing more on-site inspections to take place. Some individuals have retired to properties that were once used occasionally and now are used for full-time residence. These trends have caused concern about possible overloading and malfunctioning of older on-site sewage systems.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- After Only (post program)

##### Evaluation Results

Pre- and post- test results show a 19 percent increase in the number of correct responses. More than 300 septic tanks were pumped and inspected to ensure they are working properly. There was an increase in the number of requests in the pilot area for certified on-site pumpers. There was an increase in the number of requests in the pilot area for well test kits.

There was an increase in the number of requests in the pilot area for on-site sewage system inspections.

**Key Items of Evaluation**

Water quality is a key factor affecting human health, food production and economic growth. Educational programs that directly respond to issues related to water quality lead to implementation of management practices that reduce nutrient and bacteria loading into bodies of water. This reduction in contaminants helps protect human health and increases the tourism value of waterbodies. When a community's economic base is tied to water quality issues, concerns about pollutants in the water and human health concerns can cause severe shortfalls in the local economy. Proper on-site sewage maintenance reduces the risk of bacteria in private wells and in waterbodies. This reduces the chance of health issues that are associated with bacteria in drinking water and in areas for swimming and other whole-body contact.

**V(A). Planned Program (Summary)**

**Program # 5**

**1. Name of the Planned Program**

Missouri Crop Management Systems

**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	20%			
104	Protect Soil from Harmful Effects of Natural Elements	10%			
205	Plant Management Systems	55%			
405	Drainage and Irrigation Systems and Facilities	10%			
512	Quality Maintenance in Storing and Marketing Non-Food Products	5%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	16.4	0.0	0.0	0.0
Actual	18.0	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
702073	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
729340	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, Ag Science Week, regional short courses, field days, and demonstration projects. University of Missouri variety performance evaluations will be conducted in more than 40 locations.

**2. Brief description of the target audience**

The primary target audiences are crop producers and their advisers. 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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	8000	10000	0	0
<b>Actual</b>	7644	31250	0	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2	5

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	10	7

**Output #3**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2	3

**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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	12	29

**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, and new practices.
2	Crop producers will improve their knowledge and implementation related to the various soil.
3	Crop producers will learn proper irrigation management.

## **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, and new practices.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Income from crops represents more than half of all agricultural receipts in Missouri. As seen by recent food riots in other parts of the world, net gains in crop productivity in the U.S. are essential for continued economic development. In addition, use of traditional food crops for biofuel production places additional demands on cropping systems. By developing and promoting efficient crop management systems in Missouri, MU Extension plays a part in the economic viability of Missouri.

#### **What has been done**

A three-day professional development Crop Management Conference for certified crop advisers was conducted. Presentation topics included nitrogen management, energy savings, soybean rust, herbicide injury, bio-fuels, resistant pests, pasture management, row-crop management practices, and weather information. In addition, daylong regional conferences were held throughout the state on these and additional critical topics. 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 180 crop advisers who attended the 2010 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 350 producers who attended regional crop management conferences grow more than 960,000 acres of corn and soybeans. In many locations, the number of attendees grew significantly since the inaugural year, and the addition of two new locations this year appeared successful. Attendees rated the overall program content an 8.7 on a scale of 1 to 10, and 93 percent of those in attendance indicated they would attend a similar program next year. The participants rated the conference proceedings and other handouts distributed at the conferences at 9.0. Many positive comments were returned on the written

evaluation forms pertaining to the use of audience response systems and the interactive nature of each presentation.

#### 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

### Outcome #2

#### 1. Outcome Measures

Crop producers will improve their knowledge and implementation related to the various soil.

#### 2. Associated Institution Types

- 1862 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

#### 3c. Qualitative Outcome or Impact Statement

##### **Issue (Who cares and Why)**

Increasing commodity prices escalate the need for sound, research-based soil testing recommendations to guide crop inputs. These tests provide the scientific basis for more efficient use of fertilizer while minimizing the environmental impact of food production.

##### **What has been done**

The MU Soil Testing program promotes economically viable and environmentally sound nutrient management. These tests provide nutrient recommendations to producers, homeowners, horticulturists, golf course managers and agro-industry. The soil and plant testing database guides fertilizer research directives and serves as an educational resource for statewide extension programs. The program also provides leadership for the following activities:

1. Developing new analytical methods.
2. Maintaining the quality of the soil test data.
3. Providing resources and technical assistance.

##### **Results**

The MU soil testing laboratories are located in Columbia and at the Delta Research and

Extension Center. In 2010, the MU labs analyzed more than 30,000 soil, plant, manure and water samples. The results from these tests not only served producers in every county in Missouri, but also provided the basis for the Soil Testing team to refine current recommendations. The laboratory's recently updated Web site (<http://soilplantlab.missouri.edu/>) provides the most current information and recommendations on nutrient management. Educational programs and promotional activities provide citizens of Missouri with nutrient management information and guidelines for using soil test-based recommendations for agricultural production, lawns and gardens, urban landscapes and commercial horticulture production. These activities will continue to have a positive impact on the environmentally sound use of nutrients.

#### 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 #3

##### 1. Outcome Measures

Crop producers will learn proper irrigation management.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Based on the USDA/NASS Farm and Ranch Irrigation Survey, started in 1994, Missouri is one of the fastest growing irrigated states. The use of irrigation in Missouri increases yield by 44%, 55% and 33% over dryland production for corn, soybeans, and cotton, respectively. Although the cost of irrigation (both fixed and variable) is a little over \$100/acre, the enhanced yields cause the cost of production (COP) under irrigation to be lower than the COP for dryland.

###### What has been done

Irrigation Conferences and meetings were held throughout the Missouri delta provided valuable information to local irrigators on irrigation scheduling, pump efficiency with shallow water tables, and wireless soil moisture monitoring. The information has been posted to the web and is also available to irrigators throughout the country.

### **Results**

As a direct result of these educational efforts, evaluations have found Missouri irrigators have become more profitable and proficient at irrigation. Evaluations have found that yields are enhanced (irrigated vs. dryland). Based on survey results, irrigated vs. dryland yields from 1987-1999 compared to 2000-2008, the benefit from irrigation grew 8.7 bu/ac, 5.0 bu/ac and 46.7 lbs/ac for corn, soybeans, and cotton, respectively. This enhancement, due to better irrigation management, including scheduling, moisture monitoring, and improved pump efficiency, has resulted in almost \$40 million dollars of gross profit for Missouri producers per year.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
405	Drainage and Irrigation Systems and Facilities

## **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**

The MU Soil Testing program met most of its goals for the past year. At the local level, high input and output prices make the services of this program in more demand than ever. Additionally, the demands for crops to be used for both food and fuel make efficient crop production a necessity for both producers and consumers. From a global perspective, abundant, affordable food supplies provide an avenue for a more peaceful and prosperous world.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study

**Evaluation Results**

**Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 6**

**1. Name of the Planned Program**

Missouri Woodland Steward

**V(B). Program Knowledge Area(s)**

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
123	Management and Sustainability of Forest Resources	45%			
131	Alternative Uses of Land	5%			
135	Aquatic and Terrestrial Wildlife	45%			
605	Natural Resource and Environmental Economics	5%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	1.6	0.0	0.0	0.0
Actual	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
105311	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
109401	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**



2010 0 0

**Output #2**

**Output Measure**

- Provide in-service training (ISE) session for regional natural resource program coordinators. This will include Missouri Master Wildlifer and Missouri Master Naturalist.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	0

**Output #3**

**Output Measure**

- Coordinate delivery of short courses to private landowners at selected locations across Missouri.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	15	6

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	50 percent of participants will increase their knowledge of forest ecology.
2	50 percent of participants will increase their knowledge of forest management.
3	50 percent of participants will increase their knowledge of wildlife ecological principles.
4	50 percent of participants will increase their knowledge of wildlife habitat improvement practices.
5	30 percent of participants will have a management plan in place after six months.
6	30 percent of participants will have engaged in at least one forest and/or wildlife improvement practice after six months.

**Outcome #1**

**1. Outcome Measures**

50 percent of participants will increase their knowledge of forest ecology.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Natural resource managers want their clients (landowners) to take responsibility for the stewardship of their woodlands. For that to happen, landowners need to have a basic understanding of plant growth as it relates to both individual trees and the larger forest stand.

**What has been done**

Six of the original Woodland Steward short courses were conducted in FY10 with 90 landowners participating, representing 28,800 acres. In addition, the Woodland Steward program was expanded to capture both youth and adult field days where various topics related to forest ecology were presented. In those events, over 1,700 direct contacts were made.

**Results**

Impact was assessed by observing a 2.3-point increase in pre- and post-Likert self-evaluations (1-5 scale) related to woodland management.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

## **Outcome #2**

### **1. Outcome Measures**

50 percent of participants will increase their knowledge of forest management.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Not only do forest landowners need to understand basic principles of forest ecology principles, they must also have a basic knowledge of simple forest management principles and practices to communicate effectively with resource professionals.

#### **What has been done**

Six of the original Woodland Steward short courses were conducted in FY10 with 90 landowners participating, representing 28,800 acres.

#### **Results**

Impact was assessed by observing a 2.5-point increase in pre- and post-Likert self-evaluations (1-5 scale) related to forest ecology.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
123	Management and Sustainability of Forest Resources

## **Outcome #3**

### **1. Outcome Measures**

50 percent of participants will increase their knowledge of wildlife ecological principles.

### **2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Natural resource managers want their clients (landowners) to take responsibility for the stewardship of their woodlands. For that to happen, landowners need to have a basic understanding of wildlife ecological principles.

**What has been done**

Six of the original Woodland Steward short courses were conducted in FY10 with 90 landowners participating, representing 28,800 acres.

**Results**

Impact was assessed by observing a 1.8-point increase in pre- and post-Likert self-evaluations (1-5 scale) related to wildlife ecology.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

**Outcome #4**

**1. Outcome Measures**

50 percent of participants will increase their knowledge of wildlife habitat improvement practices.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Not only do forest landowners need to understand basic principles of wildlife ecology, they must also have a basic knowledge of simple wildlife management principles and practices in order to communicate effectively with resource professionals.

**What has been done**

Six of the original Woodland Steward short courses were conducted in FY10 with 90 landowners participating, representing 28,800 acres.

**Results**

Impact was assessed by observing a 2.0-point increase in pre- and post-Likert self-evaluations (1-5 scale) related to wildlife management.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

**Outcome #5**

**1. Outcome Measures**

30 percent of participants will have a 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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Natural resource managers want their clients (landowners) to work with them and develop a plan that will meet their woodland objectives.

**What has been done**

Six of the original Woodland Steward short courses were conducted in FY10 with 90 landowners participating, representing 28,800 acres. Six-month follow-up mail surveys were conducted.

**Results**

Impact was assessed by six-month follow-up surveys. The surveys revealed that 57 landowners, representing 21,000 acres, did complete a management plan. This 63 percent success rate is slightly better than in past years, primarily due to increased availability of federal EQIP dollars for writing management plans.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
123	Management and Sustainability of Forest Resources

**Outcome #6**

**1. Outcome Measures**

30 percent of participants will have engaged in at least one forest and/or wildlife improvement practice after six months.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Natural resource managers want their clients (landowners) to implement the management plan that was developed and not let it rest on a shelf, or in a filing cabinet, or in a computer file.

**What has been done**

Six of the original Woodland Steward short courses were conducted in FY10 with 90 landowners participating, representing 28,800 acres. Six-month follow-up mail surveys were conducted.

**Results**

Impact was assessed by six-month follow-up surveys. Of the 57 landowners who had prepared forest management plans, 50 individuals, representing 18,000 acres, implemented at least one management practice called for in their plan.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

#### V(H). Planned Program (External Factors)

##### External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Appropriations changes

##### Brief Explanation

Output #1 was not met in the past year simply because no statewide annual conference was held.

Output #2 was not realized because retirements and resignations have left vacancies in the voluntary regional natural resource program coordinator role in many regions and no volunteers have come forward from the reduced staff. This is simply not a high priority in times of budget and staff reductions.

Output #3 was again significantly affected by the weak economy. Forest landowners in Missouri continue to be recreational forest landowners at best. Few manage their woodlands for profit from timber sales. And those that do have been reluctant to manage their woodlands when stumpage prices for traditional forest products remain very weak.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- Before-After (before and after program)
- Time series (multiple points before and after program)

#### Evaluation Results

Program leaders will continue to conduct pre- and post-Likert self-assessments to monitor knowledge gain among program participants and to use six-month follow-up surveys to monitor implementation of management practices. Longer-term impacts such as increased forest growth, increased wildlife populations, and increased revenue from management activities will be monitored by meeting with participants at future field days and landowner conferences.

#### Key Items of Evaluation

Since January 2006, the Missouri Woodland Steward Program has reached 638 landowners, representing 107,800 acres. A simple cash flow analysis in terms of the

potential net present value (NPV) based on average Ozark forest inventory data can be summarized as follows:

- Liquidate forest now NPV = \$650/acre
- No management, but cut trees in 40 years NPV = \$85/acre
- Manage the forest NPV = \$835/acre

Estimated economic value (gain) of forest management on those 107,800 acres is \$80.85 million (\$750/acre) NPV compared with no management and even \$19.94 million (\$185/acre) over liquidating the forest asset today!

**V(A). Planned Program (Summary)**

**Program # 7**

**1. Name of the Planned Program**

Pasture Based Dairy Systems

**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	20%			
301	Reproductive Performance of Animals	10%			
302	Nutrient Utilization in Animals	10%			
303	Genetic Improvement of Animals	10%			
307	Animal Management Systems	20%			
315	Animal Welfare/Well-Being and Protection	10%			
601	Economics of Agricultural Production and Farm Management	10%			
801	Individual and Family Resource Management	10%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	4.8	0.0	0.0	0.0
Actual	5.0	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
210622	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
218802	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 teach "expert producers" who in turn will teach other producers. Methods will include monthly meetings, newsletters, pasture walks, helping producers learn how to use the web (A webpage has already been established from the ODF project.), provide annual Ag. Lenders workshop, establish forage demonstration plots, and hold annual dairy grazing symposium at the University of Missouri Agricultural Experiment Station in Mt. Vernon, Missouri, which has an established grass-based dairy research and demonstration program.

**2. Brief description of the target audience**

Young families seeking a livelihood in agriculture and to live in the rural areas of Missouri. Existing dairy producers who seek a less stressful farm management lifestyle. Foreign investors who seek to establish profitable investments as grass-based dairies in Missouri.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	350	500	600	750
<b>Actual</b>	653	875	525	375

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

<b>2010</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
<b>Actual</b>	0	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2	1

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	4	3

**Output #3**

**Output Measure**

- Revise the pasture-based dairy manual on a semiannual basis for regional Extension specialists to use in producer meetings.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	1

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of clientele gaining knowledge of forages and grazing systems management.
2	Increase the number of MO dairy farms that adopt the Missouri Pasture-based model resulting in increased profitability.
3	Quality of life as expressed by family farm operators.

## **Outcome #1**

### **1. Outcome Measures**

Number of clientele gaining knowledge of forages and grazing systems management.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Historically low milk prices in 2009 generated renewed interest of evaluating alternative systems of dairying that could lower costs of production. Analysis of data from dairy farms has clearly demonstrated that 55 percent 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**

Two existing discussion groups met monthly in 2010, and a third group was formed in the fall of 2010, to discuss pasture-based dairy systems, forages and grazing management. In addition, University of Missouri Extension has developed a Web-based grazing wedge calculator and made it available for any user. Participants input weekly paddock dry matter measurement to calculate average dry matter growth as well as average cover for the farm.

#### **Results**

The monthly discussion groups have increased the knowledge and understanding of how to make more 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 one producer has been able to increase dry matter intake to 74 percent. The goal is to reach about 50 percent. 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.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems
302	Nutrient Utilization in Animals
601	Economics of Agricultural Production and Farm Management

**Outcome #2**

**1. Outcome Measures**

Increase the number of MO 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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The total economic impact of one dairy animal is about \$14,000, which includes the ripple effects from the milk being produced on the farm through the creation of a product for human consumption. Hence, a viable dairy industry in the state has significant impact on the overall economy.

**What has been done**

University of Missouri Extension provides ongoing educational programs to increase knowledge and understanding of pasture-based dairy systems. Methods used include classroom and on-farm workshops, discussion groups and mass media. Further, expert producers participating in the program serve as mentors and give presentations both statewide and nationally.

**Results**

The dairy industry is still recovering from the adverse economic conditions experienced in 2009 not only in Missouri, but nationally and internationally. In 2010 one new pasture-based dairy was started, but several other producers have begun work toward establishing systems when the economy improves. Still, during the past five years, expansion and growth by new grazing dairies created \$100 million in new investment, generated \$40 million in annual milk sales, added \$124 million in total output, and added 1,100 additional jobs to the state of Missouri.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems
307	Animal Management Systems
315	Animal Welfare/Well-Being and Protection
601	Economics of Agricultural Production and Farm Management
801	Individual and Family Resource Management

**Outcome #3**

**1. Outcome Measures**

Quality of life as expressed by family farm operators.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Data collected following the economic collapse in the 1980s indicated that mental health problems associated with farm failures can lead to increased physical illness, family and animal abuse, divorce and suicide. The social and physiological problems extend to others associated with agribusinesses in the community. Conventional dairy operations, which require families to work 10-14 hours per day for the entire year, creates stressful situations for the families.

**What has been done**

Discussion groups and workshops have focused not only on management issues related to managing pasture-based dairy systems, but also on alternative and more efficient ways of managing the dairy as a whole. This is strongly related to efficient time management, which affects quality of life for the family.

**Results**

Surveys consistently demonstrate an increased quality of life, 70 percent, when compared with the system used before converting to a pasture-based dairy system. The differences most often identified were more time with their family and opportunities to take extended vacations instead of day trips between milkings. Since many are seasonal operations, there is increasingly more adaptation to once-a-day milking toward the end of lactation, which further enhances family time,

their primary measure of quality of life. A striking example was the new start-up seasonal, pasture-based dairy in 2010 that had no prior experience in dairying. After evaluating their management practices and recommending changes that would make more effective use of their time, their workdays decreased from almost 14 hours per day to only 10 hours, even during the spring calving season. Their simple response to this change was "I didn't realize how much wasted effort we were expending." As observed with other start-ups, efficiency will increase rapidly in 2011.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
307	Animal Management Systems
601	Economics of Agricultural Production and Farm Management
801	Individual and Family Resource Management

#### V(H). Planned Program (External Factors)

##### External factors which affected outcomes

- Natural Disasters (drought, weather extremes, etc.)
- Economy
- Competing Public priorities
- Populations changes (immigration, new cultural groupings, etc.)
- Other (Attitude)

##### 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. During 2010 some producers experienced a drought from June until the later part of September. Compared with the previous three years, this 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 and Data Collection)

##### 1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

## Evaluation Results

Stressful economic conditions in 2010 resulted in more Missouri dairy producers adopting some level of grazing. Producers implementing grazing, even on a limited scale, experienced savings of about \$0.80 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 result in more intake from pasture. Three operations adopted the model and significantly reduced the quantity of purchased feed during the drought experienced in 2010. 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 \$3-4 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. This system is particularly important in the southeastern part of the United States, including Missouri, which is a milk-deficit area, but has unlimited potential for pasture-based systems. 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 \$100 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. Missouri and Georgia have submitted a joint grant application to educate and assist beginning and new pasture-based dairy operations in the two states, but programs created will have direct application to the entire Southeast. If application for the grant is successful, it will have significant impact on the rural economy of this region of the country.

**V(A). Planned Program (Summary)**

**Program # 8**

**1. Name of the Planned Program**

MO-PORK: Increasing Pork Production in Missouri

**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	30%			
302	Nutrient Utilization in Animals	40%			
303	Genetic Improvement of Animals	5%			
305	Animal Physiological Processes	2%			
306	Environmental Stress in Animals	3%			
307	Animal Management Systems	15%			
308	Improved Animal Products (Before Harvest)	3%			
315	Animal Welfare/Well-Being and Protection	2%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual	5.0	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
175518	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
182335	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**

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); 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**

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).

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	750	750	400	0
<b>Actual</b>	353	586	438	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2	1

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	2

**Output #3**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	1

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Participants will maintain or increase pork production efficiencies, 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 pork production efficiency and productivity.

**Outcome #1**

**1. Outcome Measures**

Participants will maintain or increase pork production efficiencies, 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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri swine industry has struggled economically like the rest of the country. That Missouri has not seen the same decline in swine farm numbers is due in part to leadership and guidance provided by the MO-PORK program. This program has helped maintain the economic drivers in the rural communities where swine farms operate. Local jobs have been maintained because swine farms have focused on efficiency by reducing inputs (feed, health products and equipment) or increasing outputs such as reproductive performance (number pigs weaned, and pigs per sow per year) and growth performance (market weight and lean gain per day).

**What has been done**

As part of the MO PORK program, efforts have focused on reducing inputs through efficient energy use, alternative feed ingredients, least-cost diet formulations, feed management, feed analysis, reproductive performance and Pork Quality Assurance Plus. More than 120 pork producers (representing more than 80% of the pork production in Missouri) and 26 individual farms were visited for specific troubleshooting and consultation. Four "train-the-trainer" sessions were offered for the PQA+ program to help assure Missouri producers of market access, and 64 PQA+ Advisors were certified. Presentations and demonstrations were made on at least 23 separate occasions to audiences from 12 to 76 people.

**Results**

Producers have increased piglet survival, gained a more thorough understanding of the use and limitations of medicines, refined use of feed ingredients, and captured a greater proportion of the value of manure nutrients for crops. Specifically, Missouri pork producers have been able to reevaluate and reformulate their swine diets using the National Swine Nutrition Guide formulator, which resulted in a savings ranging from \$5 to \$45 per ton depending on previous diets and changes that were incorporated. The feed savings generated in this way averaged \$7.50 per pig marketed. Without a doubt, these feed savings definitely allowed Missouri pork producers to stay

in business and ultimately make a profit when breakeven prices were rising. The economic impact, for Missouri, is a saving of more than \$36 million in feed for pork producers.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
315	Animal Welfare/Well-Being and Protection

#### 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 pork production efficiency and productivity.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

The main issues are the ability of Missouri pork producers to have freedom to farm as well as maintain a competitive infrastructure. Missouri's number one industry is agriculture, and it is important that pork production be one of the drivers of economic development in Missouri. The swine industry has been very dynamic and competitive through the beginning of this century. It is an industry that has embraced change and been willing to accommodate to consumer demand when purchasing pork products. Missouri has long had a diverse swine industry that varies in size and type as well as environmental conditions to suit both indoor and outdoor production systems.

###### What has been done

Workshops, seminars, Web pages, printed materials and short courses include the National Swine Nutrition Guide, Pork Quality Assurance Plus, Growth and Quality Barrow Classic, Pork Profit Seminars, and Swine Institute. Farm visits have been used, especially on-farm demonstrations and research efforts. Countless telephone and e-mail consultations have been part of this effort. In addition, the technical information on the Missouri Swine Resource Guide and By-Product Feed Price Report located on the Web at [www.agebb.missouri.edu/swine](http://www.agebb.missouri.edu/swine) is a very useful resource.

### Results

Providing technological advantages through educational materials, development of the National Swine Nutrition Guide least-cost diet formulator, and updating the swine feeding programs for producers have resulted in a huge economic advantage for Missouri pork producers.

Computerizing feeding programs has enabled swine producers to personally adapt diets as well as be knowledgeable about feed efficiency and performance values. The better use of synthetic amino acids and minimizing commodity grain in formulations have reduced feed costs and improved feed efficiency by 30 to 40 percent, resulting in an economic impact for Missouri of almost \$36 million dollars.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
303	Genetic Improvement of Animals
305	Animal Physiological Processes
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
315	Animal Welfare/Well-Being and Protection

### V(H). Planned Program (External Factors)

#### External factors which affected outcomes

- Economy
- Appropriations changes
- Public Policy changes
- Government Regulations
- Competing Programmatic Challenges

#### Brief Explanation

The price of feed ingredients has continued to rise and become more volatile, increasing the importance of refined use strategies. Continued economic losses have pressed producers to remain vigilant about increasing efficiency by any means, including those from genetics and management decisions. Packers have continued to feel pressure from outside forces to provide quantitative documentation and assurance of animal well-being at source farms. This pressure has led packers to continue to demand PQA+ certification not only from farm owners, but also from workers in the barns (employees), and an increasing number of packers are requiring farm assessments by an outside source.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

### **Evaluation Results**

In general, swine programming makes use of before-and-after evaluations, follow-up visits and comparison between producers adopting technology at various levels. An economic measurement used is the actual cost of ingredients. These feed costs are then calculated into feed efficiency to determine ultimate impact on a pork producer's operation as feed efficiency may vary by operation due to management, housing, herd health and genetics. Therefore, one producer may be able to obtain the cheapest feed but have poor feeder management, resulting in excessive feed wastage and a bottom line that does not reduce total feed costs. Feed cost represents 60 to 70 percent of the total cost of pork production. Thus any feed management practice that improves growth performance and feed efficiency enhances the bottom line for pork producers' profit margins besides finding the cheapest commodity grains or ingredients. Other pork production issues of importance to producers are ensuring quality food product; product safety from terrorism; prevention of disease outbreaks; antibiotic feeding concentrations; neighborhood acceptance of operations in their backyard; health of employees, owners, pigs and the public; labor shortages; and lack of skilled labor. Therefore, producers need to be continually educated and challenged to adopt new technologies. Otherwise, they may opt to leave the pork production industry because of the increasing costs of environmental regulations, governmental regulations affecting how animals are to be raised, limited market access and smaller profit margins.

### **Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 9**

**1. Name of the Planned Program**

Plant Protection for the 21st Century

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
211	Insects, Mites, and Other Arthropods Affecting Plants	15%			
212	Pathogens and Nematodes Affecting Plants	15%			
213	Weeds Affecting Plants	15%			
214	Vertebrates, Mollusks, and Other Pests Affecting Plants	5%			
215	Biological Control of Pests Affecting Plants	10%			
216	Integrated Pest Management Systems	40%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual	5.0	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
175518	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
182335	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 and regional 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, Ag Science Week, regional short courses, field days and demonstration projects. A suite of full color print publications related to pest and crop management will be developed, published and revised. Several websites are available for public use. The integrated pest management site also contains interactive information for clientele interested in black cutworm status. Weekly teleconferences among state and regional faculty members will be held during spring, summer and autumn for timely commodity and pest updates. Funding will be provided to regional extension specialists for local demonstrations of integrated pest management practices.

**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 producers, which makes them ideal intermediates for passing on 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 including FFA, 4-H, Young Farmers, and their teachers will receive specially designed programs.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	3000	5000	500	0
<b>Actual</b>	3730	7238	934	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	3	3

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	5	10

**Output #3**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	3	2

**Output #4**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	12	34

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	50% of MO producers and crop advisors will indicate they have increased knowledge and plan to adopt at least one IPM strategy and/or system(s) into their operation.
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**

50% of MO producers and crop advisors will indicate they have increased knowledge and plan to adopt at least one IPM strategy and/or system(s) into their operation.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

More than 30 different plant species are important to Missouri agriculture. This large number of species challenges pest management specialists to offer appropriate pest management recommendations.

**What has been done**

The MU Integrated Pest Management Program involves an integrated approach by the various disciplines to develop and implement a comprehensive and multidisciplinary pest management program - including seminars, workshops, field days, development of curricula, guide sheets and manual, in-service training, Web sites, newsletters, weekly teleconferences and applied demonstrations.

**Results**

The MU Extension IPM Program, through these multiple approaches, educated Missouri farmers and their advisors about the purpose, foundation and implementation of Integrated Pest Management; disseminated information about effective and environmentally sound plant pest management practices; identified, monitored and evaluated existing and potential plant pests; and demonstrated IPM principles at the local level. The program emphasis areas were: IPM in Agronomic Crops, IPM in High Value/High Input or Intensively Managed Crops, and IPM support for Pest Diagnostics Facilities. This comprehensive approach and the selected emphasis areas are clearly aligned with the federal IPM Roadmap and other discussions related to future approaches for IPM education. Specific examples of the programs impact are listed in the impact section of this report.

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
216	Integrated Pest Management Systems

## **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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The Missouri Pesticide Use Act establishes that anyone using any pesticide which is classified for restricted use for the purposes of producing any agricultural commodity on property owned or rented by the applicator or their employer or on the property of another person, if used without compensation other than trading of personal services between producers of agricultural commodities, must complete the University of Missouri Extension Certified Private Applicator Training Program and be certified by the Director of Agriculture.

#### **What has been done**

To meet the legal requirement mandated by the Environmental Protection Agency and by the Missouri Department of Agriculture's Bureau of Pesticide Control, an aspiring private applicator must fulfill one to the following: 1) attend a training program conducted by a local regional extension specialist, or 2) complete a self-study tutorial course through the viewing of a training DVD (135 minutes) and M-87 Private Pesticide Applicator Reference Manual in their local University of Missouri Extension Center. To keep the certification valid for a licensed private applicator, the applicator is required to renew once every five years by repeating the same process.

#### **Results**

Thirty-one regional extension specialists conducted formal educational programs for certifying and recertifying private pesticide applicators in Missouri's 114 counties. This training provided

training on such topics as integrated pest management, pesticide labels, pesticide application and storage, pesticide safety, personal protective equipment, selection and proper use of application equipment, health risks, and regulatory requirements. The Private Pesticide Applicator Training (PPAT) Program at the University of Missouri provided certification and recertification training to approximately 2087 agricultural producers this past year. In addition the program developed a new private pesticide training video. This video will be used in MU Extension Centers for training walk-in clientele and as a resource for formal training events hosted by regional extension specialists.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
214	Vertebrates, Mollusks, and Other Pests Affecting Plants
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

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- After Only (post program)
- Before-After (before and after program)
- During (during program)

#### Evaluation Results

Some major program accomplishments this past year included: A team of state and regional Extension specialists collaborated in four regions to provide interactive day-long conferences under the overall theme of "Crop Management Strategies in an Era of Uncertainty." These presentations involved discussions of the integration of management practices and how this integration affects the various components of the interaction and an assessment of the risks, benefits and costs of the whole system management approach.

Comments, suggestions and alternative practices were solicited from participants via audience response systems and incorporated into the scenarios developed during the presentations. The conferences reached audiences that grow more than 660,000 acres of corn and soybeans in Missouri. Attendees rated the overall program content an 8.8 on a scale of 1 to 10 and 93% of those in attendance indicated they would attend a similar program next year. The participants also rated the conference proceedings and other handouts distributed at the conferences a 9.3. Many positive comments were also returned on the written evaluation forms pertaining to the use of audience response systems and the interactive nature of each presentation.

The MU Extension Soybean Rust Management Team surveyed Certified Crop Advisors (CCA's) concerning the effectiveness of the Missouri soybean rust monitoring program and their preferred sources of information about rust. The survey results showed that 100% felt the national rust website was useful or very useful, 100% used the information available there some or extensively when making recommendations to farmers about fungicides for soybean rust management, 94% would be concerned if the website was not available, and 100% felt University of Missouri Extension was effective or very effective in conveying information about soybean rust, and 59% indicated University of Missouri Extension was their preferred source of information about soybean rust.

A day-long field day and in-service education training program was conducted at the Bradford Research and Extension Center. Participants included agricultural retailers, technical service and research and development representatives from throughout the agricultural pesticide industry, crop consultants, extension faculty, farmers, and personnel from state and federal agencies. This training covered 1) the most recent information and recommendations pertaining to the management of the most prevalent weed, insect, and disease problems in Missouri's crops and forages, 2) information on the utility of new pesticides, pest management techniques, and/or genetically modified crops in Missouri, and 3) results from ongoing, collaborative research projects that address new and emerging pest management problems in Missouri's crops and forages. Attendees influence decisions on approximately 12 million acres of cropland throughout the Midwest. Many of these attendees are chemical industry representatives and crop consultants that make decisions on a large number of acres across several states. On a scale of 1 to 5 with 1 being poor and 5 being excellent, attendees rated this year's overall program content a 4.34.

## **Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 10**

**1. Name of the Planned Program**

Profit Focused Agriculture

**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	40%			
602	Business Management, Finance, and Taxation	10%			
603	Market Economics	10%			
604	Marketing and Distribution Practices	10%			
605	Natural Resource and Environmental Economics	15%			
606	International Trade and Development	2%			
607	Consumer Economics	2%			
610	Domestic Policy Analysis	10%			
611	Foreign Policy and Programs	1%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	15.6	0.0	0.0	0.0
Actual	18.0	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
702073	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
729340	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, and 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).

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	7500	18500	500	750
<b>Actual</b>	11058	50489	1055	700

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

<b>2010</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>	0	0	
<b>Actual</b>	0	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	50

**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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The 2007 Census of Agriculture reported an increase in the number of Missouri women who are principal farm operators. Historically, educational classes have not targeted women. Annie's Projects are intended to develop the skills and provide the tools women need to make better decisions, be better business partners, and make farms more profitable, as well as provide economic benefit to the community. Informed decisions will also lead to a healthier environment and higher quality food products.

#### **What has been done**

AgBusiness Specialists customized the Annie's Project curriculum. The media continued advertizing Annie's Project classes. Nine Annie's Project classes (18 hours) and three Annie's Project II-Women Marketing Grain & Livestock classes (12 hours) were delivered across the state. Classes were taught by extension specialists and local professionals. Evaluations were modified to collect better impact data. Extension specialists received training to prepare for conducting classes. Curriculum improvement is ongoing.

#### **Results**

A total of 118 people participated in the classes. Each participant completed a balance sheet so that he or she understood current and noncurrent assets and liabilities. Each participant also started or completed a business plan. Participants were sent an electronic survey about six months after completing the class. The response rate was 38 percent. All participants indicated they had shared information from the class with at least two other people. Half said they had actually used the financial scorecard for their business, and another 22 percent said they planned to do so within the year. The scorecard includes the 21 ratios identified by the Farm Financial Standards Council. Another question asked if participants had used information from the class to make changes in any leases; 47 percent of respondents said yes and an additional 20 percent are planning to make changes.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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

**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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The average age of Missouri farmers is well over 50, which makes estate planning and business succession a critical concern for farmers. Many farmers do not understand estate planning and business succession concepts and lack the tools to deal effectively with attorneys and others to accomplish their goals. Many farmland owners no longer operate the farm, and more than half of leases remain unwritten, resulting in conflicts and disagreements. Fencing and boundary laws are also poorly understood.

**What has been done**

A three-session workshop on estate planning was offered at five Missouri locations through Interactive Video. Facilitators at each location relayed questions the participants were reluctant to ask during the program. The curriculum is updated annually and an associate circuit (probate) judge assisted in teaching one of the sessions. In addition, a curriculum covering the main aspects of farm leases was developed and presented as an ITV program at five sites. Three programs on fencing laws were also conducted by ITV.

**Results**

Sixty-one people participated in the estate planning series, 46 in the leasing series, and 104 in the fencing law series. After the estate planning series 79 percent of participants checked to see how their property was titled (double the pre-session survey response), 69 percent communicated their plans to their heirs (up from 18 percent initially), 73 percent estimated the value of their estates (up from 36 percent pre-session), and 84 percent of attendees at leasing sessions indicated they had learned how to terminate a lease and where to get forms and assistance. The fencing sessions received a 98 percent favorable rating.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
601	Economics of Agricultural Production and Farm Management
602	Business Management, Finance, and Taxation

**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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	3	6

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The future economic viability and quality of life in rural Missouri is based on the development of a "new agricultural economy" that will add value to the commodities raised in Missouri and develop new business models for Missouri producers.

**What has been done**

The Missouri Value Added Center (MOVAC) and three regional agriculture business counselors (RABCs) facilitated value-added business endeavors within specific agrographic regions of Missouri, developed leadership skills, and acted as the initial catalyst for assessing funding opportunities, sourcing resource providers, and communicating with regulators and decision makers.

### Results

The Missouri Value Added Center staff helped to incubate business development of the following agricultural business sectors over the past 18 months: biomass resource recovery park, large animal composting, small-scale oilseed crushing plant, wood export cooperative, quality beef program, and specialty berry to juice cooperative. The 10-year present value potential of investment into these businesses could lead to \$78 million of new economic activity and add 185 jobs to the state economy.

#### 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

Weakness in the overall economy of the country influenced the content of many profit-focused agriculture educational efforts and the type of questions received from individuals. Two in-service education sessions on working with farmers in distress were provided for regional extension specialists. One in-service session and 13 sessions for agricultural lenders were conducted to inform extension specialists and agricultural lenders of both the positive and negative effects of the economy on Missouri's agricultural sector. Many presentations were also given as parts of other programs. Increasing land values and input costs and extreme fluctuations in grain prices created challenges and opportunities for producers, lenders, investors and extension educators. None of the anticipated educational outcomes of the profit-focused agriculture program were negatively affected by external factors. Continued financial issues and attrition within MU Extension continued to limit the ability to expand programs.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.
- Other (Comparisons between states)

### **Evaluation Results**

Evaluations of participants in all programs and events were positive. The sessions on estate planning continued to be well attended statewide, and an advanced series has been requested by previous attendees. More than 80 percent of the 46 people attending an ITV program on farm leases said they learned the correct way to terminate a lease and where to get forms and assistance. This program continues to serve an important need. A two-session ITV program on Missouri's complex fencing laws drew 104 participants, 98 percent of whom indicated that the ITV method was an excellent choice for teaching this material. More than one-third of the women participating in Annie's programs responded to a survey six months after completing the classes. All of these respondents indicated sharing information with others, and nearly 75 percent had used their new knowledge to make changes in their operations. This ongoing program continues to attract new participants and provides ongoing education and support for an increasing clientele base. For the 30<sup>th</sup> year, 265 lenders attending Ag Lender seminars at 13 sites over the state rated the seminars at 8.55 on a 10-point scale with annual planning budgets and forecasts by extension economists as most useful. This series continues to be an effective method of coordinating current knowledge between lenders and extension specialists. Business/Farm Income Tax Schools were held at six locations with a total attendance of 380 tax practitioners and extension specialists. These schools, taught by IRS, Missouri Department of Revenue, and extension specialists continue to be a very efficient and well-attended method for updating key professionals on tax laws and procedures relevant to the profitability of Missouri agriculture. Nine multisession workshops on farm business recordkeeping using Quicken, QuickBooks, and Excel were conducted by agbusiness specialists over the state and were well attended.

### **Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 11**

**1. Name of the Planned Program**

Show-Me-Select Replacement Heifer 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	60%			
303	Genetic Improvement of Animals	20%			
307	Animal Management Systems	10%			
308	Improved Animal Products (Before Harvest)	10%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	12.0	0.0	0.0	0.0
Actual	13.0	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
491451	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
510538	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**

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.

**2. Brief description of the target audience**

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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	750	10000	100	450
<b>Actual</b>	995	1486	716	849

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

**Patent Applications Submitted**

Year: 2010

Plan: 0

Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	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.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2	3

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	6	9

**Output #3**

**Output Measure**

- Regional specialist will assist with producer sales.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	12	14

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Economic assessment of the program and impact based on surveys of participating farmers.
2	Increase in the number of animals (heifers) enrolled in the program.
3	Increase in the number of programmatic participating veterinarians on a region-to-region basis.
4	Annual economic impact of the Show-Me-Select heifer program on the state's economy.
5	Number of farmers participating in the SMS program and the % of producers adopting management protocol.

## **Outcome #1**

### **1. Outcome Measures**

Economic assessment of the program and impact based on surveys of participating farmers.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

The audiences targeted in this program include regional extension livestock specialists, veterinarians, and farmers across Missouri who are actively involved in cow-calf production and marketing. Technology transfer with respect to the management practices involved in the program is not dependent the size of a livestock operation but rather on individual farmers who may introduce a fundamental change in approach to management and marketing that affects the profitability of their particular operations.

#### **What has been done**

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 to, Missouri raised heifers; and (3) the creation of reliable sources of quality commercial and purebred replacement females.

#### **Results**

The Show-Me-Select Replacement Heifer Program is the first comprehensive, statewide, on-farm beef heifer development and marketing program in the United States. Participation in the program from 1997-2010 involved 91,776 heifers on 703 farms across Missouri, 205 veterinarians, 10 regional extension livestock coordinators, and 17 regional extension livestock specialists. The marketing component of the program over this period involved 105 sales at 12 locations. During this time, 22,807 heifers sold through the Show-Me-Select Replacement Heifer Program sales, with gross receipts of \$25,406,700. The total net impact on Missouri's economy from the 14 years of the Show-Me-Select Replacement Heifer Program and Sales exceeds \$50,000,000. Producers from 104 of Missouri's 114 counties (91%) have enrolled heifers in the program, and 64 counties in Missouri (56% of the total) list the Show-Me-Select Replacement Heifer Program as a priority

program for their county in the their current program of work.

#### 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)

#### Outcome #2

##### 1. Outcome Measures

Increase in the number of animals (heifers) enrolled in the program.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Continuation of low adoption rates of best management practices in the United States will ultimately erode the competitive position of the U.S. cattle industry. Producers in other countries are adopting new technologies for animal production more rapidly than their U.S. counterparts. Unless owners of commercial and purebred cowherds aggressively implement reproductive and genetic improvement, the United States will lose its competitive advantage in production of high quality beef.

###### **What has been done**

A number of management procedures have been cited to have a significant impact on beef herds and their resulting performance as measured by reproduction and productivity. Only a limited percentage of beef cattle operations use these management procedures. Best management practices for replacement beef heifers, when collectively viewed as a "program," can assist producers in more effectively managing reproduction, production and marketing.

###### **Results**

The Show-Me-Select Replacement Heifer Program is the first comprehensive, statewide, on-farm beef heifer development and marketing program in the United States. Participation in the program from 1997-2010 involved 91,776 heifers on 703 farms across Missouri, 205 veterinarians, 10 regional extension livestock coordinators and 17 regional extension livestock specialists. The marketing component of the program over this period involved 105 sales at 12 locations. During this time, 22,807 heifers sold through Show-Me-Select Replacement Heifer Program sales, with gross receipts of \$25,406,700. The total net impact on Missouri's economy from the 14 years of the Show-Me-Select Replacement Heifer Program and Sales exceeds \$50,000,000. Producers from 104 of Missouri's 114 counties (91%) have enrolled heifers in the program, and extension councils in 64 counties in Missouri (56% of the total) list the Show-Me-Select Replacement Heifer Program as a priority program for their county in their current program of work. Heifers from the program have now sold to farms in Arkansas, Arizona, Florida, Georgia, Iowa, Illinois, Indiana, Kentucky, Kansas, Missouri, Nebraska, Oklahoma, South Carolina, South Dakota, Tennessee and Texas.

#### 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)

#### Outcome #3

##### 1. Outcome Measures

Increase in the number of programmatic participating veterinarians on a region-to-region basis.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### Issue (Who cares and Why)

Veterinarians provide expertise in herd health, assessment of reproductive potential, and pregnancy diagnosis. Veterinarians serve as key information sources for U.S. beef producers and are essential in facilitating the adoption of various reproductive procedures. Nearly two-thirds

(60.8%) of cow-calf producers cited their veterinarian as a "very important" source of information for their cow-calf operation including health, nutrition, or questions pertaining to production or management.

**What has been done**

Implementation of the Show-Me-Select Replacement Heifer Program in Missouri involved University specialists working closely with producers, regional extension specialists, and veterinarians. On-farm development programs that involve local veterinarians, state, regional extension livestock specialists, and individual farm operators provide the structure through which change can occur.

**Results**

Veterinarians provide expertise in the areas of health, assessment of reproductive potential, fetal aging and pregnancy diagnosis. Veterinarians serve as key information sources for U.S. beef producers and are essential in facilitating the adoption of various reproductive procedures. Nearly two-thirds (60.8%) of cow-calf producers cited their veterinarian as a "very important" source of information for their cow-calf operation including health, nutrition, or questions pertaining to production or management. The success of this program over the past years was largely a function of being able to reach the target audience and the associated impact of that connection. Implementation involved University specialists working closely with producers, regional extension specialists, and veterinarians. On-farm development programs that involve local veterinarians, state and regional extension specialists, and individual farm operators provide the structure through which change can occur.

**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)

**Outcome #4**

**1. Outcome Measures**

Annual economic impact of the Show-Me-Select heifer program on the state's economy.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
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- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Continuation of low adoption rates of best management practices in the U.S. will erode the competitive position of the U.S. cattle industry. Other countries are adopting new technologies more rapidly than the U.S. Unless owners of beef herds aggressively implement reproductive and genetic improvement, the U.S. will lose its competitive advantage in production of high quality beef. International players will position themselves to dominate the production and sale of high-quality beef worldwide.

**What has been done**

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. Meaningful assessment of this program began by building in evaluation as part of the design, which it did. Data collection is part of the delivery process and reinforces the development of sound management practices on individual farms that participate in the program regardless of their size.

**Results**

The marketing component of the program facilitated the sale of 22,807 heifers in 105 sales across Missouri from 1997 through the fall sales in 2010. These sales generated interest from over 7,500 prospective buyers that formally registered to buy heifers, and over 2,700 individuals that purchased heifers from the various sales. Heifers from the program have now sold to farms in AR, AZ, CO, FL, GA, IA, IL, IN, KY, KS, LA, MO, NE, OK, SC, SD, TN and TX. Collectively, 105 sales have generated \$25,406,700 in gross sales. 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. Economic impact of the Show-Me-Select Replacement Heifer Program on an annual basis is estimated at \$3.5 million. Impact on Missouri's economy from the past 14 years of the Show-Me-Select program exceeds \$50,000,000.

**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
- Other (Marketing Fluctuations)

### **Brief Explanation**

The audiences targeted in this program include Regional Extension Livestock Specialists, veterinarians, and farmers across Missouri that are actively involved in cow-calf production and marketing. There are no limitations placed on the program in terms of farm or size of cowherd. The pilot programs involved herds as small as 15 cows and as large as 800 cows. 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 this program over the past 14 years relied largely in reaching this target audience and the associated impact of that connection. Numerous sectors of the Missouri livestock industry came together as a result of this program, including University of Missouri Extension, the College of Agriculture Food and Natural Resources, the College of Veterinary Medicine, the Division of Animal Sciences, 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. Since the program began in 1997, 703 farms in Missouri have enrolled 91,776 heifers in the Show-Me-Select Replacement Heifer Program. The program has been led by 10 Regional Extension Livestock Specialists that serve as Coordinators of the Program in their respective regions, and 17 additional Specialists across the state that support efforts in these regions. In addition, 205 veterinarians in Missouri have participated in the Program since its inception. 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. Hence, evaluation has an impact in the program itself. Meaningful assessment of this program began with building in evaluation as part of the design. Data collection was part of the delivery process and reinforced the development of sound management practices through on-farm, individualized result demonstrations conducted on farms that participated in the Program. Farmers used data generated on their own farms with the focus of the program centered on action alternatives based on data generated, methods flowed from issues. The end result was that a negotiated participatory process that evolved among the Regional Extension Livestock Specialist, the veterinarian, and the farmer with support from State specialists. The existing database from the Show-Me-Select Replacement Heifer Program serves as a conduit in the development of new educational programming areas.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

## 1. Evaluation Studies Planned

- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

## 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 to, Missouri raised heifers; and 3) the creation of reliable sources of quality commercial and purebred replacement females. The program was initiated as a pilot project in two regions of Missouri in 1997 with 33 farms and 1,873 heifers. During the past 14 years, 703 farms enrolled 91,776 heifers in the program. Regional extension livestock specialists serve as coordinators of the program locally and work closely with the 196 veterinarians involved with the program state wide. State specialists provide program support to regional extension field staff and participating veterinarians. The reproductive goals for heifers enrolled in the program are aimed at improving breeding performance during the heifers' first breeding period, minimizing the incidence and severity of dystocia, with the resulting delivery of healthy vigorous calves, and successful rebreeding of heifers during the subsequent breeding season. The marketing component of the program facilitated the sale of 22,807 heifers in 105 sales across Missouri from 1997 through the fall sales in 2010. These sales generated interest from over 7,500 prospective buyers that formally registered to buy heifers, and over 2,700 individuals that purchased heifers from the various sales. Heifers from the program have now sold to farms in AR, AZ, CO, FL, GA, IA, IL, IN, KY, KS, LA, MO, NE, OK, SC, SD, TN and TX. Collectively, 105 sales have generated \$25,406,700 in gross sales. Producers from 104 (91%) of 114 counties have participated in the Show-Me-Select Replacement Heifer Program. Buyers from 112 of 114 counties (98%) registered to purchase heifers from 1997-2010 Show-Me-Select Replacement Heifer Sales. Buyers from 108 of the 114 counties (95%) purchased heifers from 1997-2010 Show-Me-Select Replacement Heifer sales. 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. Economic impact of the Show-Me-Select Replacement Heifer Program on an annual basis is estimated at \$3.5 million. Impact on Missouri's economy from the first 14 years of the Show-Me-Select program exceeds \$50,000,000.

## Key Items of Evaluation

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 to, Missouri raised heifers; and 3) the creation of reliable

sources of quality commercial and purebred replacement females. During the past 14 years, 703 farms enrolled 91,776 heifers in the program. Regional extension livestock specialists serve as coordinators of the program locally and work closely with the 205 veterinarians involved with the program state wide. State specialists provide program support to regional extension field staff and participating veterinarians. The reproductive goals for heifers enrolled in the program are aimed at improving breeding performance during the heifers' first breeding period, minimizing the incidence and severity of dystocia, with the resulting delivery of healthy vigorous calves, and successful rebreeding of heifers during the subsequent breeding season. The marketing component of the program facilitated the sale of 22,807 heifers in 105 sales across Missouri from 1997 through the fall sales in 2010. These sales generated interest from over 7,500 prospective buyers that formally registered to buy heifers, and over 2,700 individuals that purchased heifers from the various sales. Heifers from the program have now sold to farms in AR, AZ, CO, FL, GA, IA, IL, IN, KY, KS, LA, MO, NE, OK, SC, SD, TN and TX. Collectively, 105 sales have generated \$25,406,700 in gross sales. Producers from 104 (91%) of 114 counties have participated in the Show-Me-Select Replacement Heifer Program. Buyers from 112 of 114 counties (98%) registered to purchase heifers from 1997-2010 Show-Me-Select Replacement Heifer Sales. Buyers from 108 of the 114 counties (95%) purchased heifers from 1997-2010 Show-Me-Select Replacement Heifer sales. The program fosters the adoption of reproductive technologies focused on expanded use of artificial insemination (AI), use of high accuracy AI sires, and provides the infrastructure for effective implementation of new reproductive technologies and economic feedback regarding their use. By-products of adoption of reproductive technologies in beef cattle include enhanced genetic merit of heifers and steers, and improvements in whole herd reproductive management. The Missouri Show-Me-Select Replacement Heifer Program recently created a Tier 2 classification that distinguishes heifers from high accuracy sires. Sales results from this past fall's sales show an average premium of \$155 per heifer that were distinguished as Tier 2 replacements compared with other heifers in the program. 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. Economic impact stemming from the program on an annual basis is estimated at \$3.5 million. Impact on Missouri's economy from the first 14 years of the Show-Me-Select program exceeds \$50,000,000.

**V(A). Planned Program (Summary)****Program # 12****1. Name of the Planned Program**

Applying Science and Technology

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

## 1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	7.4	0.0	0.0	0.0
Actual	11.0	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
288288	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
292736	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

Food Science: Show Me Quality Assurance, Pork Quality Assurance, Camp Food and Fitness, Meats Contest & Cured Ham, Growth & Quality of Live Animal Evaluation, Livestock Judging and Grading. Animal Science Food Animal: Beef Project, Judging, Demonstration, Exhibition; Sheep Project, Judging, Demonstration, Exhibition; Swine Project, Judging, Demonstration, Exhibition; Goat Project, Judging, Demonstration, Exhibition; Dairy Project, Judging, Demonstration, Exhibition; Poultry Judging, Demonstration, Exhibition. Animal Science Companion Animal: Horse Project, Bowl, Hippology, Judging,

Demonstration, Exhibition; Dog Project, Judging, Demonstration, Exhibition; Cat Project, Judging, Demonstration, Exhibition. Vet Science: Project, Judging, Demonstration, Exhibition. Embryology. Plant Science: Horticulture Project, Judging, Demonstration, Exhibition; Soybean Project, Judging, Demonstration, Exhibition; Corn Project, Judging, Demonstration, Exhibition; Gardening Judging, Demonstration, Exhibition; Bee Keeping. Environmental/Natural Sciences: Project, Judging, Demonstrations, Exhibition. Community Mapping: Water Quality/Aquatic Education; Sports Fishing; Project WET; Wildlife Habitat and Management; Project WILD; Leopold Education Project; Geology; Forestry Project, Demonstration and Exhibition; Project Learning Tree; Solid Waste Management. Information Sciences: Project, Judging, Demonstration, Exhibition, Community Mapping; Computers; Software-based projects; Geo-Spatial; Internet; Digital Media. Physical Sciences Project, Judging, Demonstration, Exhibition, Community Mapping: Robotics; Design; Bicycle; Built Environments; Home Environment; Design/Manufacturing - Textiles; Aero Space; Woodworking; Welding; Electricity; Small Engines; Energy Use and Conservation.

**2. Brief description of the target audience**

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

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	650	3500	28000	8500
<b>Actual</b>	4289	10942	25609	11922

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	5	0	
<b>Actual</b>	5	0	30

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Attendance of project leaders at workshops for food science, animal science, plant science, environmental science, informational sciences and physical sciences.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	650	298860

**Output #2**

**Output Measure**

- Number of youth enrolled in food science, animal science, plant science, environmental science, informational sciences and physical sciences.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	6500	742

**Output #3**

**Output Measure**

- Number of youth enrolled in embryology.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	10000	29540

**Output #4**

**Output Measure**

- Number of hits on website.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	22000	17228

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Youth will competently demonstrate knowledge and skills gained through demonstrations and project exhibition.

**Outcome #1**

**1. Outcome Measures**

Youth will competently demonstrate knowledge and skills gained through demonstrations and project exhibition.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	13500	16289

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Today's young people must be prepared to live and work in a world that no one can completely envision -- for jobs that do not yet exist, using technologies that have not yet been invented, solving problems that have not yet been identified. Future scientists are critical to our state, national and global economy; three-quarters of Missouri's \$9.5 billion in products and services exported in 2009 were Science, Engineering and Technology (SET) based industries.

**What has been done**

4-H provided 332,090 youth contacts and 19,018 adult contacts in projects related to science, engineering and technology. The Missouri 4-H program annually links thousands of young people, parents, volunteers, and professionals to MU. Last year, 3,659 persons visited the MU campus for educational events and camps and 4-H contests that provided opportunities for young people to demonstrate knowledge and demonstrate their skills.

**Results**

4-H members report an increased interest in science at a rate 3 times their non-4-H peers. Interest in science is a predictor for young people to choose science related careers. Interest in science is a predictor for young people to choose science related careers. Future scientists are critical to our state, national and global economy.

Recent analysis of Missouri data for Wave 7 of the 4-H Study for Youth Development reveals girls who are active in 4-H after school and summer programs increased their interest in science more than their non 4-H counterparts.

**4. Associated Knowledge Areas**

**KA Code    Knowledge Area**

## **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, motivated local and state faculty and volunteers. Four vacancies in faculty and staff positions reduced the ability to provide program leadership for volunteers who work directly with youth.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- During (during program)
- Other (Demonstration, Judging and Exhib)

### **Evaluation Results**

In 2007, Missouri 4-H joined the national 4-H Study of Positive Youth Development. The longitudinal study has surveyed 4,793 adolescents in 34 states in its first five years. This landmark investigation is helping us better understand the factors that lead to positive growth and decreased risk during adolescence. Between March and August of 2007, 338 adolescents from Missouri participated in Wave 5 of the 4-H Study of Positive Youth Development. In 2008, 296 Missouri adolescents were surveyed. One hundred, sixty-five of those youth were new to the study and 131 were students who had been surveyed in 2007. Another 127 teens were surveyed in 2009 with 23 being new to the study. The students were from 26 sites in Missouri 4-H Youth Development Specialists from the University of Missouri and Lincoln University recruited students in grades 6 to 12 to complete a written survey. Parents could also complete an optional survey.

In addition to contributing to the national study, we particularly wanted to know about the value of Missouri 4-H participation. In order to explore this, we grouped Missouri students based on their self-reported 4-H participation in the past year. Groups were:

- 4-H - Participated in a 4-H club at least once a month
- Active - Participated in a 4-H Club two or more times a month

- Non-4-H - Never participated in a 4-H club
- Two findings jump out from the Missouri data:
- Young women in 4-H increased their interest in science significantly over their non-4-H female peers.
  - Active 4-H members expect to complete higher levels of education.

### **Key Items of Evaluation**

In addition to contributing to the national study, we particularly wanted to know about the value of Missouri 4-H participation. In order to explore this, we grouped Missouri students based on their self-reported 4-H participation in the past year. Groups were:

- 4-H - Participated in a 4-H club at least once a month
- Active - Participated in a 4-H Club two or more times a month
- Non-4-H - Never participated in a 4-H club

Two findings jump out from the Missouri data:

- Young women in 4-H increased their interest in science significantly over their non-4-H female peers.
- Active 4-H members expect to complete higher levels of education.

These findings were mostly consistent with the national sample and the longitudinal data. These data suggest that young people who are active in 4-H are likely to report more positive behaviors and fewer negative behaviors. Additional information on the 4-H Study of Positive Youth Development can be found at: <http://mo4h.missouri.edu/resources/evaluation/pydstudy.htm>.

**V(A). Planned Program (Summary)**

**Program # 13**

**1. Name of the Planned Program**

Building Character

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	15.0	0.0	0.0	0.0
Actual	10.0	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
226510	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
230008	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

Integrate Show Me Character resources into 4-H Clubs, 4-H Camps, 4-H Council and other meetings and 4-H educational events. Integrate Show Me Character modules into adult and teen volunteer training, workshops; Module 1-Why Character Development; Module 2-Character Development Theory; Module 3-The Six Pillars of Character; Module 4-Making Good Decisions; and Module 5-Competing with Honor.

**2. Brief description of the target audience**

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

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	7800	10200	15600	51000
<b>Actual</b>	0	0	0	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	3	0	
<b>Actual</b>	3	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of youth and adults reached by 4-H field and state faculty with the Show Me Character Program.  
 Not reporting on this Output for this Annual Report

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	10,000 youth will report an awareness of the six pillars of character.
2	10,000 youth will report an awareness of how character affects their daily decisions.
3	20 4-H field faculty will integrate Show Me Character into their 4-H program.
4	50 to 60 youth will report annually through the Y2200, State 4-H Recognition Form on how 4-H has influenced their lives through their 4-H Story.

**Outcome #1**

**1. Outcome Measures**

10,000 youth will report an awareness of the six pillars of character.

Not Reporting on this Outcome Measure

**Outcome #2**

**1. Outcome Measures**

10,000 youth will report an awareness of how character affects their daily decisions.

Not Reporting on this Outcome Measure

**Outcome #3**

**1. Outcome Measures**

20 4-H field faculty will integrate Show Me Character into their 4-H program.

Not Reporting on this Outcome Measure

**Outcome #4**

**1. Outcome Measures**

50 to 60 youth will report annually through the Y2200, State 4-H Recognition Form on how 4-H has influenced their lives through their 4-H Story.

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 and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- During (during program)
- Case Study
- Other (Demos, Exhibs, Behav @ Ed Events)

### **Evaluation Results**

### **Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 14**

**1. Name of the Planned Program**

Choosing Healthy Lifestyles

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	3.1	0.0	0.0	0.0
Actual	11.0	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
308880	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
313646	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 Food and Nutrition Projects; Physical Activity 4-H Projects; Camp Food and Fitness; Steppin' Out Fitness Guide; FNEP and 4-H; Couch Potato Challenge Guide; Fight BAC Food Safety; 4-H Shooting Sports; 4-H Child Development Project; 4-H Sportsfishing; Stress Connection Project; 4-H Outdoor Adventures; Develop curricula for teen depression and suicide; Gardening; 4-H Safety Projects; Farm/Rural Safety Days.

**2. Brief description of the target audience**

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

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	1650	4000	2000	10000
<b>Actual</b>	1391	670	5408	19974

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	17

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Attendance of project leaders at workshops for foods/nutrition, physical activity, shooting sports, healthy relationships and/or safety.

Year	Target	Actual
2010	230	532

**Output #2**

**Output Measure**

- Number of youth enrolled in foods projects, physical activity projects, leisure projects, safety

projects, camps, educational events and afterschool.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	5200	239039

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	4500 youth will competently demonstrate knowledge and skills gained through demonstrations and project exhibition.
2	75% of the participants of Camp Food and Fitness will indicate they are continuing to make healthy food choices 6 months after the camp experience.

**Outcome #1**

**1. Outcome Measures**

4500 youth will competently demonstrate knowledge and skills gained through demonstrations and project exhibition.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	5000	3120

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri citizens expressed through the University of Missouri Extension Plan of Work process concerns over the high incidence of obesity in children and youth and the need for wholesome choices for physical and leisure activity. Communities want youth to learn more and have opportunities for healthy food and other lifestyle choices.

**What has been done**

Healthy lifestyles include eating a healthy diet, maintaining a healthy weight, exercising regularly, quitting (or not starting) smoking, and minimizing stress. By providing education, programs and experiences that promote healthy behaviors, 4-H can help youth, adults and families integrate healthy behaviors, which include physical, mental and emotional well being, into their everyday lives.

**Results**

5,327 youth demonstrated knowledge that met or exceeded established criteria through public presentations or exhibition; 2,663 youth demonstrated knowledge that minimally met established criteria through public presentations or exhibition; 887 youth demonstrated knowledge that could improve based on established criteria through public presentations or exhibition.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

## **Outcome #2**

### **1. Outcome Measures**

75% of the participants of Camp Food and Fitness will indicate they are continuing to make healthy food choices 6 months after the camp experience.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	20	60

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Missouri citizens expressed through the University of Missouri Extension Plan of Work process concerns over the high incidence of obesity in children and youth and the need for wholesome choices for physical and leisure activity. Communities want youth to learn more and have opportunities for healthy food and other lifestyle choices.

#### **What has been done**

By providing education, programs and experiences that promote healthy behaviors, 4-H can help youth, adults and families integrate healthy behaviors, which include physical, mental and emotional well being, into their everyday lives.

#### **Results**

56 youth are well positioned to make healthy food and fitness choices by attending Camp Food and Fitness. A survey completed immediately following the event. 92% of the youth indicated they learned healthy food choices, 88% indicated increased knowledge of food safety procedures, 100% of the youth completed a Healthy Lifestyle Plan. We are in the process of following-up with the individual youth to determine the success rate of the 4-H member to follow their plan.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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, motivated local and state faculty and volunteers. Four vacancies in faculty and staff positions reduced the ability to provide program leadership for volunteers who work directly with youth.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- During (during program)
- Other (Demos, Judging, Exhibits of Knowle)

### **Evaluation Results**

In 2007, Missouri 4-H joined the national 4-H Study of Positive Youth Development. The longitudinal study has surveyed 4,793 adolescents in 34 states in its first five years. This landmark investigation is helping us better understand the factors that lead to positive growth and decreased risk during adolescence. Between March and August of 2007, 338 adolescents from Missouri participated in Wave 5 of the 4-H Study of Positive Youth Development. In 2008, 296 Missouri adolescents were surveyed. One hundred, sixty-five of those youth were new to the study and 131 were students who had been surveyed in 2007. Another 127 teens were surveyed in 2009 with 23 being new to the study. The students were from 26 sites in Missouri 4-H Youth Development Specialists from the University of Missouri and Lincoln University recruited students in grades 6 to 12 to complete a written survey. Parents could also complete an optional survey.

In addition to contributing to the national study, we particularly wanted to know about the value of Missouri 4-H participation. In order to explore this, we grouped Missouri students based on their self-reported 4-H participation in the past year. Groups were:

- Non-4-H - Never participated in a 4-H club
- 4-H - Participated in a 4-H club at least once a month
- Active - Participated in a 4-H Club two or more times a month

Two findings jump out from the Missouri data:

- Young women in 4-H increased their interest in science significantly over their non-4-H female peers.
- Active 4-H members expect to complete higher levels of education.

These findings were mostly consistent with the national sample and the longitudinal data. These data suggest that young people who are active in 4-H are likely to report more positive behaviors and fewer negative behaviors. Additional information on the 4-H Study of Positive Youth Development can be found at: <http://mo4h.missouri.edu/resources/evaluation/pydstudy.htm>.

### **Key Items of Evaluation**

In addition to contributing to the national study, we particularly wanted to know about the value of Missouri 4-H participation. In order to explore this, we grouped Missouri students based on their self-reported 4-H participation in the past year. Groups were:

- Non-4-H - Never participated in a 4-H club
- 4-H - Participated in a 4-H club at least once a month
- Active - Participated in a 4-H Club two or more times a month

Two findings jump out from the Missouri data:

- Young women in 4-H increased their interest in science significantly over their non-4-H female peers.
- Active 4-H members expect to complete higher levels of education.

These findings were mostly consistent with the national sample and the longitudinal data. These data suggest that young people who are active in 4-H are likely to report more positive behaviors and fewer negative behaviors. Additional information on the 4-H Study of Positive Youth Development can be found at: <http://mo4h.missouri.edu/resources/evaluation/pydstudy.htm>.

**V(A). Planned Program (Summary)**

**Program # 15**

**1. Name of the Planned Program**

Creating Economic Preparedness

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	2.7	0.0	0.0	0.0
Actual	11.0	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
308880	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
313646	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

Learning about personal finances through Financial Champions 4-H Project Literature, demonstrations, exhibits, camps and educational events. Learning about consumerism through Consumer Savvy 4-H Project Literature, demonstrations, exhibits, camps and educational events. Learning about youth entrepreneurship through curricula, demonstrations, exhibits, camps and educational events.

**2. Brief description of the target audience**

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 8 - 19.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	250	2000	650	2000
<b>Actual</b>	397	460	373	744

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	8

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- 4-H Club, Council Treasurer Roles; 4-H Club fundraisers; 4-H Financial Champions Project Literature; 4-H Consumer Savvy Project Literature; Entrepreneurship; Workforce/Career Readiness.

Year	Target	Actual
2010	1200	2167

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of youth and adults in treasurer roles for 4-H Clubs, Councils and Committees.
2	Attendance of project leaders at workshops for personal finance, consumer and/or entrepreneurship.
3	Number of youth enrolled in personal finance, consumer and/or entrepreneurship.
4	Number of youth participating in camps, educational events and afterschool.
5	Number of hits on website.
6	350 youth will competently demonstrate knowledge and skills gained through treasurer roles, demonstrations and project exhibition.
7	70 volunteers will competently lead youth through project experiences, promoting demonstrations, judging and other educational events.
8	100 youth will go onto post-secondary education.
9	75 youth will demonstrate career planning by listing their goal(s) and the institution of higher education they choose to achieve their goal(s) on their 4-H state scholarship and/or award applications.

## **Outcome #1**

### **1. Outcome Measures**

Number of youth and adults in treasurer roles for 4-H Clubs, Councils and Committees.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	1100	2267

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

#### **What has been done**

Providing opportunities to equip youth with skills, knowledge, and experiences that will assist them in acquiring economic success; including managing personal finances, entrepreneurship and preparing for the workforce. Opportunities include the Entrepreneurship 4-H Project, Show Me Wares at the Missouri State Fair, and Made in Missouri Competition.

#### **Results**

MU Extension, through the 4-H Center for Youth Development, is playing an intermediary role in assisting local and regional development organizations in communities across Missouri to partner with the Corporation for National and Community Service AmeriCorps\*VISTA to build their capacity for entrepreneurship and economic development.

VISTA members generated the following through four quarters of activity in year four:

\*Started or expanded 109 entrepreneurship programs serving 160 zip code communities

\*Engaged 1,964 community participants in entrepreneurship programs

\*Recruited 576 community volunteers (including 224 Baby Boomers) to contribute 5,333 hours to programs, valued at \$96,188

\*Secured \$52,890 in in-kind donations

\*Raised \$490,595 in cash and monetary donations

\*Total resources generated: \$672,819

\*Community education, collaboration, and media partnerships laid the groundwork for continued impacts beyond year three.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

#### Outcome #2

##### 1. Outcome Measures

Attendance of project leaders at workshops for personal finance, consumer and/or entrepreneurship.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	30	292

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

###### **What has been done**

Family and Consumer Science Specialists incorporate 4-H volunteers into their on-going financial management workshops.

###### **Results**

Creating Economic Preparedness reached 397 adults FY10.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

### **Outcome #3**

#### **1. Outcome Measures**

Number of youth enrolled in personal finance, consumer and/or entrepreneurship.

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	130	576

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

##### **What has been done**

Providing opportunities to equip youth with skills, knowledge, and experiences that will assist them in acquiring economic success; including managing personal finances, entrepreneurship and preparing for the workforce.

##### **Results**

Ten 4-H Members have started their own business. See the following link for an example.  
Seven 4-H Alumni businesses have been featured as part of the 4-H Entrepreneurship Program  
See this link for an example.  
See the following link for the 4-H Entrepreneurship Program  
<http://4h.missouri.edu/go/get/projects/projects2.htm#Entrepreneurship>.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #4**

**1. Outcome Measures**

Number of youth participating in camps, educational events and afterschool.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	40	5161

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

**What has been done**

Through camping, young people learn independence, responsibility, how to get along with others, and how to make the right decisions. Camp promotes cooperation, teamwork, and respect for other people and our natural environment. 4-H programs offer a variety of camping experiences. Residential camps for one or more nights; Day camps; Special interest camps such as Aerospace Camp; Camps designed for specific age groups.

**Results**

An Evaluation of Life Skill Development in Missouri's 4-H Youth Resident Summer Camps in the quantitative section of the surveys, parents reported that their child's Social Skills had improved more than any other because of attending 4-H Camp (Parent mean = 1.92 where 1 ="Strongly Agree"; 4 = "Strongly Disagree"). Youth agreed even more frequently (Youth mean = 1.89). Youth reported their Teamwork skills improved most because of attending 4-H Camp (Youth mean =1.78). Parents agreed slightly less frequently (Parent mean = 1.98). In even the lowest-rated life skill (Learning to Learn), both parents and campers overwhelmingly agreed that this skill improved because of 4-H camp. The vast majority of parents and youth alike feel that the 4-H Camp experience provides a wealth of learning experiences for campers. It clearly does have perceived value to both parents and children in developing life skills.  
<http://4h.missouri.edu/resources/evaluation/#camp>.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #5**

**1. Outcome Measures**

Number of hits on website.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	1300	54829

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

**What has been done**

Providing opportunities to equip youth with skills, knowledge, and experiences that will assist them in acquiring economic success; including managing personal finances, entrepreneurship and preparing for the workforce. These include opportunities such as events, camps, and scholarships.

**Results**

	Hits	Views
Website	54,839	70,341
Projects	17,228	19,355
Resources	10,266	12,246
Events	10,208	11.656

**4. Associated Knowledge Areas**

**KA Code**    **Knowledge Area**  
806            Youth Development

**Outcome #6**

**1. Outcome Measures**

350 youth will competently demonstrate knowledge and skills gained through treasurer roles, demonstrations and project exhibition.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	425	2167

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

**What has been done**

Providing opportunities to equip youth with skills, knowledge, and experiences that will assist them in acquiring economic success; including managing personal finances, entrepreneurship and preparing for the workforce. Youth serve as treasurers for their local 4-H Clubs and county 4-H Councils. They learn to accurately handle and account for club's income and expenses.

**Results**

Comments by youth after workshops.

\* About attitude, responsibility, honesty, have to be a leader (character); with the second time learned communication; not to judge other's cultures because for them it's normal; setting goals making commitments; respect; I learned about apathy; communication and learned that I need to set goals; I learned about attitude, responsibility; and honesty. (Howell County)

\* Be more responsible, be honest (which I am) and know how to work with a group and be a leader in any situation; not judge other's cultures try to find it fascinating; talk to advisors and make financial plans; go to Jefferson City; respect others better and to show a more positive attitude. (Howell County)

\* I learned (Franklin County): A whole bunch on making motions; how to introduce people; the

agenda, to plan ahead, and how to get kids involved and parents to be quiet; how to do Parliamentary Procedure; how to make a motion and how to get other members involved in the 4-H meeting.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #7**

**1. Outcome Measures**

70 volunteers will competently lead youth through project experiences, promoting demonstrations, judging and other educational events.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	85	101

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

**What has been done**

Curricula has been developed and made accessible to volunteers via the MU Extension 4-H Youth Development Website - curricula includes teaching techniques in general and more specifically by project areas.

**Results**

Volunteer comments responding to "Describe the most important thing from this orientation you plan to use with youth:

- \* Encouraging youth's life skills through their projects, and letting them use their own ability levels through challenges of trying new things so that they can feel proud and accomplished.
- \* ...the master focused approach rather than the ends focused approach. This will help with the members work on the tasks at hand.

\* That 4-H is focusing on preparing children for the future. The projects they choose to participate in are stepping stones to their life skills. It is important to support the kids as they learn and reinforce what they learn by asking open-ended questions. And most importantly be a responsible adult with good character that the kids can rely on.

\* 4-H is not about winning. It is about setting goals for yourself and learning new skills and leadership.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

#### Outcome #8

##### 1. Outcome Measures

100 youth will go onto post-secondary education.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	100	7921

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Today's young people must be prepared to live and work in a world that no one can completely envision -- for jobs that do not yet exist, using technologies that have not yet been invented, solving problems that have not yet been identified.

###### **What has been done**

Building on 100 years of informal science education, 4-H addresses America's critical need to engage more young people in Science, Engineering and Technology (SET) programs. The combination of science-rich content, and youth development context inherent in 4-H club and camp programs, is proven to have a positive effect, resulting in young adults who are prepared to contribute, excel and lead in their communities and work places. (4-H Study of Positive Youth Development, Lerner and Lerner, 2008)

###### **Results**

Studies show the youth in programs like 4-H are 70% more likely to attend college and increase their earning potential \$2.01 million dollars over their life time. If just one-third of our club

members (7,921) completed a Bachelor's degree, this would create \$14 billion of earning potential.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

#### Outcome #9

##### 1. Outcome Measures

75 youth will demonstrate career planning by listing their goal(s) and the institution of higher education they choose to achieve their goal(s) on their 4-H state scholarship and/or award applications.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	75	246

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Today's young people must be prepared to live and work in a world that no one can completely envision -- for jobs that do not yet exist, using technologies that have not yet been invented, solving problems that have not yet been identified.

###### **What has been done**

Building on 100 years of informal science education, 4-H addresses America's critical need to engage more young people in Science, Engineering and Technology (SET) programs. The combination of science-rich content, and youth development context inherent in 4-H club and camp programs, is proven to have a positive effect, resulting in young adults who are prepared to contribute, excel and lead in their communities and work places. (4-H Study of Positive Youth Development, Lerner and Lerner, 2008)

###### **Results**

Missouri 4-H Members are twice more likely to have been on a college campus than their non-4-H peers. University of Missouri is by far the campus most frequently visited and 4-H is the second most reported reason to be on the University of Missouri 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 10

- \* 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 \$210 million (2.1 million per individual) (Porter, 2003).
- \* Porter, K. (2003). The Value of a College Degree. Washington, D.C.: ERIC Clearinghouse on Higher Education.

#### 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, motivated local and state faculty and volunteers. Four vacancies in faculty and staff positions reduced the ability to provide program leadership for volunteers who work directly with youth.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Time series (multiple points before and after program)

#### Evaluation Results

Evaluation summary on one of 4-H's college access programs, Youth Futures: College Within Reach.

Since the inception of Youth Futures 296 youth (duplicates removed) have participated in the program (41 youth in 2002; 61 in 2003; 57 in 2004; 48 in 2005; 47 in 2006; 57 in 2007; 58 in 2008; and 59 in 2009). These numbers represent total participants

each year and reflect duplicate youth. The same youth may participate in the program multiple years.

One hundred and four participants are currently in high school. Of the 192 participants scheduled to graduate from high school from 2002 to 2009:

- 24 (13%) have graduated from college
- 106 (55%) are currently college sophomores, juniors or seniors
- 18 (9%) entered but later dropped out of college
- 5 (3%) joined the military after high school graduation
- 14 (7%) entered the work force
- 20 (10%) were unable to be located or dropped out of the program
- 5 (3%) moved to another state.

Of the 36 participants scheduled to graduate from high school in 2009, 28 (78%) enrolled in college. The status of the remaining eight participants is as follows: four (11%) dropped out of high school and/or out of the program, three (8%) entered the workforce, and one (3%) joined the military.

### **Key Items of Evaluation**

Evaluation summary on one of 4-H's college access programs, Youth Futures: College Within Reach

Since the inception of Youth Futures 296 youth (duplicates removed) have participated in the program (41 youth in 2002; 61 in 2003; 57 in 2004; 48 in 2005; 47 in 2006; 57 in 2007; 58 in 2008; and 59 in 2009). These numbers represent total participants each year and reflect duplicate youth. The same youth may participate in the program multiple years.

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**V(A). Planned Program (Summary)**

**Program # 16**

**1. Name of the Planned Program**

Enhancing Community Viability Through Youth Leadership

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	15.0	0.0	0.0	0.0
Actual	11.0	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
308880	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
313646	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 Leadership Roles - club, county council/committees, state council, collegiate; Leadership project; Youth Civic Leaders Summit; Extension Council Youth Leaders; Army Service Learning Toolkit; Public Adventures; CECH-UP; Global Education.

2. Brief description of the target audience

Adults (youth staff, local leaders, parents, volunteers, teachers, organizational leaders), youth aged 8 - 19.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	1500	4000	10000	5000
<b>Actual</b>	9478	27605	24765	28897

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	4

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of youth and adults in leadership roles for 4-H Clubs, Councils and Committees.

Year	Target	Actual
2010	2500	8555

**Output #2**

**Output Measure**

- Number of youth and adult partnership teams trained at workshops, conferences, summits.

Year	Target	Actual
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2010	350	525
------	-----	-----

**Output #3**

**Output Measure**

- Number of community service grants awarded through the Missouri 4-H Foundation.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	60	19

**Output #4**

**Output Measure**

- Number of youth in civic leadership roles.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	30	7

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	12,000 youth will engage and complete 4-H leadership roles.
2	70% of the sample of 400 youth who have participated in state 4-H educational events or fulfilled leadership roles will report incorporating skills in other educational and/or leadership situations.

## **Outcome #1**

### **1. Outcome Measures**

12,000 youth will engage and complete 4-H leadership roles.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	12000	14712

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

#### **What has been done**

Adult staff and volunteers facilitated youth ages 5 to 19 to learn through projects, camps, educational events and meaningful leadership roles about the importance and benefits of serving the community and being an engaged citizen. Program staff facilitated learning to help parents, caregivers, volunteer leaders and staff of other youth serving organizations to gain skills to promote youth and adult partnerships and to facilitate youth contribution through community service.

#### **Results**

246 youth, ages 14 to 18, completed either the Missouri 4-H Recognition Form, the Missouri 4-H Scholarship Form or applied to be a Regional Representative of the State 4-H Council. These youths indicate in writing what they have learned about leadership through their 4-H experience. They go on to indicate how they apply these skills at school and in other organizations they may belong.

Another 129 middle school youth complete a similar application in their quest to obtain a scholarship to the Missouri State 4-H Teen conference. Following is an example of a statement taken from the Missouri 4-H Recognition Form:

The 4-H concept I have learned is "do, reflect, apply" method. It is not enough to simply go through the program and reflect on what you have done, you have to directly apply those skills to

reap the full benefit.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

#### Outcome #2

##### 1. Outcome Measures

70% of the sample of 400 youth who have participated in state 4-H educational events or fulfilled leadership roles will report incorporating skills in other educational and/or leadership situations.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	300	440

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

###### **What has been done**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

###### **Results**

Evaluation from one event - Youth Civic Leaders Summit.

130 participants completed a 4-H Life Skills Evaluation, which sought to measure changes in five life skill areas as a result of participation in the Summit. (On a scale of 1 to 4: 1=very low, 4=very high)

Life Skill Area/Average scores (1 = very low; 4 = very high)  
Before the Summit(BS), After the Summit(AS), Change(C)  
Decision making (think about consequences of decisions)-(BS)3.21, (AS)3.66, (C)+0.45  
Communication (listen carefully to others; state thoughts, feelings, and ideas; settle disagreements in ways not hurtful)-(BS)3.10, (AS)3.57, (C)+0.48  
Leadership (organize a group to reach its goal, use different leadership styles, get others to share in leadership)-(BS)2.91, (AS)3.57, (C)+0.66  
Marketable skills (contribute as a team member, accept responsibility for a job)-(BS)3.47, (AS)3.75, (C)+0.28  
Self-responsibility (understand importance of following through on commitments)-(BS)3.50, (AS)3.89, (C)+0.39  
Overall-(BS)3.24, (AS)3.69, (C)+0.45

#### 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, motivated local and state faculty and volunteers. Four vacancies in faculty and staff positions reduced the ability to provide program leadership for volunteers who work directly with youth.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- After Only (post program)
- During (during program)
- Case Study

## Evaluation Results

Evaluation from one event - Youth Civic Leaders Summit.

130 participants completed a 4-H Life Skills Evaluation, which sought to measure changes in five life skill areas as a result of participation in the Summit. (On a scale of 1 to 4: 1=very low, 4=very high)

Life Skill Area/Average scores (1 = very low; 4 = very high)

Before the Summit(BS), After the Summit(AS), Change(C)

Decision making (think about consequences of decisions)-(BS)3.21, (AS)3.66, (C)+0.45

Communication (listen carefully to others; state thoughts, feelings, and ideas; settle disagreements in ways not hurtful)-(BS)3.10, (AS)3.57, (C)+0.48

Leadership (organize a group to reach its goal, use different leadership styles, get others to share in leadership)-(BS)2.91, (AS)3.57, (C)+0.66

Marketable skills (contribute as a team member, accept responsibility for a job)-(BS)3.47, (AS)3.75, (C)+0.28

Self-responsibility (understand importance of following through on commitments)-(BS)3.50, (AS)3.89, (C)+0.39

Overall-(BS)3.24, (AS)3.69, (C)+0.45

Missouri 4-H Members are twice more likely to have been on a college campus than their non-4-H peers. University of Missouri is by far the campus most frequently visited and 4-H is the second most reported reason to be on the University of Missouri 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 10
- 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 \$210 million (2.1 million per individual) (Porter, 2003).
- Porter, K. (2003). *The Value of a College Degree*. Washington, D.C.: ERIC Clearinghouse on Higher Education.

## Key Items of Evaluation

Missouri 4-H Members are twice more likely to have been on a college campus than their non-4-H peers. University of Missouri is by far the campus most frequently visited and 4-H is the second most reported reason to be on the University of Missouri 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 10
- These students are more likely to go to college and enjoy
  - o increased financial success for themselves and their offspring
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  - 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 \$210 million (2.1 million per individual) (Porter, 2003).
- Porter, K. (2003). *The Value of a College Degree*. Washington, D.C.: ERIC

Clearinghouse on Higher Education.

**V(A). Planned Program (Summary)**

**Program # 17**

**1. Name of the Planned Program**

Volunteer Development

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	7.4	0.0	0.0	0.0
Actual	11.0	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
308880	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
313646	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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	175	11300	1150	11300
<b>Actual</b>	7568	3500	4008	4696

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	7

**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	Target	Actual
2010	600	7586

**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 in local, county, regional and state 4-H leadership roles.
4	Number of volunteers attending workshops and/or forums for personal growth.
5	Number of volunteers completing Volunteers: The Foundation of Youth Development.
6	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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	5000	7586

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

#### **What has been done**

A required 4-H volunteer orientation began in FY08, in FY09 5,715 completed the orientation which introduces them to the concepts of land-grant universities, how youth grow and develop, 4-H's philosophy on competition, character education and how to reduce risk when working with youth. In addition to face-to-face workshops, an on-line course is available so busy volunteers can complete this obligation at their convenience.

#### **Results**

Volunteer comments responding to "Describe the most important thing from this orientation you plan to use with youth."

\*Encouraging youth's life skills through their projects, and letting them use their own ability levels through challenges of trying new things so that they can feel proud and accomplished.

\*...the master focused approach rather than the ends focused approach. This will help with the member's work on the tasks at hand.

\*That 4-H is focusing on preparing children for the future. The projects they choose to participate in are stepping stones to their life skills. It is important to support the kids as they learn and reinforce what they learn by asking open-ended questions. And most importantly be a responsible adult with good character that the kids can rely on.

\*4-H is not about winning. It is about setting goals for yourself and learning new skills and leadership.

#### 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	Quantitative Target	Actual
2010	5000	10224

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Missouri citizens expressed their concerns through the University of Missouri Extension Plan of Work process over the net social and economic loss due to the outward migration of youth from their communities. Communities want their youth to go on to higher education to gain knowledge, skills and experience but lament fewer youth are returning to their home communities to provide civic and economic leadership.

###### **What has been done**

Through workshops, volunteer forums, leadership roles and web based instruction, state and county extension faculty will help adult and youth volunteer leaders gain knowledge and skills to communicate, manage programs, design and deliver education events, develop interpersonal skills and create environments that promote positive youth development.

###### **Results**

Volunteers describing how they will use information learned from on-line volunteer orientation:

\*How to apply what they are learning to other areas of their life and how to use this information in the future.

\*To make sure that you put emphasis on the child's abilities, what they will learn and how they will use these skills later in life rather than on winning at any cost.

\*I plan to use with my Clover Kids open-ended questions, keep them doing hands on activities and to remember not to stress winning but trying their best.

\*The mastery approach was very intriguing to me, and I would like to implement that in 4-H as

well as everyday parenting.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #3**

**1. Outcome Measures**

Number of volunteers in local, county, regional and state 4-H leadership roles.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	10000	10224

**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 will help adult and youth volunteer leaders gain knowledge and skills to communicate, manage programs, design and deliver education events, develop interpersonal skills and create environments that promote positive youth development.

**Results**

Source WebApps

\*As a result of attending this session, I now plan to...

Try to come up with project/community service; visit 4-H websites; be more involved as a project leader; be more organized and to step back a little more not do everything for everyone; use the information I learned in my meeting; have a great 4-H year and experience & motivate our kids because we have the tools to help us do it; become more involved.

\*How can I use this information in my club?

By involving the kids more and being a good role model is important for them; I can help kids

have more fun and learn more; To be a good recreation leader; Tell the 4-H'ers about what I learned and how they could do the same; I could use it to make the club more fun and enjoyable for the kids.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

**Outcome #4**

**1. Outcome Measures**

Number of volunteers attending workshops and/or forums for personal growth.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	300	7586

**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 will help adult and youth volunteer leaders gain knowledge and skills to communicate, manage programs, design and deliver education events, develop interpersonal skills and create environments that promote positive youth development.

**Results**

Source WebApps

\*As a result of attending this session, I now plan to...

Try to come up with project/community service; visit 4-H websites; be more involved as a project leader; be more organized and to step back a little more not do everything for everyone; use the information I learned in my meeting; have a great 4-H year and experience and motivate our kids because we have the tools to help us do it; become more involved.

\*How can I use this information in my club?

By involving the kids more and being a good role model is important for them; I can help kids have more fun and learn more; To be a good recreation leader; Tell the 4-H'ers about what I learned and how they could do the same; I could use it to make the club more fun and enjoyable for the kids.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

#### Outcome #5

##### 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	Quantitative Target	Actual
2010	100	1086

##### 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**

A required 4-H volunteer orientation began in FY08, in FY09 5,715 completed the orientation which introduces them to the concepts of land-grant universities, how youth grow and develop, 4-H's philosophy on competition, character education and how to reduce risk when working with youth. In addition to face-to-face workshops, an on-line course is available so busy volunteers can complete this obligation at their convenience.

###### **Results**

Volunteers describing how they will use information learned from on-line volunteer orientation:

\*How to apply what they are learning to other areas of their life and how to use this information in the future.

\*To make sure that you put emphasis on the child's abilities, what they will learn and how they will use these skills later in life rather than on winning at any cost.

\*I plan to use with my Clover Kids open-ended questions, keep them doing hands on activities and to remember not to stress winning but trying their best. The mastery approach was very intriguing to me, and I would like to implement that in 4-H as well as everyday parenting.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development

#### Outcome #6

##### 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	Quantitative Target	Actual
2010	8000	9076

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Adults sustain safe and supportive environments where youth can thrive. Positive youth development has improved the quality of life in communities through improved social, environmental and economic conditions in communities. It is important background screening is conducted on adults working with youth to ensure one important aspect of providing a safe learning environment for youth. 4-H is associated with a wholesome environment for positive youth development.

###### **What has been done**

Missouri 4-H volunteers submit an application on an annual basis. The applicant is screened for both criminal records and for child abuse and neglect. Volunteers do not work directly with youth until they receive a post card in the mail from the 4-H Center for Youth Development indicating they have successfully completed the screening process.

###### **Results**

9,076 volunteers screened prior to service.

#### 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, motivated local and state faculty and volunteers. Four vacancies in faculty and staff positions reduced the ability to provide program leadership for volunteers who work directly with youth.

### **V(I). Planned Program (Evaluation Studies and Data Collection)**

#### **1. Evaluation Studies Planned**

- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Other (see below)

#### **Evaluation Results**

All of our 4-H volunteers 9,076 completed an orientation to date through face-to-face, on-line or by CD. Volunteers report increased understanding of the land-grant university mission, how kids grow and develop and the philosophy of mastery competition.

Since 2007, 3,918 volunteers have completed the on-line training. Each person must complete a survey and quiz to complete the course. Following are highlights from this data:

##### Leadership Role(s)

- 64% are project leaders

##### Length of Service in years

- 32% 1 to 5 years
- 42% less than 1 year
- 11% 6 to 10 years
- 11% 11 or more years
- 5% other

##### How many other 4-H trainings of any kind previously attended?

- 79% this is my first training

- 18% 1 to 5
  - 3% 6 or more
  - 85% understood the 4-H Name and Emblem is a federal mark
  - 99% understood that 4-H at state-level events is fun, hands-on learning taught by university faculty
  - 84% identified correctly current technology and teaching events at the land-grant university
  - 72% identified the four essential elements of positive youth development
  - 62 to 98% of the volunteers correctly distinguished between project/content skills and life skills youth gain from 4-H projects
  - 98% validated that taking time to discuss and reflect upon the 4-H experience is important and enhances learning
  - 80% understood the ages and stages of childhood
  - 95% understood 4-H's philosophy of competition
  - 98% understood 4-H promotes mastery
  - 89% understood strategies to promote mastery
  - 99% understood how to use open-ended questions to promote mastery
  - 98% understood 4-H's approach to teaching character
  - 98% understood elements to include in an emergency plan
- In general, the volunteers agreed that the orientation increased their knowledge of what it takes to be an effective volunteer. The topics indicated where they learned the most were as follows:
- 4-H is part of the land-grant university (71%)
  - Creating safe environments (67%)
  - 4-H's philosophy on competition (65%)

## Key Items of Evaluation

All of our 4-H volunteers 9,076 completed an orientation to date through face-to-face, on-line or by CD. Volunteers report increased understanding of the land-grant university mission, how kids grow and develop and the philosophy of mastery competition.

Since 2007, 3,918 volunteers have completed the on-line training. Each person must complete a survey and quiz to complete the course. Following are highlights from this data:

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- 84% identified correctly current technology and teaching events at the land-grant university
- 72% identified the four essential elements of positive youth development

62 to 98% of the volunteers correctly distinguished between project/content skills and life skills youth gain from 4-H projects

98% validated that taking time to discuss and reflect upon the 4-H experience is important and enhances learning

80% understood the ages and stages of childhood

95% understood 4-H's philosophy of competition

98% understood 4-H promotes mastery

89% understood strategies to promote mastery

99% understood how to use open-ended questions to promote mastery

98% understood 4-H's approach to teaching character

98% understood elements to include in an emergency plan

In general, the volunteers agreed that the orientation increased their knowledge of what it takes to be an effective volunteer. The topics indicated where they learned the most were as follows:

4-H is part of the land-grant university (71%)

Creating safe environments (67%)

4-H's philosophy on competition (65%)

**V(A). Planned Program (Summary)**

**Program # 18**

**1. Name of the Planned Program**

Improving Communications

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	3.5	0.0	0.0	0.0
Actual	11.0	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
308880	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
313646	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

Communication Toolkit: Fun Skill-Building Activities to do with Kids; Clowning project, judging, demonstration, exhibition; Public Speaking; Theatre Arts project, judging, demonstration, exhibition; Demonstration learning methodology; Oral reasons for project judging.

2. Brief description of the target audience

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

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	1000	500	8500	12000
<b>Actual</b>	0	0	0	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of youth enrolled in communication projects and educational events.  
 Not reporting on this Output for this Annual Report

**Output #2**

**Output Measure**

- Attendance of project leaders at workshops for educational methods and communication projects.  
 Not reporting on this Output for this Annual Report

**Output #3**

**Output Measure**

- Number of youth participating in camps, educational events and afterschool.  
Not reporting on this Output for this Annual Report

**Output #4**

**Output Measure**

- Number of hits on website.  
Not reporting on this Output for this Annual Report

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	4,000 youth will competently demonstrate knowledge and skills gained through demonstrations, oral reasons and/or public speaking.
2	A sample of 400 youth who have participated in state 4-H educational events incorporating communications (oral reasons, demonstrations, public speaking, etc.) will report incorporating skills in other educational and/or leadership situations.

**Outcome #1**

**1. Outcome Measures**

4,000 youth will competently demonstrate knowledge and skills gained through demonstrations, oral reasons and/or public speaking.

Not Reporting on this Outcome Measure

**Outcome #2**

**1. Outcome Measures**

A sample of 400 youth who have participated in state 4-H educational events incorporating communications (oral reasons, demonstrations, public speaking, etc.) will report incorporating skills in other educational and/or leadership situations.

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 and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- During (during program)
- Other (Educational Events)

**Evaluation Results**

**Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 19**

**1. Name of the Planned Program**

Building Environments

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	4.4	0.0	0.0	0.0
Actual	3.0	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
133309	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
119350	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 guidesheet 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 guidesheet 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 guidesheet 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 Homebuyers; Existing and Long-term Homeowners; Non-profit Housing Agencies; Government and State Housing Directors.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	2300	200	500	0
<b>Actual</b>	875	6168	458	91

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	5

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	50	179

**Output #2**

**Output Measure**

- Number of media events.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	20	15

**Output #3**

**Output Measure**

- Number of unique website visits.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	50000	89382

**Output #4**

**Output Measure**

- Number of participant contacts.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2500	8597

**Output #5**

**Output Measure**

- Number of guide sheets distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	250	1018

**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 Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	40	43

### **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; and 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**

Forty-three percent (43%) of participants completed a home disaster plan as a result of attending an educational program. These plans will help ensure that families are prepared in case of emergency and will reduce the risk of harm to their families and their homes.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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 Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	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; and 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**

Ninety-four percent (94%) of program participants secured the funding to purchase a home. Research has shown that persons who receive financial education prior to purchasing a home are less likely to default or be forced into foreclosure. In addition, lending institutions are more willing to provide reduce the interest rate charged on home mortgages when education is received, therefore, resulting in thousands of dollars in interest being saved over the lifetime of the loan.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	40	93

**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; and 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**

Ninety-three percent (93%) of program participants felt that they were better able to maintain their home as a result of attending an educational program.

#### 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 #4

##### 1. Outcome Measures

Percent of participants who have implemented energy conservation technologies.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	40	88

##### 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; and 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**

Eighty-eight percent (88%) of program participants implemented recommended energy conservation technologies in their home following the educational program. By doing so, they will reduce their monthly utility bills and reduce their carbon footprint.

#### 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

#### 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
- Populations changes (immigration, new cultural groupings, etc.)

##### Brief Explanation

The greatest barrier to programming in Built Environment programming is the need in relative comparison to faculty available to deliver programming.

#### V(I). Planned Program (Evaluation Studies and Data Collection)

##### 1. Evaluation Studies Planned

- Before-After (before and after program)
- During (during program)
- Case Study

#### Evaluation Results

Persons who have attended a housing program offered by MU Extension have reported making positive, recommended changes to their homes and/or securing the funding to purchase a home. We feel that this is significant as we are not just seeing program participants indicate they are more aware of these things, but actually taking action. Program participants have developed disaster preparedness plans, secured home financing with reduced interest rates, made home repairs and implemented energy conservation technologies.

**Key Items of Evaluation**

Eighty-eight percent (88%) of program participants implemented recommended energy conservation technologies in their home following the educational program. By doing so, they will reduce their monthly utility bills and reduce their carbon footprint.

**V(A). Planned Program (Summary)**

**Program # 20**

**1. Name of the Planned Program**

Parenting

**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	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	7.5	0.0	0.0	0.0
Actual	7.0	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
228530	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
204600	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 and multi-sessions programs; develop curriculum and educational resources, including print and web materials; provide training; work with media; partnering with other agencies and states.

2. Brief description of the target audience

Parents or others acting in a parenting role (e.g., grandparents, other relatives, foster parents).

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	2000	1000	200	0
<b>Actual</b>	4067	1801	695	238

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	1	0	
<b>Actual</b>	1	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

Year	Target	Actual
2010	100	514

**Output #2**

**Output Measure**

- Number of media events.

Year	Target	Actual
------	--------	--------

2010 20 30

**Output #3**

**Output Measure**

- Number of guide sheets distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	500	2344

**Output #4**

**Output Measure**

- Number of website visitors.  
Not reporting on this Output for this Annual Report

**Output #5**

**Output Measure**

- Number of participant contacts.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	0	6818

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of participants who show increased knowledge of appropriate parenting practices.
2	Percent of participants who have adopted appropriate parenting practices.

### **Outcome #1**

#### **1. Outcome Measures**

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

Not Reporting on this Outcome Measure

### **Outcome #2**

#### **1. Outcome Measures**

Percent of participants who have adopted appropriate parenting practices.

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**

Changes in parenting behaviors can often take many years to emerge. Our long term goal is to reduce child abuse and neglect and we see short term indicators of awareness and knowledge, but we have not had adequate time to follow-up with parents to determine if education has had a positive impact on this objective.

### **V(I). Planned Program (Evaluation Studies and Data Collection)**

#### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Comparisons between program participants (individuals, group, organizations) and non-participants

**Evaluation Results**

**Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 21**

**1. Name of the Planned Program**

Strengthening Families

**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	60%			
806	Youth Development	40%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	10.7	0.0	0.0	0.0
Actual	9.0	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
323751	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
289851	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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	3000	20000	2000	2500
<b>Actual</b>	10988	29757	7740	1293

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	1	0	
<b>Actual</b>	1	0	1

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

Year	Target	Actual
2010	250	982

**Output #2**

**Output Measure**

- Number of guide sheets distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1000	1694

**Output #3**

**Output Measure**

- Number of media events.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	20	27

**Output #4**

**Output Measure**

- Number of website visits.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	200000	937222

**Output #5**

**Output Measure**

- Number of participant contacts.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1000	49889

**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	Number of participants who increased their knowledge of appropriate strengthening family practices.
3	Percent of participants reporting improved family communication.

**Outcome #1**

**1. Outcome Measures**

Number of participants reporting improved family relationships.

Not Reporting on this Outcome Measure

**Outcome #2**

**1. Outcome Measures**

Number of participants who increased their knowledge of appropriate strengthening family practices.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	98

**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 those 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**

Ninety-eight percent (98%) of program participants indicate that they have increased their knowledge and understanding in regards to appropriate family strengthening practices. They indicate that they will attempt to implement this knowledge in their personal daily lives following the educational program.

#### 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 reporting improved family communication.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	40	79

##### 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 those 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**

Seventy-nine percent (79%) of program participants report that they family communications have improved since attending a family strengthening program.

#### 4. Associated Knowledge Areas

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

Our current evaluation tools did not clearly provide results for Outcome #1 and we will work to adapt our evaluation tools in capture this information.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- During (during program)

## **Evaluation Results**

Program evaluations in the Family Strengthening area show that when families learn positive, productive communication skills, they are better equipped to handle stressful situations; they are more willing to work to improve family relationships; and they feel they have improved family relationships. Participants have reported that this program has helped them to the point that some have been able to regain custody or increase visitation with their children, in cases where they had been removed from the home.

### **Key Items of Evaluation**

Seventy-nine percent (79%) of program participants report that their family communications have improved since attending a family strengthening program.

**V(A). Planned Program (Summary)**

**Program # 22**

**1. Name of the Planned Program**

Building Better Childcare for Missouri

**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	100%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	5.6	0.0	0.0	0.0
Actual	4.0	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
171397	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
153450	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 and multi-session programs; Develop products, curriculum, and resources; Provide training for other professionals; Partner with other state agencies and organizations.

2. Brief description of the target audience

Individuals who provide non-parental care to children ages birth through school entry such as center- and home-based childcare providers, Head Start and Early Head Start teachers, public-school preschool educators, and parent educators.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	200	1000	0	0
<b>Actual</b>	3118	4731	347	1700

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

Year	Target	Actual
2010	100	184

**Output #2**

**Output Measure**

- Number of participant contacts.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	200	6796

**Output #3**

**Output Measure**

- Number of guide sheets distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	500	1181

**Output #4**

**Output Measure**

- Number of website visits.  
Not reporting on this Output for this Annual Report

**Output #5**

**Output Measure**

- Number of media events.  
Not reporting on this Output for this Annual Report

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent reporting an increase in awareness of developmentally appropriate learning environments and activities.
2	Percent reporting they implemented age-appropriate learning environments and activities.

**Outcome #1**

**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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	40	95

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The quality of child care nationwide is suffering. Because so many families with young children rely on child care so that they can work, every effort to improve the situation benefits young children and their families. Moreover, a high quality system of child care supports the economic development of Missouri.

**What has been done**

Child care provider education and specialized training are the strongest predictors of child care quality and, in turn, children's experiences. Moreover, the state of Missouri requires that providers working in licensed facilities obtain 12 clock hours of training per year. Extension's "Building Better Child Care" program meets the needs of many Missouri citizens.

**Results**

Ninety-five percent (95%) of participants report an increased awareness of developmentally appropriate learning environments and activities following the educational program.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

**Outcome #2**

**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	Quantitative Target	Actual
2010	0	86

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The quality of child care nationwide is suffering. Because so many families with young children rely on child care so that they can work, every effort to improve the situation benefits young children and their families. Moreover, a high quality system of child care supports the economic development of Missouri.

**What has been done**

Child care provider education and specialized training are the strongest predictors of child care quality and, in turn, children's experiences. Moreover, the state of Missouri requires that providers working in licensed facilities obtain 12 clock hours of training per year. Extension's "Building Better Child Care" program meets the needs of many Missouri citizens.

**Results**

Eighty-six percent (86%) of program participants report implementing one or more age-appropriate learning environments and/or activities into their childcare programs as a result of attending an MU Extension childcare training.

**4. Associated Knowledge Areas**

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

## **V(H). Planned Program (External Factors)**

### **External factors which affected outcomes**

- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

### **Brief Explanation**

Our evaluation tools did not clearly differentiate childcare provider types. In coming years, we will track more closely the home provider, the unpaid providers, and the licensed center providers. We will also track those individuals who received training as a requirement for continuing education.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- Before-After (before and after program)

## **Evaluation Results**

## **Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 23**

**1. Name of the Planned Program**

Food Safety

**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%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	6.9	0.0	0.0	0.0
Actual	5.0	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
209486	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
187550	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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	1000	5000	5000	0
<b>Actual</b>	2605	6216	440	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	1	0	
<b>Actual</b>	1	0	1

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

Year	Target	Actual
2010	10	218

**Output #2**

**Output Measure**

- Number of participant contacts.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	500	9354

**Output #3**

**Output Measure**

- Number of media events.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	20	33

**Output #4**

**Output Measure**

- Number of website visits.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	10000	286771

**Output #5**

**Output Measure**

- Number of guide sheets.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1270	19957

**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	Quantitative Target	Actual
2010	0	86

**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. Programs include but are not limited to occasional quantity cooks, EFNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

**Results**

Eighty-six percent (86%) of program participants reported an increased knowledge in proper hand washing techniques. This is important to decrease the spread of germs and bacteria, therefore, resulting in less spread of communicable diseases.

**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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	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. Programs include but are not limited to occasional quantity cooks, EFNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

#### **Results**

Eighty-one percent (81%) of program participants report an increased knowledge of how to cook foods to a proper temperature to reduce the risk of food-borne illness.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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.

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	72

#### **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. Programs include but are not limited to occasional quantity cooks, EFNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

##### **Results**

Seventy-two percent (72%) of program participants have an increased knowledge of how to avoid cross-contamination with raw and uncooked food products.

#### **4. Associated Knowledge Areas**

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

#### **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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	66

##### **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. Programs include but are not limited to occasional quantity cooks, EFNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

###### **Results**

Sixty-six percent (66%) of program participants report an increased knowledge of storing foods at a safe temperature to reduce the risk of food-borne illness.

##### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	76

### **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. Programs include but are not limited to occasional quantity cooks, EFNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

#### **Results**

Seventy-six percent (76%) of program participants report an increased knowledge of how to store foods properly.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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 Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	55

### **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. Programs include but are not limited to occasional quantity cooks, EFNEP, FSNE, and Food Power. The evaluation data of these methods indicate successful behavior change regarding food handling.

#### **Results**

Fifty-five percent (55%) of program participants adopted one or more safe food handling practices as a result of attending an educational program.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

Evaluation strategies currently do not incorporate medium-to-long term measures. It is our goal to do more follow-up with program participants to determine intermediate and long term impacts.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

## **Evaluation Results**

### **Key Items of Evaluation**

Fifty-five percent (55%) of program participants adopted one or more safe food handling practices as a result of attending an educational program. This is significant as we are seeing short-term behavior change. It is often difficult to see behavior change, especially where longstanding tradition may be to keep foods at unsafe temperatures for long periods of time and/or to thaw foods on the counter instead of in the refrigerator.

**V(A). Planned Program (Summary)**

**Program # 24**

**1. Name of the Planned Program**

Personal Financial Management

**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	40%			
801	Individual and Family Resource Management	60%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	6.3	0.0	0.0	0.0
Actual	5.0	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
190441	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
170500	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 eldercare 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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	3000	5000	500	500
<b>Actual</b>	8950	4895	1988	304

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	1	0	
<b>Actual</b>	1	0	1

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

Year	Target	Actual
2010	150	517

**Output #2**

**Output Measure**

- Number of media events.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	20	30

**Output #3**

**Output Measure**

- Number of unique website visits.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	250000	300827

**Output #4**

**Output Measure**

- Number of participant contacts.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1500	13845

**Output #5**

**Output Measure**

- Number of guide sheets distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1000	7584

**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	Number of participants who check their credit report.
9	Number 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	Quantitative Target	Actual
2010	0	79

**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**

Seventy-nine percent (79%) of program participants report an increased knowledge of how to manage their debt.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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	Quantitative Target	Actual
2010	0	91

**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**

Ninety-one percent (79%) of program participants report having increased their knowledge of the benefits of saving on a regular basis.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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	Quantitative Target	Actual
2010	0	85

**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**

Eighty-five percent (85%) of program participants report an increased knowledge of basic personal financial management.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #4**

**1. Outcome Measures**

Number of participants who have reduced their debt.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	40

**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**

Forty percent (40%) of program participants report reducing their debt as a result of attending this program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #5**

**1. Outcome Measures**

Number of participants who began saving on a regular basis.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	37

**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**

Thirty-seven percent (37%) of program participants have begun to save on a regular basis following participation in an educational program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

## **Outcome #6**

### **1. Outcome Measures**

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

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Action Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	31

### **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**

Thirty-one percent (31%) of program participants have increased the amount of money they save on a regular basis following the educational program.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
801	Individual and Family Resource Management

**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	Quantitative Target	Actual
2010	0	83

**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**

Eighty-three percent (83%) of program participants have written financial goals that will guide their future financial decisions.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #8**

**1. Outcome Measures**

Number of participants who check their credit report.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	16

**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**

Sixteen percent (16%) of program participants have checked their credit report as a result of their participation in the educational program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
801	Individual and Family Resource Management

**Outcome #9**

**1. Outcome Measures**

Number 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	Quantitative Target	Actual
2010	40	67

**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**

Sixty-seven percent (67%) of program participants have a better understanding of their rights under the Fair Credit Reporting Act as a result of attending an educational program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
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**

Limited intermediate and long-term evaluations have been conducted, therefore, not providing an accurate reflection of the number of program participants who have begun to save and reduce their personal debt over a longer period of time.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)

## **Evaluation Results**

### **Key Items of Evaluation**

Forty percent (40%) of program participants report reducing their debt as a result of attending this program.

Thirty-seven percent (37%) of program participants have begun to save on a regular basis following participation in an educational program. In addition, thirty-one percent (31%) of program participants have increased the amount of money they save on a regular basis.

**V(A). Planned Program (Summary)**

**Program # 25**

**1. Name of the Planned Program**

Nutrition, Health and Physical Activity

**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	25%			
724	Healthy Lifestyle	50%			
806	Youth Development	25%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	15.7	0.0	0.0	0.0
Actual	13.0	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
476104	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
426250	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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	15000	25000	200000	10000
<b>Actual</b>	24944	38971	198727	28309

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	1	0	
<b>Actual</b>	1	0	3

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of program participants.

Year	Target	Actual
2010	200000	451246

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	5000	10181

**Output #3**

**Output Measure**

- Number of media events.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	20	82

**Output #4**

**Output Measure**

- Number of partnerships formed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	100	165

**Output #5**

**Output Measure**

- Number of community campaigns conducted.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	2

**Output #6**

**Output Measure**

- Number of website visits.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	500000	1730350

**Output #7**

**Output Measure**

- Number of volunteers trained.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	100	468

**Output #8**

**Output Measure**

- Number of guide sheets distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	175000	1998767

**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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	40	82

#### **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 adults and youth. 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**

Eighty-two percent (82%) of program participants report being more aware that they need to participate in 30 minutes of physical activity most days of the week to maintain their health.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	40	93

#### **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 adults and youth. 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**

Ninety-three percent (93%) of program participants reported that they were more aware of the food they ate and how they could make healthier food choices.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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	Quantitative Target	Actual
2010	40	47

**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 adults and youth. 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**

Forty-seven percent (47%) of program participants demonstrated the ability to select healthier food and/or snack items following a nutrition education program.

**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.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	46

**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 adults and youth. 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**

Forty-six percent (46%) of program participants reported that they felt more able to manage their personal health and chronic conditions at the end of the educational program.

**4. Associated Knowledge Areas**

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

**Outcome #6**

**1. Outcome Measures**

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

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	40	19

**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 adults and youth. 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**

Nineteen percent (19%) of program participants felt they learned skills that would enable them to prepare healthy meals for themselves and their families.

**4. Associated Knowledge Areas**

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

## **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 Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	86

### **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 adults and youth. 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**

Eighty-six percent (86%) of program participants improved one or more healthy food and nutrition practices. This may include, but is not limited to, planning meals in advance, comparing prices, does not run out of food and using a shopping list.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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 Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	84

**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 adults and youth. 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**

Eighty-four percent (84%) of program participants began or increased the amount of physical activity they participated in most days of the week as a result of attending an educational program.

**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 Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	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 adults and youth. 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**

Seventy-five percent (75%) of program participants were more willing to try and accept new foods into their diet as a result of attending a nutrition education program. Research has shown that foods may need to be introduced into the diet as many as thirteen times prior to being accepted into the diet. Food tastings are an integral part of nutrition education, especially for youth nutrition education.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	61

### **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 adults and youth. 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**

Sixty-one percent (61%) of program participants reported increasing their regular daily physical activity as a result of attending these programs.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	48

### **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 adults and youth. 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**

Forty-eight percent (48%) of program participants reported making behavior changes that were based on MyPyramid and/or the Dietary Guidelines in an attempt to improve and/or maintain their health.

### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

MU Extension has not implemented 3- to 6-month follow-up evaluation with program participants to determine intermediate to long-term impacts. Our goal would be to implement a system that could track program participants and increase our impact reporting.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Other (Anecdotal success stories)

### **Evaluation Results**

Overall program evaluation indicates that program participants are making positive behavior changes as a result of our education programs.

### **Key Items of Evaluation**

Eighty-four percent (84%) of program participants began or increased the amount of physical activity they participated in most days of the week as a result of attending an educational program.

Eighty-six percent (86%) of program participants improved one or more healthy food and nutrition practices. This may include, but is not limited to, planning meals in advance, comparing prices, does not run out of food and using a shopping list.

**V(A). Planned Program (Summary)**

**Program # 26**

**1. Name of the Planned Program**

Aging

**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	80%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%			
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	10%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	5.6	0.0	0.0	0.0
Actual	4.0	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
171397	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
153449	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 and multi-session programs, meetings; Develop products, curriculum and resources; Develop curriculum for advocacy groups; Provide training; Work with media; Partner with AARP, Missouri Department of Health and Senior Services, Area Agencies on Aging and national organizations; Assemble and maintain relevant website on how-to strategies.

**2. Brief description of the target audience**

Older adults and their families, persons who work with older adults, persons in mid-life who are preparing for aging, persons over 60, grandparents, baby boomers, homecare providers, disability and aging advocacy groups, home builders/contractors of elderly housing, real estate agents, aging service providers (health and mental health).

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	3250	7000	0	0
<b>Actual</b>	10394	14768	6167	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	50	224

**Output #2**

**Output Measure**

- Number of media events.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	20	5

**Output #3**

**Output Measure**

- Number of unique website visits.
- Not reporting on this Output for this Annual Report

**Output #4**

**Output Measure**

- Number of participant contacts.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	11000	31329

**Output #5**

**Output Measure**

- Number of guide sheets distributed.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	500	813

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Number of participants who volunteer more or who seek volunteer opportunities.
2	Percent reporting an increased knowledge of how to manage caregiving roles and responsibilities.
3	Percent reporting an increased knowledge of the availability of family elder care.

**Outcome #1**

**1. Outcome Measures**

Number of participants who volunteer more or who seek volunteer opportunities.

Not Reporting on this Outcome Measure

**Outcome #2**

**1. Outcome Measures**

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

Not Reporting on this Outcome Measure

**Outcome #3**

**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
- Populations changes (immigration, new cultural groupings, etc.)

**Brief Explanation**

**V(I). Planned Program (Evaluation Studies and Data Collection)**

**1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)

- During (during program)
- Case Study

## **Evaluation Results**

### **Key Items of Evaluation**

**V(A). Planned Program (Summary)**

**Program # 27**

**1. Name of the Planned Program**

Facilitating Community Decision Making for Youth and Adults

**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	35%			
610	Domestic Policy Analysis	25%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	25%			
805	Community Institutions, Health, and Social Services	10%			
806	Youth Development	5%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	9.6	0.0	0.0	0.0
Actual	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
200617	0	0	0
<b>1862 Matching</b>	<b>1890 Matching</b>	<b>1862 Matching</b>	<b>1890 Matching</b>
200793	0	0	0
<b>1862 All Other</b>	<b>1890 All Other</b>	<b>1862 All Other</b>	<b>1890 All Other</b>
0	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

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, and work with communities to address a specific need or issue. Also work with media; provide analysis, training and consultation for local and state government; work with local officials to provide classroom training for middle school students; facilitate project planning and local government field trips with middle schoolers; and conduct project fairs and other events to highlight middle school learning and civic engagement projects.

**2. Brief description of the target audience**

Targeted audience would be all social groups in the community, including low-income and minority, youth (age 12-14), adults, community leaders, local government and policy making groups, and state and local agencies. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	15000	8000	1500	600
<b>Actual</b>	10233	4489	2349	622

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	2	2	
<b>Actual</b>	2	2	1

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of partner hours leveraged.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1000	1199

**Output #2**

**Output Measure**

- Number of volunteers hours leveraged to assist in programming.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	500	4470

**Output #3**

**Output Measure**

- Number of communities/organizations using deliberative processes to dialogue or frame public issues.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	15	4

**Output #4**

**Output Measure**

- Percent of non-White Caucasian participants in programs.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	9	8

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	% of participants reporting they feel they have an increased voice and opportunity to participate in the community.
2	Number of communities/organizations developing or updating a plan.
3	Number of communities reporting engagement in plan/project implementation.
4	Number of people reporting taking on increased, different, or new leadership roles in community.
5	Number of jobs created by new businesses or business expansion/growth.
6	Number of jobs retained.
7	Number of businesses created.
8	Dollar value of savings from more efficient government and organizational performance.
9	Dollar value of new resources leveraged by communities.
10	Number of volunteer hours generated by communities/organizations.

**Outcome #1**

**1. Outcome Measures**

% of participants 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	Quantitative Target	Actual
2010	0	0

**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 to 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. Training in use of deliberative methods was offered. We provided workshops and education to 59 of 114 counties to encourage Census participation.

**Results**

A Marion County youth said, "I get to have a voice in government so things are done with and for kids rather than to kids." Comments from participants in the Neosho comprehensive community planning process included: "Lots of feedback and participation. This is what Neosho needs!" Another noted, "Anyone who wants to know about what was going on or wanted to make a contribution had the opportunity to do so." A third stated, "Thanks for this opportunity. Many residents feel disenfranchised by their local government. This gave them a chance to be part of the process." Montgomery County residents reported learning that getting lots of ideas was important to choosing good ones and that it is possible to provide input without arguments ensuing. 71% of students participating in the Saint Louis area project fair indicated that it definitely made them feel that they had a voice in important local government issues (only 5 students or .03% strongly disagreed).

**4. Associated Knowledge Areas**

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

**Outcome #2**

**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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	5	36

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Local officials wish to implement what citizens want. Organizations want to improve services to clientele. Citizens want input into the community or organization of which they are a member or clientele. Funding organizations require a proposal to show relation to a plan. For implementation a plan shows the needed sequence for a successful outcome. Plans are important as guides for future activity.

**What has been done**

We provided facilitation using methods that allow people to have voice, technical assistance, training and planning programs, e.g. Vision to Action: Take Charge Too, Appreciative Inquiry, World Café, etc. to build capacity of residents to engage in community action. We partnered with other organizations for a planning and zoning course; with Drury College for visioning and planning in three communities, with the MO Community Betterment Program.

**Results**

Programs such as Vision to Action and Missouri Community Betterment help communities view themselves objectively and begin a planning process. Atchison County is planning for wind energy tourism by reviewing projects in other states. Warren County and the City of St. Louis are working to increase access to food. Warren County is using CIM (Community Information Management) as part of its planning to increase food access and to locate sources of low-cost, quality food. Facilitation led to the development of a statewide plan to address policy, finance, and

structural program changes for housing faced by people with disabilities; Southeast Regional Missouri's Mental Health Department inpatient redesign plan; strategic plan for Springfield's Commission on Human Rights and Community Relations, updated comprehensive Neosho community plan; and planning and zoning plans for Montgomery County and Sunrise Beach.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

#### Outcome #3

##### 1. Outcome Measures

Number of communities reporting engagement in plan/project implementation.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	10	19

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Local officials wish to implement what citizens 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 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 flood recovery to tourism, from preserving historic schools and other buildings to responding to business closures or relocations, from summer youth programs to food access.

###### **Results**

Herculaneum completed a new bridge and started another and added new businesses and homes; Arnold worked with MoDOT to effect highway changes while involving volunteer architects, developers, builders, contractors, business people and individuals working on plans for

the area; Hillsboro planted trees and gardens, built sidewalks and improved the way the city looks and feels; Pike County Community Betterment groups are making riverfront improvements, using empty buildings, training food servers and convenience store clerks, and impacting tourism; Burlington Junctions completed streetscaping, evaluated progress on citywide property cleanups, and is focusing on desirable locally sustainable businesses; Republic obtained board approval for names of four new schools; Maryville 8th graders (fourth year) planned and planted flowers, weeded, and painted in the schools. An urban neighborhood food coop, community gardens and farmers' markets in several counties improved food access.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #4**

**1. Outcome Measures**

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

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Community leaders are central for effectively mobilizing people to address local issues. Community leaders recognize that they cannot be successful alone or without greater personal capabilities. Effective citizen leaders translate knowledge and commitment into hands-on action to engage in building community networks, make well-informed decisions and find real solutions. Local officials who are comfortable in their roles are more inclined to speak out in public meetings and take on new roles.

**What has been done**

Training was offered to local officials. Participatory planning processes engaged a variety of citizens in organizational and community planning. Decision support was provided through several well developed web-based systems.

**Results**

Local officials of all levels of government reported more confidence in their roles and a better understanding of concepts, and plans to use their learning. After attending a deliberative training three participants became active in the Community Action Agency. Elsewhere farm leaders become interested in methods to engage stakeholders in issues. Individuals participating in participatory planning for organizations and communities frequently took on new roles; however we have not formally assessed this aspect. Arnold Hometown Association member Marie Perdue commented, "Planning for all these improvements in the community makes me very proud to be part of the Hometown Association, especially since I know they will eventually become real; it just takes hard work and determination."

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #5**

**1. Outcome Measures**

Number of jobs created by new businesses or business expansion/growth.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

In the current recession there is a good deal of concern about how unemployment affects the economic wellbeing of families and communities. While the general economic climate has the largest impact on jobs, communities can look for niches that can create local jobs and as the economy expands the businesses might continue to grow. Job creation does not happen rapidly and quality planning and decision making can facilitate job creation by businesses.

**What has been done**

We worked with a variety of communities, organizations and agencies to create decisions that could lead to job creation and build capacity, increase workers' skills with retraining and employment. Community planning and analysis are an important part of creating capacity for communities for job and business creation and support. In partnership with state economic development and transportation departments we provided analysis, mapping and other tools in

support.

**Results**

Direct counts of jobs were often not reported. Restaurants in Louisiana (Pike County) have increased clientele because of increased tourism and other local businesses have longer hours to serve the tourists. This suggests increased hours for employees. A cooperative Buy Missouri business and a cooperative Gallery provided outlets for local producers to sell their products, creating at least part-time employment. The development of the Old North Grocery Coop in St Louis created one fulltime and two part-time jobs for local residents.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #6**

**1. Outcome Measures**

Number of jobs retained.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Retaining a job has the same impact on the family and the community as creating a new one. Retention also maintains the local tax base.

**What has been done**

We worked in a variety of capacities with communities and business owners and farmers to retain jobs. In response to Wal-Mart locating out of the area in Pike County, local businesses were encouraged to provide a broader range merchandise to encourage shopping locally and the maintenance of viable local businesses. Facilitation of planning and provision of analysis also assisted communities in their focus on retention.

**Results**

Identifying retained jobs is more difficult than jobs created. For example, St. Louis and Kansas City retained summer programs that employ youth. Local businesses in Pike County have expanded their array of merchandise to maintain the number of people who shop locally. Work with the Warsaw Farmers' Market (Benton County) resulted in a new location for the market, which proved popular with vendors and retained their employment. An Extension conducted vendor survey indicated on average the market brings in \$320 each week. The market is open 26 Saturdays, yielding \$8,320 average for a local farmer. Vendors reported an average of 62% of that is profit.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

**Outcome #7**

**1. Outcome Measures**

Number of businesses created.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

New businesses are a major source of growth in the U.S. economy. A new business creates employment and income for its owners, and over time, is likely to create additional local jobs. A new business also increases property values and tax revenues in the community and often increases pride in the community.

**What has been done**

Extension has worked with local communities and interested groups to facilitate their business formation and increase outlets for their products, such as farmers' markets and cooperatives. Specialists assisted in development of at least three cooperatives as during the past year.

**Results**

Pike County's Missouri Made and More cooperative features local items in tandem with the riverfront farmers' market. A Palmyra cooperative of 10 local artists opened a gallery. Since 2000,

an Old North St. Louis Neighborhood partnership has focused on a healthy, dynamic, and sustainable community yielding: \$35 million retail redevelopment; 27 buildings undergoing historic rehabilitation, 32 high-quality affordable apartments in historic rehabbed buildings, 20 new homes built; a bike/walking tour, neighborhood DVD and community museum; the volunteer-based homeowner organization becoming a fully functioning development corporation implementing commercial and housing redevelopment projects. Access to healthy food in this food desert has resulted in: 155 attendees per week at the new farmer's market, 13 pounds of produce are harvested weekly from the community garden, at least 20 families have a CSA subscription, and a neighborhood grocery co-op opened its doors July 1, 2010.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

#### Outcome #8

##### 1. Outcome Measures

Dollar value of savings from more efficient government and organizational performance.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

In the current economic climate, governments and organizations have faced reduced resources for achieving their objectives. Searching for and achieving savings allows governments and organizations to allocate more of the available resources to their priority areas. Seeing savings by governments and organizations increases trust in them as well-managed organizations.

###### **What has been done**

We have provided analysis, facilitated planning, and provided training for governments and organizations that have saved costs, helped them be more efficient, and implement other methods of raising money for activities and encouraging the use of volunteers. In addition, we have conducted hands on workshops for legislators and assistants and urban local government officials on use of web-based analysis tools for improved decision making and engagement of citizens.

**Results**

Montgomery County commissioners, in a letter to legislators, stated that process facilitated by Extension "saved the county \$20,000." Canton in Lewis County established a Community Recycling Center which uses volunteers to sort the recycling, raising funds by selling advertising on the informational recycling flyers distributed to all households Palmyra and Arnold have received donated services from architectural firms. Three cities in Henry County have partnered with Extension and Drury University for planning services. Arnold worked with MoDOT on highway change planning and design, using volunteer architects, developers, builders and contractors, all of whom who would likely charge approximately \$200 per hour.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #9**

**1. Outcome Measures**

Dollar value of new resources leveraged by communities.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Communities and organizations wish to offer citizens and clientele quality services that contribute to their economic wellbeing and quality of life. Resources are needed to provide these services and these can come from within the community or from outside. In the current economic situation there is a Catch-22 as communities and organizations have fewer local resources but so do donors. When funds are most needed, there are few funds available.

**What has been done**

We assisted by providing information on grant sources, training and assistance on grant writing and working with communities on plans that that the communities use to back-up grant requests. In addition extension has worked with communities to increase local fund raising.

**Results**

\$258,250 was reported, but few faculty reported. A Pike County city obtained sewer, water systems, fire truck and station remodeling grants; Palmyra raised \$5,500 via the community stakeholder memberships venture and buy-a-brick projects while civic organizations received \$5,500 in grants; Canton received \$35,000 for emergency sirens and civic organizations another \$89,000; LaGrange received \$5,788 for parks and tree planting; Ewing received \$18,250. Jefferson County received grants to curb methamphetamine. The Deliberative Dialogue program obtained \$5,000. The Old North St. Louis neighborhood received a grant of \$100,000 and a donation of grocery store equipment. Since 2000, an Old North St. Louis Neighborhood partnership facilitated by Extension has created \$35 million retail redevelopment. In the past five years, communities such as Herculaneum and Hillsboro have leveraged well over \$10 million in grants and financing for projects developed in their plan.

**4. Associated Knowledge Areas**

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

**Outcome #10**

**1. Outcome Measures**

Number of volunteer hours generated by communities/organizations.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Communities and organizations can tend to take a narrow view of resources, generally thinking only in terms of financial resources, and consequently struggle to support initiatives. Volunteers are a critical resource to carrying out initiatives and staffing for community-based initiatives.

**What has been done**

We worked with communities and organizations to involve volunteers in their planning processes

and project implementation and to assist in their volunteer recruitment and management.

### Results

Most projects engage volunteers. For example, Arnold engaged volunteer architects, developers, builders, contractors, business people and others to begin implementing its comprehensive plan. The Old North Neighborhood in St. Louis relies on volunteers to plant and harvest from its community garden to help support the neighborhood grocery co-op and engaged a number of volunteers in its planning. The newly established Canton Community Recycling Center uses volunteers to sort the recycling.

## 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

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 state and local funding, hiring freeze for duration of fy2010 and continuing; limitations imposed by economic downturn for program sponsors, participants and leaders and their demands and interests changing. 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 and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Case Study

### **Evaluation Results**

Post session or post program evaluations show that they are well-received by the populace, often very enthusiastically, usually accompanied with a request for more assistance and a wish that more had attended or a statement that they will recommend it to others. Comments such as "We could not have done it without you, your contribution was important, I would be happy to receive more information at any time," are common. Specific comments show substantial local impacts: "Thank you so much..., this is really opening doors and opportunities for us. This means we will be able to get doctors and keep the clinic open." During the past year, we began to implement a consistent evaluation for use with participatory planning programs that accesses the sense of input and voice felt by participants, their post-pre-post understanding of the community issues, and their intent to remain engaged.

Determination of projects and plan implementation has occurred via documentation for significant engagement. While post program leverage of economic resources for these decision making programs is reported at just over \$250,000, the likely impact is much higher and not easily quantified. Communities also report that money was saved, but do not report an amount. For small communities a savings of a few thousand dollars can be substantial.

### **Key Items of Evaluation**

Community decision-making 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 impact is not a precise science when the impact occurs over time, often long after the specialist and the community have switched their focus to another issue. Case studies and the ability to tell the story over time are important as the results from the facilitation of decision making are contextual to the situation and/or place (although sometimes developing case studies is time and resource intensive). Rarely are we able to prove causation.

Evaluation protocols and measures continue to be developed for other decision support programming and for community planning programs in tandem with the work in the North Central Region on indicators. Once we are past what has been learned, the nature of impact reporting will most likely rest on a protocol that assesses attributed results as context varies from community to community, especially as decision making processes are locally driven. Keep in mind that what the community considers a success or valuable result may not be what we deem so or what we are measuring.

**V(A). Planned Program (Summary)**

**Program # 28**

**1. Name of the Planned Program**

Ensuring Safe Communities

**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	95%			
806	Youth Development	5%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	3.2	0.0	0.0	0.0
Actual	4.0	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
130837	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
130952	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 & presentations 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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	2000	1600	800	150
<b>Actual</b>	2464	2296	78	13

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	1	0	
<b>Actual</b>	1	0	1

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

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

Year	Target	Actual
2010	45	142

**Output #2**

**Output Measure**

- Number of partner hours leveraged.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2500	3645

**Output #3**

**Output Measure**

- Number of days the FEMA Safe Room Display is used.  
Not reporting on this Output for this Annual Report

**Output #4**

**Output Measure**

- Number of unique visits(hits) to Community Emergency Management Web page.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	2500	93634

**Output #5**

**Output Measure**

- Number of volunteer hours leveraged.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	800	3763

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of participants in workshops/training reporting learning about preparedness, hazards, mitigation.
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	Percent 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**

Percent of participants in workshops/training reporting learning about preparedness, hazards, mitigation.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	75	92

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri experiences at least 10 significant emergencies such as floods, ice storms, and tornadoes each year. Missouri received a Presidential Disaster Declaration during the summer for flooding on the upper Missouri and Mississippi rivers.

**What has been done**

142 community preparedness learning events were conducted including severe weather preparedness, animal and plant bio-security. County offices distributed information in the office, at county fairs and other events. TV, web, and radio materials were developed and distributed. Weather awareness campaigns were developed and delivered. Extension Specialists were primary instructors in Community Emergency Response Teams (CERT) courses and Teen CERT courses.

**Results**

Participants reported learning about seasonal natural hazards, family preparedness, extinguishing fires, emergency medical skills. One participant wrote on an evaluation; "It is really good to have this information and these new skills to possibly save someone's life in a disaster." In post surveys for severe winter weather/all hazard preparedness, participants indicated greater home and work hazard awareness; learning about work or children's school emergency plans; purchasing generators and weather radios; how to develop a family emergency plan; how to identify utility entrance and shut-offs; how to prepare a home emergency kit; family members become prepared; how to prepare car emergency kits; how to mitigate hazards at home.

**4. Associated Knowledge Areas**

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

## **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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	5	24

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Disasters are unpredictable and external assistance does not meet all needs that arise. Community Organizations Active in Disaster (COADs) include any agency/organization with a role to play in any phase of emergency management and provide the platform for launching Long Term Recovery Committees in their communities after a disaster event. Established COADs assist in mitigation, preparedness, response and recovery, contributing to community resiliency to disaster.

#### **What has been done**

Three COADs were started as a result of the 2008 flooding and moderate 2010 early summer flooding that occurred along the Missouri and Mississippi Rivers in Missouri. We continue to work in recovery for the 20 Presidential disaster declarations from the previous six years. We responded to the urgent needs of communities and citizens to support response and recovery from winter storms, excessive rainfall, spring/summer storms, limited tornadoes, and continued H1N1 flu episodes.

#### **Results**

After disasters, Extension is called upon regularly by SEMA to facilitate unmet-needs committees and Community Organizations Assisting in Disaster. Local Extension specialists are directly involved in Community Organizations Active in Disasters (COADs), Local Emergency Planning Committees, Citizen Corps programs, and Long Term Recovery Committees. In many cases they are not only members but comprise the day-to-day leadership. Twenty-four active COADs are creating a greater breadth and depth of disaster resiliency and creating opportunities for expanded training (e.g. Community Emergency Response Team (Citizen Corps-CERT) training to citizen volunteers to teach them how to support local government disaster operations) and disaster exercise for preparedness. In addition we worked with two COADs in Montgomery and Lincoln Counties to use our Community Issues Management system to upload GIS, other data,

and local data for emergency response planning in the first two days (<http://www.cim-network.org/muext/>).

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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	Quantitative Target	Actual
2010	50	43

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri communities, organizations, and businesses must be prepared for the possibility of a multitude of severe weather events in addition to terrorist or seismic disasters. The key to addressing current and potential disasters is to integrate multidisciplinary research and education into a coordinated mitigation, preparedness response and recovery that includes collaboration with local, state and federal partners. Individuals, organizations and communities knowing about preparedness is important but application of learning is critical to true preparedness.

**What has been done**

In 2010, 142 community preparedness learning events were conducted including animal and plant bio-security, seasonal hazard presentations, Community Emergency Response Team (CERT) courses, Ready Business courses and earthquake awareness courses. County offices distributed information in the office, at county fairs and other events. TV, web, and radio Media materials were developed and distributed. Weather awareness campaigns were developed and delivered.

**Results**

As a result of hazards awareness and hazard preparedness workshops across the state with diverse audiences, participants later reported: buying weather radios and flashlights, developing family disaster plans and building emergency kits. Some self-reported outcomes include: "I

bought a weather radio and carry it in my vehicle. I had not thought about keeping one in my vehicle before your presentation."; "Our electricity went off and we went to the basement during a storm. I had flashlights down there but couldn't remember where they were. Now I know exactly where they are as well as other supplies, because after that happened, I filled out the 'Ready in 3' card."

#### 4. Associated Knowledge Areas

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

#### Outcome #4

##### 1. Outcome Measures

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

Not Reporting on this Outcome Measure

#### 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	Quantitative Target	Actual
2010	25	50

##### 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 (2008) and the MU Extension Emergency Management Guidance. Each year during preparedness campaigns like Earthquake Awareness month (February), Severe Weather Awareness Month (March) and National Preparedness Month (September), all offices are encouraged to pull out the plan and review it for refreshing faculty and staff on procedures and to review for possible changes needed.

**Results**

All 111 offices have the plan in place and are encouraged to review it at least annually; 50 offices reported reviewing their plan during one of the major hazard awareness campaigns. We are seeing significant engagement of regional extension faculty in providing Community Emergency Response Team (CERT) training, in Local Emergency Planning Committees (LEPC), Community Organizations Active in Disasters (COAD), Citizen Corps programs, and Long Term Recovery Committees all encouraged in the MU Extension Emergency Management Guidance. 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**

<b>KA Code</b>	<b>Knowledge Area</b>
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	Quantitative Target	Actual
2010	100000	70368

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Missouri has been and will likely continue to experience a number of disasters, being the 8th most disaster prone state in the nation. Each is costly in dollars and can cost lives. Engaging citizens

and organizations to engage in disaster preparedness can help mitigate cost and hasten recovery. Communities need volunteer assistance in organizing and funding disaster preparedness efforts that can save money and lives.

#### **What has been done**

The Community Emergency Management program provided direct support in training and engaging volunteers as communities and the state planned for, addressed and recovered from severe winter, spring and summer storms and the 2nd wave of H1N1 Influenza virus. Activities included COAD development and support, consultations with citizens and leaders about appropriate recovery strategies, educational programs on emergency/disaster management.

#### **Results**

Through the efforts of MU Extension's CEMP and its partners, citizens, businesses and other organizations are becoming more prepared for a disaster and thus more resilient to the impacts. Volunteers are being trained within faith-based organizations to become shelters, feeding sites and volunteer coordination centers. Adults and teens are being trained in CERT to support local disaster preparedness, response and recovery. Three new COADs were formed to support disaster mitigation, preparedness and recovery. These trained volunteers become a significant multiplier for local responders and voluntary organizations as they mitigate, prepare for and manage the recovery after a disaster. In addition, several COADs and Long Term Recovery Committees were successful in leveraging additional funds for recovery and preparedness. CEMP focused significant efforts on disaster preparedness and training.

#### **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

In 2010, Missouri had one major Presidential disaster declaration affecting 29 counties (approx. 25% of the state). In the last six years Missouri has been devastated by natural events which received 21 Presidential disaster declarations, more than any other state during the period. Missouri now ranks 8<sup>th</sup> as the most disaster prone state in the last 50 years. 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 the regional CEMP teams has other primary responsibilities to larger programs. We have had a hiring freeze in effect since November 2008, a state appropriation cut in 2010, and reduced local funding--all of which have limited our capacity to deliver local and state programs and develop follow up evaluation. In addition, we have spent considerable time on relationship building with our funding stakeholders. Some of these stakeholders have also been severely affected by state budget cuts. We anticipate another reduction in state funding for FY11. The need to garner grant and contract funding is essential.

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 and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Comparisons between different groups of individuals or program participants experiencing different levels of program intensity.

### **Evaluation Results**

MU Extension supported flood recovery through education and hands-on assistance. Results documented in our evaluation reporting system included the following testimonials to Extension's impact and involvement. MU Extension posted a link to the University of Missouri's flood publication MP 904 Resources for your flooded home on the Big Lake Assn's Facebook page. One comment left on the Facebook page included: "This is a good read for first time flood person. It is a very good publication to read BEFORE going to your residence after a flood!!! Please at least read what pertains to you and read some more. Reading it can...save you headaches, like with flood insurance adjusters. Read your flood policy before the adjuster arrives!" One person who was working with an insurance problem said, "Thank you so much, you have given me good information to document damages and share with my insurance company." And one noted, "Thank you for testing my home and for showing me how to open up the window in my door."

As reported above, our evaluation results for workshops regularly resulted in learning about preparedness and mitigation. Results reported approximately six months later about actual implementation or action taken are significantly less as people don't always take

action nor do they do it immediately.

Intermediate outcomes were reported including buying weather radios and flashlights, developing family disaster plans, sharing information with other family and friends, building emergency kits and identifying utility control points. Some self-reported outcomes include: "Thanks to your presentation, we now carry a flashlight in our car."; "I bought a weather radio and carry it in my vehicle. I had not thought about keeping one in my vehicle before your presentation."; "Our electricity went off and we went to the basement during a storm. I had flashlights down there but couldn't remember where they were. Now I know exactly where they are as well as other supplies, because after that happened, I filled out the 'Ready in 3' card."

As a result of a multi-state flood summit, for which MU Extension took leadership, the land grant university representatives from Missouri, Illinois, Indiana, Iowa, Louisiana and Arkansas developed a white paper with detailed recommendations for how land grants respond to major flood events, the values of participation by university extension systems and common themes, issues and challenges extension systems face by becoming involved in emergency management work. The paper was provided to MU Extension leadership and shared with participating states, NIFA and EDEN.

## Key Items of Evaluation

The Community Emergency Management program (CEMP) had a large impact across the state in providing direct support for community and state planning to address and recover from spring/summer storms and the second outbreak of H1N1 Influenza virus.

Documenting impact of the work with COADs, disaster recovery, and community resiliency is difficult. Much easier is the self-reported change in learning and actions participants intend to take to prepare for disaster upon completion of the workshops. Some of our evaluations were able to show that participants in educational programming do in fact take action that improves the preparedness for their families and organizations. Feedback from COAD participants included: "This was much needed. We need to know what everybody is doing. What a great place to get things started." "This group now has a formal structure that will ensure its continued operation and is better able to apply its resources because of the relationships built and tools being used. The floods of 2008 have been a steady motivation factor for the group to press ahead. When the next flood comes all 15 agencies will be more effective because of the interaction of this group. Aid will be provided more strategically and more quickly and more resources will be available to deploy."

The Family Disaster Plan, which was introduced in September and downloaded 13,355 times. More than half of those downloads (7,750) occurred during September. The supplemental pages for additional adults, children, pets and household inventory also were downloaded during this period. One colleague at another university wrote: "I've been getting great feedback about the preparedness plan you developed. The State of Florida has one available online, but I think we are going to start using yours as the example for our students when we ask them to develop a personal and family plan because yours is better. They especially like the pet part since these little guys are often not included." Another MU Extension colleague wrote "At yesterday's meeting, the United Methodist organization disaster representative housed in Columbia commented that this was "the best" Family Disaster Plan" she had ever seen. The Salvation Army Disaster Coordinator asked if they

could use the plan which will be incorporated into their materials they distribute to other such groups." The CEMP website had 93,634 unique visitors during the year.

**V(A). Planned Program (Summary)**

**Program # 29**

**1. Name of the Planned Program**

Community Leadership Development for Youth and Adults

**V(B). Program Knowledge Area(s)**

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	84%			
806	Youth Development	16%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	0.0	0.0
Actual	3.0	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
122115	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
122222	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

Form planning committee; assist with organizational development, fund development, and tailoring content to local community need. Provide facilitation, training, workshops, retreat, field trips and exchanges with other communities, conduct planning with education class for use of learning.

**2. Brief description of the target audience**

Targeted audience is all social groups in the community, including low-income and minority, youth (age 14-18), adults. 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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	2500	400	900	25
<b>Actual</b>	3275	33	998	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	1	
<b>Actual</b>	1	0	1

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of indepth leadership programs held.

Year	Target	Actual
2010	32	21

**Output #2**

**Output Measure**

- Number of volunteer hours assisting.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	125	737

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of participants reporting changes in personal growth and self efficacy; community commitment; shared future and purpose, community knowledge and civic engagement.
2	Percent increase in number of participants reporting new roles and opportunities undertaken.
3	Number of community projects/plans developed.
4	Number of community projects/plans implemented.
5	Sustained capacity for community leadership development: the number of programs which continue after at least 5 years.
6	Dollar value of grants and resources leveraged/generated from community projects/programs.

### **Outcome #1**

#### **1. Outcome Measures**

Percent of participants reporting changes in personal growth and self efficacy; community commitment; shared future and purpose, community knowledge and civic engagement.

Not Reporting on this Outcome Measure

### **Outcome #2**

#### **1. Outcome Measures**

Percent increase in number of participants reporting new roles and opportunities undertaken.

Not Reporting on this Outcome Measure

### **Outcome #3**

#### **1. Outcome Measures**

Number of community projects/plans developed.

#### **2. Associated Institution Types**

- 1862 Extension

#### **3a. Outcome Type:**

Change in Action Outcome Measure

#### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	5	6

#### **3c. Qualitative Outcome or Impact Statement**

##### **Issue (Who cares and Why)**

Community leaders are the central force in effectively mobilizing people to address local issues. Frequently, community leaders wonder how to achieve the kind of success they dream about and recognize that they cannot be successful alone or without greater personal capabilities. Effective citizen leaders translate knowledge and commitment into hands-on action to engage in building community networks, make well-informed decisions and find real solutions.

##### **What has been done**

Programs engaged local leaders and citizens in developing a program adapted to the community in urban and rural areas. Past participants helped plan and deliver cohort programs. Several

have formed nonprofit organizations to support their programs. Other programs being implemented include Step Up to Leadership that is co-delivered with community action agencies to low income persons.

**Results**

Warren County participants are working with three colleges to bring post-secondary educational opportunities to residents. Three St. Charles County developed a concept for service and are planning to establish a non-profit organization. Shannon County participants developed and received funding for Senior Citizen Appreciation Day, city beautification, and Personal Hygiene Education Week. Other projects included the Hollister School family night to include Hispanics, Warren County Homeless Veteran's dinner and welcome packets for community newcomers. Henry County's participants indicated great willingness to design a community project.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

**Outcome #4**

**1. Outcome Measures**

Number of community projects/plans implemented.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	2	6

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

A number of concerns facing communities demand leadership. The contemporary arena in which community actions are pursued can seem overwhelmingly complex. For example, community organizations and political subdivisions such as cities, school districts, library boards and counties continually struggle to find qualified residents to serve as council, board and commission members.

**What has been done**

Programs engaged local leaders and citizens in developing a program adapted to the community in urban and rural areas. Past participants helped plan and deliver cohort programs. Several have formed nonprofit organizations to support their programs. Step Up to Leadership is co-delivered with community action agencies to low income persons.

**Results**

Step up to Leadership, developed collaboratively with the Missouri Association for Community Action in 2005, is being used across the state by the Community Action Agencies to develop leadership skills among their constituents. In some areas, Extension faculty are part of the training teams and the program is being delivered in partnership. Mini-grants up to \$500 were available to CAA participants (through funding from the Dept. of Social Services) by application to support their efforts to take a lead in promoting activities that directly benefit low-income people or help to strengthen their community. Participants focused on working with food pantries, spousal and child abuse, housing policies, weatherization, and a number of critical community issues. EXCEL programs in Warren County, St. Louis and other areas also implemented programs.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

**Outcome #5**

**1. Outcome Measures**

Sustained capacity for community leadership development: the number of programs which continue after at least 5 years.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	18	19

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

In order to build sustainable communities research shows their needs to be programs that teach members of the community about the communities. 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 longer 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. Some existing programs expanded from local to regionalized focus.

**Results**

The EXCEL (EXperience in Community Enterprise and Leadership) program celebrated its 26th year in 2010. More than 7,569 youth and adults have graduated from the EXCEL (EXperience in Community Enterprise and Leadership) program since 1984 in over one third of Missouri's counties. Nineteen programs have been active for 6 years or more. More than 278 Randolph County EXCEL graduates are serving their community, and community collaboration has increased significantly since the program began there in 1984-yielding increased opportunities and benefits for all county residents. A number of programs have created their own nonprofit organization to support the ongoing program. Two regional programs are operating in northern Missouri where population is less dense. The new Northeast program expanded an already excellent county program; participants began to think more regionally about how to grow their communities. After all, not many of us stay within our resident county to shop and/or to work.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
806	Youth Development

**Outcome #6**

**1. Outcome Measures**

Dollar value of grants and resources leveraged/generated from community projects/programs.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	5000	31500000

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

In order to build sustainable communities, capacity for leadership has to be built in a way that engages a critical mass of citizens in hands-on and applied learning about leadership and about their communities.

#### What has been done

Cohort programs with multiple sessions increase skill and knowledge acquisition about effective community leadership and the community itself while actively engaging participants and program alumni in community application and their passions.

#### Results

Camden County needed a new high school to better serve the growing school district. A bond issue failed three times before the community decided to consider raising the school levy to the maximum of \$2.75 before a fourth vote. Over several years, EXCEL participants worked with the school system through study groups and a foundation to pass the bond issue and follow up with a lease purchase agreement for \$11 million for a total of \$31.5 million and completion of an exemplary school. A recently completed new highway adjoining the school grounds adds to the school's value in the community. Former Superintendent Dr. Ron Hendricks commented that without the community support and programs like EXCEL that build human and social capital, the project would not have been successful.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
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

Millions of dollars are spent every year by governments, foundations, and the private to support leadership programs as a way to better the future of communities. Despite this long history of investment, until recently virtually no evaluation effort focused on the impact of leadership development on community wellbeing. Due to time and resource limitations little quantitative data was collected consistently across programs. Factors affecting outcomes include limitations of faculty time and pressures with decreased state

and local funding, a hiring freeze for duration of fy2010 and continuing; limitations imposed by the economic downturn for program sponsors, participants and leaders and their demands and interests changing. Finally tracking participants and 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. To be noted is that the impact upon individuals is often felt for years. Measuring impact in the community has been and remains a significant and more challenging task.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- During (during program)

## **Evaluation Results**

Several years ago, the NCRCRD convened a research group which was able to secure an NRI grant to look at the impacts of the leadership development efforts in multiple states. This NRI study 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 including the finance and building of a new Camdenton high school and aquatic center in Moberly. In FY2010, 51 such leadership programs added to the capacity for Missouri's future.

First, a significant difference between and within groups demonstrated the effect of the leadership program. Participants want to become leaders or improve their leadership skills. The study showed programs were effective in helping them achieve these goals as seen by the greater increases in their impact scores compared to those in the control counties with no leadership program.

Second, the assessment of community leaders' knowledge and skills in the control group was higher than that of the leadership program participants raises some interesting questions. Perhaps a secondary, contextualized effect provided program participants with a new framework for assessing what they know and what they can do while those in the control group did not have this framework to use. As a result of participants "recalibrating" their thinking about effective leadership in the community with a new framework, they understand their strengths and weaknesses differently than those in the control counties. In addition, survey participants in the control counties were given a five-year framework for assessment of their individual attributes while those in the treatment group represent a more diverse group in terms of the length of time since they had completed their educational program experience.

Finally, we should not disregard the very real finding that learning from experience is still a good teacher. As shown by the results for the control group, they also felt they had learned things during the five year period they were asked to use as a reference frame for this study. This suggests that community leadership education efforts should make more effective use of experience and experiential learning activities in their overall program design.

Measuring impact in the community has been and remains a significant and more challenging task. A significant research need is establishment of the economic impact of community leadership programs for the community.

### **Key Items of Evaluation**

Community leadership development programs have continued to participate in evaluation efforts on a voluntary basis producing a small number of cases in the benchmark data. In 2010, this continued to be the case due to lack of resources and time constraints. In 2011 programs will be required to participate in an evaluation survey that is being used in a multi-state NRI funded project. A plan was designed by a team of state and regional faculty that includes a demographic questionnaire at the beginning of the program, a post/pretest (survey); individual session assessments, anticipated actions and actions taken assessment (North Central Region recommendations), and creation of a process for focus groups for long-range evaluation efforts. The evaluation process will be centralized for use across the state. Administration of the survey questionnaire will take place approximately six to twelve months following the end of the educational program. Scores from benchmark data will be used for comparison of scores over time.

Important findings reported in a multi-state NRI project, Impact of Community Leadership Education in the New Economy support the argument that participation in community-based leadership development education programs produced significant learning when compared to those in control counties where no programs were available. There were larger gains in learning and attitude changes among those participating in these programs than for those who did not.

Descriptive statistics show there is a dominance of women participants in the programs. This finding leads to the need for a discussion regarding "is leadership in rural America being re-gendered?"

Hortencia Miranda, a graduate of the Taney County Step Up to Leadership, upon receipt of a \$500 mini-grant through the Community Action Agency, created the first annual family activity night focusing on diversity in the Hollister school district by giving Latino parents the opportunity to become more involved in their children's education and to meet other families in a fun and relaxed atmosphere. Hortencia wanted to start a group that would help Latino parents and children get more involved in school activities. She said language and other cultural barriers either kept parents from getting involved or made them feel unwanted. She also got a principal, and several teachers involved. About 100 parents and children participated. The \$500 was used to cover the expenses for 100 t-shirts, flags and paper products for the dinner families helped provide. After the event the group continues meeting and organizing events that bring them closer, work as a group, and raise funds for the next annual event. A support group of parents has been formed to start helping at the school and become active in community activities. And Hortencia feels more committed to making a difference and being a positive influence to the people around her.

**V(A). Planned Program (Summary)**

**Program # 30**

**1. Name of the Planned Program**

Building Inclusive Communities

**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	15%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	40%			
805	Community Institutions, Health, and Social Services	35%			
806	Youth Development	10%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	6.4	0.0	0.0	0.0
Actual	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
235508	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
235712	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**

Provide facilitation, training, and workshops. Conduct intensive courses and conferences to share state of the art knowledge and research and to integrate research with community needs. Assist with organizational development, fund development, tailoring content to local community need, and gaining non-profit status. Work with media and facilitate partnerships to assist in working to meet needs of Spanish-Speaking and other minority populations.

**2. Brief description of the target audience**

Targeted audience is all social groups in the community, including low-income and minority, youth and adults. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc. Also targeted are 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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	5250	2000	425	600
<b>Actual</b>	8752	2268	877	532

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	3	2	
<b>Actual</b>	3	2	5

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of partners hours engaged.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	3000	1462

**Output #2**

**Output Measure**

- Number of conferences, courses or workshops held.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	20	34

**Output #3**

**Output Measure**

- Number of organizations with which we worked.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	25	72

**Output #4**

**Output Measure**

- Percent of non-white caucasian participants reached through program.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	10	13

**Output #5**

**Output Measure**

- Percent of Hispanic participants reached through program.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	25	9

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of participants in the Community Development Academy reporting an understanding of the diverse relationships that exist within communities.
2	Number of multicultural, ethnic, and racially diverse events organized that bridged and celebrated community differences.
3	Percent of participants in the Community Development Academy that report successfully initiating, mobilizing, or coordinating new community projects.
4	Percent of participants in the Community Development Academy that indicate use of acquired skills and knowledge after one year.
5	Number of jobs created by new businesses/organizations and business expansion or organizational development/growth.
6	Number of jobs retained.
7	Number of volunteer hours generated by community organizations.
8	Number of people reporting taking on increased, different, or new leadership roles in community.
9	Percent of participants in cultural competency programs reporting increased knowledge and skills for dealing with cultural differences.
10	Dollar value of resources leveraged by participants.
11	Percent of participants reporting increased engagement in collaborative relationships to address complex community issues.
12	Dollar value of efficiencies achieved by organizations.

## **Outcome #1**

### **1. Outcome Measures**

Percent of participants in the Community Development Academy reporting an understanding of the diverse relationships that exist within communities.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	60	63

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Communities are undergoing tremendous change. Even small villages that have relied for generations on maintaining their traditions are facing demographic and economic restructuring. Change places a premium on developing all the capacities that exist within a community. People need to develop the capacity to work in diverse environments and engage a cross-section of the community in decision-making by valuing and respecting differences and understanding differences are a source of strength.

#### **What has been done**

The three courses of the Community Development Academy develop understanding and skills to engage diverse groups in community action. Course 1 was conducted twice, and courses 2 and 3 each once. An important element of the curriculum in all three courses is an increased capacity to understand the diverse relationships that exist within communities so they can more effectively engage the range of voices and experiences in the community development process.

#### **Results**

In a follow-up survey respondents participating in the CDA in the prior one to three years, 63% reported increased understanding of the diverse relationships that exist within communities, and 39% increased interactions among diverse groups.

One of the benefits of the Community Development Academy that participants consistently mention is the opportunity to be part of a diverse learning group that includes participants from around the world, from various organizations and U.S. geographies and urban as well as rural. Many comments were similar to this one by a recent graduate. "I have gained an appreciation of the differences that exist in and between regions of the country (world), yet there was a heartening commonality of values, vision, and concerns."

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

#### Outcome #2

##### 1. Outcome Measures

Number of multicultural, ethnic, and racially diverse events organized that bridged and celebrated community differences.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	6	8

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Community service providers, nonprofits, civic groups, foundations, local governments, etc. are being asked to do more with fewer resources and need to work together to facilitate the integration of the increasingly diverse elements of our communities. Bridging networks increase access to resources, expand people's worldview, increase understanding of different cultures and increase capacity to address complex communities issues by cultivating networks that bridge across cultural differences.

###### **What has been done**

We facilitated collaboration to increase understanding of the cultural attributes and characteristics of new population groups to Missouri communities to foster community understanding of what newcomers bring to the communities. Training programs, cultural festivals, research projects, workshops and conferences have been conducted that enhance skills in cultural competency and intercultural communication, facilitate collaborations and develop individual capacities.

###### **Results**

Programs and events helped people better understand other cultures and increase intercultural communication such as the 9th annual Festival of Friends in Carthage MO, the Northland Ethnic Festival in North Kansas City and English as a Second Language courses in Southwest Missouri.

80% of Cultural Academy participants reported learning how to work with people of different cultural backgrounds and create intercultural connections within the community, and willingness

to increase skills and form new connections across cultures.

105 participants and nearly 60 presenters in Cambio de Colores explored issues and best practices associated with integrating newcomers into Midwestern communities; 71.4% noted that they saw best practices they could replicate.

The Alianzas Program coordinated Bi-National Health Week in four key areas of the state with 1500 participants. Each region is developing a multicultural network to foster local education and health services for Hispanic/Latino immigrants.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

Percent of participants in the Community Development Academy that report successfully initiating, mobilizing, or coordinating new community projects.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	50	49

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Community organizations must be able to effectively collaborate with other organizations, governmental institutions and agencies, and businesses both internally and externally in order to leverage resources and initiate projects. Small urban and rural community-based organizations must carefully choose the situations and organizations to work with because they cannot afford to make a mistake. It is essential they know when to participate in collaborations as well as when not to participate.

**What has been done**

Delivery of the three-course Community Development Academy provided a strong emphasis on developing the capacity to work with others and participate in collaborative relationships. Course 2 focused on issues related to community sustainability, with sessions on working collaboratively and application of methods to develop skills. Course 1 was conducted twice, and courses 2 and 3 each once. Other programs, workshops and resources on collaboration were also utilized.

**Results**

An online survey of Community Development Academy participants was sent to 110 people who completed at least one of the three CDA courses in the last three years (48% return rate). Nearly half, 49%, of participants successfully initiated, mobilized, or coordinated a new community project. Of the projects reported, one-third were related to community economic viability, one-third to building inclusive communities, one in five to community leadership, and one in seven to community decision-making. CDA includes graduate students not currently employed as well.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
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**

Percent of participants in the Community Development Academy that indicate use of acquired skills and knowledge after one year.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	65	66

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Leaders of nonprofit organizations, government officials, extension faculty and others working in communities need to develop their capacities to work more effectively with the groups and organizations they encounter in their communities. Issues are increasingly complex, communities more diverse and resources harder to find. Acquiring skills that can be applied in a community context is increasingly important to successful community development.

**What has been done**

The Community Development Academy courses combined leading edge thinking with practical application to enhance the capacity of people to work effectively with a broad range of community issues. Each issue requires some form of decision-making process and implementation in the community arena beyond the individual, the family, or business firm. The program is designed to help people create their own change in their communities. Course 1 was offered twice and courses 2 and 3 once.

**Results**

66% Community Development Academy participants in at least 1 of the 3 CDA courses in the past 3 years (48% return rate of 110) reported incorporating the content into their work. Participants in 2 or more courses felt more knowledgeable about community development principles and process and reported incorporating learning into their work than those in only course 1. Graduates of the 3 courses reported effectively engaging in a successful community development effort more frequently. One noted, "Graduating from CDA has changed my perspectives on how I teach, research and engage in public service. The Academy helped me develop a proposal for a new Center for Rural Sustainable Development at and put me in touch with leaders in the field who acted as mentors and advisors in that process. Attending the academy was a pivotal experience and I know describe my academic career as before and after the Academy." CDA includes graduate students who may not yet be employed at time of the evaluation.

**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 #5**

**1. Outcome Measures**

Number of jobs created by new businesses/organizations and business expansion or organizational development/growth.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
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2010                      0                      0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Failure of traditional economic development strategies forces rural areas to seek new ways to spur economic activity. Communities have created wealth through the nonprofit sector and businesses that serve diverse populations. Wages in the nonprofit sector are similar to or higher than those of the for-profit sector in industries where there is a large concentration of employment across both sectors. Missouri's 229,555 nonprofit employees earned almost \$6.7 billion in wages in fiscal year 2001.

#### What has been done

We provided board training, facilitated planning, and education programs for resource development. Technical assistance programs in fundraising, cultural competency, financial planning, a volunteer management help nonprofit organizations leverage resources and increase the value of their dollar invested in employees. Projects with communities in several regions with a significant Hispanic immigrant population formed collaborations to provide services and support for those working in the area.

#### Results

In northeast Missouri \$3,723,750 dollars were generated through grants and contracts with local organizations creating and/or sustaining the equivalent of at least 90 jobs in the region.

Board development programs with a public radio station led to a restructuring of the organization and the hiring of new staff; a hospital board helped improve relationships with staff, and a social service agency was better able to address fiscal issues and restructure service delivery.

In one community a collaborative meeting among three local associations will result in a plan to work together to support and train entrepreneurs.

New nonprofit organizations in a community represent a leveraging of resources, access to new goods and services, more diverse employment opportunities and increased the capacity of communities to provide needed services. This year, Extension programs helped establish 59 new 501(c)3 nonprofits in Missouri.

### 4. Associated Knowledge Areas

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

## **Outcome #6**

### **1. Outcome Measures**

Number of jobs retained.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Condition Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

### **3c. Qualitative Outcome or Impact Statement**

#### **Issue (Who cares and Why)**

Retention of jobs is often more economical than replacing or creating new ones. Communities have created wealth through the nonprofit sector and businesses that serve diverse populations. Wages in the nonprofit sector are similar to or higher than those of the for-profit sector in industries where there is a large concentration of employment across both sectors. Missouri's 229,555 nonprofit employees earned almost \$6.7 billion in wages in fiscal year 2001.

#### **What has been done**

We provided board training, facilitating planning, and education programs for resource development. Technical assistance programs in fundraising, cultural competency, financial planning, a volunteer management help nonprofit organizations leverage resources and increase the value of their dollar invested in employees. Projects with communities in several regions with a significant Hispanic immigrant population formed collaborations to provide services and support for those working in the area.

#### **Results**

An educational program on leveraging resources helped newer nonprofits increase their understanding of in kind contributions and actual costs, increasing their capacity to leverage local resources, retain staff and compete for grants and contracts.

An effort to revitalize a community betterment organization in one rural community resulted in the engagement of a new generation of business leaders committed to making the community a better place to live with new programs that increasing recreational opportunities and celebrate the heritage of the community.

In northeast Missouri \$3,723,750 were generated through grants and contracts with local organizations creating and/or sustaining the equivalent of at least 90 jobs in the region.

#### 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 volunteer hours generated by community organizations.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	1225	6832

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Volunteers are critical to the implementation of community programs, the backbone of many development efforts and are often the core staff for many service providers in rural and urban communities. They are recruited for the skills and resources they can bring to a community effort often resulting in a better project at considerable savings to the community. When resources are scarce and difficult to access an ability to attract and effectively utilize volunteers can be critical.

###### **What has been done**

Programs to help groups and organizations recruit and develop volunteers focusing on the development of skills volunteers can bring to an organization and the value of those skills. Volunteers are being utilized in nonprofit organizations, extension programs, and community groups as key elements of program development and delivery.

###### **Results**

The Strengthening Nonprofits program collaborated with 283 other community partners leveraging 766 partner hours at a value of \$14,324 to support Missouri nonprofits. In addition, 587 volunteers engaged in 5,713 hours of service at a value of \$106,833. The total value of these is estimated to be \$121,157.

In one case, after a planning session to consider staffing plans, partnerships with volunteer groups were formed and staff sharing with other entities was determined to be the most cost-effective plan given the funding situation and volunteer base.

Bi-national Health Week activities in three cities leveraged the support of 450 community members contributing 2,250 hours with a value of \$42,074.

Nearly 60% of Community Development Academy participants surveyed reported being better at leveraging resources and working with others. The survey results indicate CDA participants mobilized an estimated 13,170 volunteer hours estimated to be as an additional value of \$212,300.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

**Outcome #8**

**1. Outcome Measures**

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

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Community leaders are the central force in effectively mobilizing people to address local issues. Frequently, community leaders find themselves learning as they lead an issue or organization as opposed to learning about leadership in a leadership course. They wonder how to achieve the kind of success they dream about and recognize that they cannot be successful alone or without greater personal capabilities.

**What has been done**

The Community Development Academy, Cultural Academy, and work with nonprofits in board training, planning, and resource development have been conducted to increase leadership skills and develop capacity for dealing with tangible and current issues in communities and organizations.

**Results**

An online survey was sent to 110 Community Development Academy participants who completed at least one of the three CDA courses in the past three years (48% return rate). 63% credited the CDA with increasing their skills in using the community development process quite a bit or extensively. 39% increased their interactions among diverse groups. 60% said they were better at leveraging resources, mobilizing nearly 600 volunteers who provided over 13,170 hour with an estimated value of \$212,300.

An effort to revitalize a community betterment organization resulted in the engagement of a new generation of business leaders committed to making the community a better place to live with new programs that increased recreational opportunities and celebrated the heritage of the community.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #9**

**1. Outcome Measures**

Percent of participants in cultural competency programs reporting increased knowledge and skills for dealing with cultural differences.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	60	65

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Communities are undergoing tremendous change. Even the smallest traditionally stable urban and rural areas are faced with changes as demographic and economic restructuring takes place across Missouri. These changes place a premium on developing all the capacities that exist within the community. To do this people need to develop the capacity to work in diverse environments and engage a cross-section of the community in decision-making.

**What has been done**

The Cultural Academy, Community Development Academy, Cambio de Colores conference, and cultural competency training programs provided opportunities for people to enhance their capacity to create communities and work environments that appreciate and draw on the diversity of the community.

**Results**

The percentage used in this indicator of 65.5% is an index created by weighting and averaging the evaluation results of two important programs: the Community Development Academy and the Cultural Academy. 63% of Community Development Academy participants having participated in at least one CDA course in the last three years responded in an online survey of CDA (48% return of 110) reported an increased their understanding of the diverse relationships that exist within communities. 80% of participants in the Cultural Academy, conducted for MU Extension faculty and community partners, indicated in the post-test score of a post-pre-post survey they learned how to "work with people of different backgrounds," and "create intercultural connections within the community."

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

**Outcome #10**

**1. Outcome Measures**

Dollar value of resources leveraged by participants.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	2000000	6260639

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Community groups and organizations are finding increasing difficulty in generating the resources they need to effectively address the complex issues they confront. Economic development, housing, education and health care all have community components that require an ability to leverage and attract the resources of multiple groups and organizations in order to provide an

effective community response.

**What has been done**

The Community Development Academy and programs with nonprofit organizations are working to increase participant capacity to leverage community resources. Learning how to build collaborations, engage volunteers, identify new types of resources, grant writing, and fundraising activities are all tools that have been used with program participants to increase their capacity to leverage scarce local resources.

**Results**

Based on survey results from participants in at least one Community Development Academy course in the past three years, participants leveraged \$2,228,732 because of what they had learned in the program. The value of \$121,157 in partner and volunteer hours was leveraged.

One community leveraged \$5,000 to generate \$50,000 in food for two food banks. In another community, the food bank leveraged resources to meet the immediate food needs of nearly 1,000 people.

The Southwest Missouri Laura Ingalls Wilder Home developed a marketing plan valued at \$15,000 to increase visitors, tourism and tax revenue. Thirteen other organizations developed strategic plans, marketing plans or business plans valued at \$122,000. In Northeast Missouri community groups leveraged \$3,723,750 in grants and contracts.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
805	Community Institutions, Health, and Social Services

**Outcome #11**

**1. Outcome Measures**

Percent of participants reporting increased engagement in collaborative relationships to address complex community issues.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	58	59

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Missouri is a diverse state racially, ethnically, and politically. Most of the overall population increase in the past Census was due to an increase in non-white populations. Improving economic conditions, addressing health care issues and effectively providing community services requires collaboration from many different areas of the community. Communities are undergoing tremendous change and must rely on all the capacities that exist within the community.

#### What has been done

Collaborative efforts have been formed to provide health care access to Hispanics, address issues challenging Missouri communities around immigration, community development, food policy and capacity building for nonprofits and other organizations. Programs such as the Community Development Academy, Promotoras de Salud, Cultural Academy and Cambio de Colores teach people how to understand and work across cultural differences.

#### Results

Nearly 60% of the participants in the Community Development Academy reported being better at leveraging resources and working with others.

The Promotoras de Salud program helped 275 people better understand and access local health care services. 89.7% of the participants were able to follow through with the treatments recommended by the health care providers.

Cambio de Colores participants represented 58 organizations from across the Midwest that formed a network for exchanging research findings and sharing best practices and outreach activities.

Bi-national Health Week served 1500 people across Missouri. More than 65 new partnerships were established with local community agencies that leveraged resources to increase healthcare access to underserved Hispanic/Latino residents.

80% participants in the Cultural Academy said that in the next 6 months they were very willing to "form new connections across cultures and increase skills in working with diverse populations."

### 4. Associated Knowledge Areas

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

#### Outcome #12

##### 1. Outcome Measures

Dollar value of efficiencies achieved by organizations.

##### 2. Associated Institution Types

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Nonprofits, service organizations and other community groups are challenged to do more with less as there are fewer resources available to provide the types of services communities need and expect from these organizations. Groups are struggling find ways to get the services they need by leveraging their resources, forming collaborations and becoming more efficient to stretch the dollars that are available to serve the broadest set of needs.

**What has been done**

The Community Development Academy and programs with nonprofit organizations worked to increase their capacity to enhance the value of the services and resources available in their community. These groups are learning how to build collaborations, increase the capacity of their leadership, share resources, identify new types of resources and write grants.

**Results**

Over 70 not-for-profits in the core urban community of Kansas City have applied for assistance from the Compassion Fund to become more effective in meeting the needs of individuals and families

After a board development session one participant noted, "You have taught us to identify local assets we tend to overlook that would be of interest to visitors. We take much of [our community] for granted. Keeping the good things for ourselves does not seem to be helping the town prosper economically."

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

## **V(H). Planned Program (External Factors)**

### **External factors which affected outcomes**

- 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 economic recession. 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.

The public discourse on issues of immigration has created a climate of anger and fear in a number of communities experiencing a large influx of Latino immigrants. Exacerbated by poor economic conditions and proposals to regulate the movement and access to resources of immigrants to Missouri, the discourse has added to local tensions and decreased levels of trust among immigrant groups and local communities toward service and education programs.

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. A new statewide association of nonprofits began in 2010 that promises to network the sector and develop collaborative relationships among support organizations that should provide a broader range of support to the state's nonprofit sector and improve the voice of the nonprofit sector in public policy discussions.

Population changes continue to affect nonprofits as the first baby boomers turn 65; many communities will see a shrinking workforce due to retirements and fewer young people available to take crucial positions in their communities. Rural areas are particularly vulnerable to labor shortages in key fields like education and healthcare. Immigrants are moving into many communities to work in basic service industries. Few organizational resources deal directly with immigrants moving into small communities and the impacts of demographic changes are just beginning to be understood. Organizations that serve as bridging institutions are often under-funded, have limited prospects for growing their resource base, and have to compete with other groups and organizations that have longer histories, more capacity, and an existing resource base to strengthen their position. The

lack of bridging institutions in many communities is negatively affecting their ability to effectively integrate the new populations into the community.

The slowdown of economic downturn and a projected slow economic growth and looming budget reductions has increased workload of organizations, the demand for the programs that support the work of nonprofit organizations, and the premium placed on effective planning and board development. Extension is not exempt.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- During (during program)
- Case Study

### **Evaluation Results**

The Community Development Academy, Bi-national Health Week, Global Leadership Exchange and Cultural Academy engaged in programmatic evaluations. Our nonprofit program has a framework for evaluating programs, and effective measures are currently under development. End of session surveys have been developed that have standardized some of the data collected after training sessions. The Promotoras de Salud program will complete a program evaluation in FY2011.

The Global Leadership Exchange Program completed an in-depth program evaluation that showed both the Thai and Missourians delegations measured perceived gain in knowledge and skills on fourteen aspects of the leadership competencies related to the program objectives and incorporated learning into their work.

An online survey was sent to 110 Community Development Academy participants who completed at least one of the three CDA courses in the past three years. 75% reported that their knowledge of community development group process increased quite a bit or extensively. 63% reported that their knowledge of community development tools increased quite a bit or extensively, credited the CDA with increasing their skills in using the community development process quite a bit or extensively and reported increased understanding of the diverse relationships that exist within communities. 39% increased their interactions among diverse groups. 60% said they were better at leveraging resources, increasing resources on average of \$35,376 per participant. Based on responses, CDA participants mobilized an estimated 27,438 volunteer hours with an estimated value of \$487,299. It should be noted that the CDA includes graduate students who may not yet be employed in a profession one to three years following participation in the course(s).

A total of 1500 participants registered in Bi-national Health Week and 291 were surveyed. 61% were women, (75% were born in Mexico. 67% preferred to speak Spanish. 74% self-identified their race as "Other", 32% said the main reason for attending was for the medical screenings. 71.7% considered the services received as very helpful, 8.9% learned they had a medical condition and 32.8% planned to share information with family, friends and neighbors. 50.9% said they get their healthcare needs met at a community health

center and 68.1% did not have medical insurance.

Thirteen participants attended the Cultural Academy. End of session evaluations showed that 80% learned how to "work with people of different backgrounds," and "create intercultural connections within the community," and 60% learned how to "recognize biases and prejudices." 80% said that in the next 6 months they were very willing to "form new connections across cultures, and increase skills in working with diverse populations."

### **Key Items of Evaluation**

There are three elements of this evaluation that should prove important to the agenda set by NIFA. They include the work being done with vulnerable populations, the programs offered that increase the capacity of communities, institutions and organizations to address complex issues, and providing a forum for intercultural communication and educational exchange.

Cambio de Colores, Alianzas, Bi-national Health Week, and Promotoras de Salud are all programs designed to facilitate the healthy integration of vulnerable populations into rural and urban areas. These programs effectively engage research and extension resources with community partners to develop and implement innovative responses to the difficult issues directly affecting these populations. These programs have proven to be highly effective models for bringing diverse interests together, building academic community partnerships and creating effective linkages to vulnerable populations that can lead to effective programmatic responses. These programs are models for building partnerships between university resources and vulnerable populations that can endure over time and could inform how NIFA approaches the process of ensuring that vulnerable groups have a voice in addressing the issues that affect them. The Promotoras de Salud is potentially an effective model for collaborating with a community organization to extend needed services to vulnerable populations.

The Community Development Academy is a proven model that helps people develop their capacity to address complex community issues. CDA has had nearly 1000 participants in at least one of the three courses since it began in 1996 and has proven to increase the capacity of its participants to work collaboratively, increase their ability to work in diverse environments and improve their capacities to leverage resources. Participants come from around the US and the world and are applying what they have learned to all five program areas in NIFA. The Cultural Academy is using a similar methodology to increase people's abilities to understand differences and the early results are promising. Given the increasing diversity of both rural and urban communities across the country the cultural academy addresses important competencies for all program areas going forward. Both of these programs increase the capacity of faculty and staff to work in diverse environments and enhance extension's capacity to address a wide range of issues in very complex environments.

The Global Leadership Exchange (GLE) is a program that began as a grassroots leadership exchange between women in Missouri and women in Thailand. For its first 10 years it was supported completely by volunteers. The success of the program has made it possible to expand the scope of the program but rely on grant funding, build a broader base of relationships and evaluate the effect of the program on the participants. GLE has proven to be an effective model building cross-cultural relationships using a leadership exchange process that emphasizes learning about diversity through cultural immersion and

the resolution of issues through the sharing of best practices.

**V(A). Planned Program (Summary)**

**Program # 31**

**1. Name of the Planned Program**

Creating Community Economic Viability

**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	60%			
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	20%			
806	Youth Development	20%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

**1. Actual amount of professional FTE/SYs expended this Program**

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	3.5	0.0	0.0	0.0
Actual	5.0	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
183172	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
183333	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**

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; enhance capacity and effectiveness of community members to support entrepreneurship through workshops, training, counseling, developing partnerships, providing referrals, organizational development, participatory visioning and planning; help communities respond to the needs and plans of their entrepreneurs through planning, leadership development, working with the media and building partnerships; develop advanced entrepreneurship skills among Extension specialists through development and delivery of new curricula; and share knowledge and learning that encourages the enhancement of local economies and quality of life through entrepreneurial efforts through web, media, partners, conferences, workshops, seminars, and public policy briefings.

**2. Brief description of the target audience**

Targeted audience is all social groups in the community, including low-income and minority, youth and adults. No limitation on gender, ethnic or religious diversity, lifestyle choice, etc. Primary Audiences: predominantly rural towns, communities, counties and/or multi-county regions and their residents in Missouri that have experienced economic downturn, and have few other opportunities; of these communities, work with ones that have demonstrated a reasonable amount of motivation to work on their situations. Secondary Audiences: communities that would like to learn more about entrepreneurial communities; Extension staff, state and non-profit staff that could benefit from advanced entrepreneurship training.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	2000	1400	300	140
<b>Actual</b>	2965	1103	182	91

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

**Patent Applications Submitted**

Year: 2010

Plan: 0

Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	1	0	
<b>Actual</b>	1	0	1

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of communities/regions engaged.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	15	25

**Output #2**

**Output Measure**

- Number of workshops on community entrepreneurship and economic development.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	30	17

**V(G). State Defined Outcomes**

**V. State Defined Outcomes Table of Content**

O. No.	OUTCOME NAME
1	Percent of workshop participants reporting increased knowledge and understanding of local/regional economy and community economic development strategies and their applicability to the situation.
2	Dollar value of new resources leveraged to address community economic change.
3	Number of community foundations, revolving loan funds, community development corporations formed.
4	Number of schools using entrepreneurship curricula (still using and newly using).
5	Number of people reporting taking on increased, different, or new leadership roles in community.
6	Number of jobs created by new businesses or business expansion/growth.
7	Percent of communities/organizations reporting increased cooperation across community services/Increase in networks and partnerships.
8	Total number of businesses created.
9	Number of jobs retained.
10	Percent of new businesses created by youth.

## **Outcome #1**

### **1. Outcome Measures**

Percent of workshop participants reporting increased knowledge and understanding of local/regional economy and community economic development strategies and their applicability to the situation.

### **2. Associated Institution Types**

- 1862 Extension

### **3a. Outcome Type:**

Change in Knowledge Outcome Measure

### **3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	70	83

### **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 local economy, what makes up the local economy, the roll of entrepreneurship and small business, how to use economic data to craft development strategies and a basic understanding of the art of economic development. There is some resistance to taking a broader, regional approach to community economic development.

#### **What has been done**

We assisted rural regions with planning, economic analysis, entrepreneurship training, organizational and leadership development. We partnered with state professional economic development organization to provide training programs and with NCRCD, SRDC, and USDA-RD on a regional economic development curriculum (SET). New tourism curriculum and products are in development. We also held conference and webinars on tourism and a webinar on creating entrepreneurship clubs to help spur local job creation.

#### **Results**

Using presentations, workshops and individual contacts, we raised awareness of new approaches and strategies in community economic development with a regional focus. Four Fundamentals of Economic Development workshops had 88 attendees; 8% reported "a lot" or "a great deal" of understanding and knowledge of economic development prior to the workshop and 44% reported that level after attending; workshop rating of 3.35 (4-point scale) with 73% stating they would recommend the workshop. Capitalizing on Your Community Heritage conference: 93% reported the conference met/exceeded expectations; learning moved from 3.0 to 4.3 (5 point scale), 9 actions plans were developed. After two webinars on community tourism, work is underway in seven locations to support development of tourism and local foods projects and development of sustainability and economic development plans.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

#### Outcome #2

##### 1. Outcome Measures

Dollar value of new resources leveraged to address community economic change.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	200000	1414000

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Communities tend to take a narrow view of resources, generally thinking only in terms of financial resources, and consequently struggle to support community economic initiatives. Entrepreneurial communities pursue opportunities without being limited by the resource on hand--they are resourceful in their thinking and find and leverage a wide array of resources through partnerships, collaborations and new approaches to community economic development.

###### **What has been done**

At state and local level, we actively engaged in identifying grant opportunities and worked with local organizations to support local initiatives. Regional projects are actively engaging community volunteers to support local initiatives. We are working with them to establish procedures to track volunteer hours and contributions.

###### **Results**

Regions participating in the Extension Community Entrepreneurship and Economic Development program, community organizations and foundations, assisted by field faculty, generated \$1,414,000 in grants/contributions this year, despite the challenging economy. Brookfield's LEGACY Foundation continues to see bequeaths and endowments and the Reynolds County Museum was awarded state tax credits. During FY10, ExCEED communities reported 2,059 hours of volunteer hours and Extension faculty assisted projects reported an additional 1,434 hours for a total of 3,493 hours valued at \$65,284.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

#### Outcome #3

##### 1. Outcome Measures

Number of community foundations, revolving loan funds, community development corporations formed.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	1	2

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

The creation of foundations and endowments allow communities to capture a portion of the wealth that now leaves rural communities when elderly residents transfer their assets to non-resident heirs. Access to business capital is problematic as many rural banks don't make commercial loans.

###### **What has been done**

Using concepts introduced through training such as Hometown Competitiveness and Energizing Entrepreneurs, two regional projects have successfully undertaken the development of community foundations to support long-term community and economic development and a third project has initiated a revolving loan fund.

###### **Results**

Brookfield's "Hometown LEGACY Foundation" continues its efforts at fundraising and is seeing contributions via bequeaths and endowments. Mississippi River Hills Association and Old Trails Regional Partnership both were awarded their 501(c)(6) designations in 2010. Foundations in some of our other projects are struggling with the current economy and are finding fundraising and grant acquisition challenging.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
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**Outcome #4**

**1. Outcome Measures**

Number of schools using entrepreneurship curricula (still using and newly using).

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	20	39

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Retaining and attracting young people is essential for the future of rural places. One proven strategy is to create local employment and business opportunities for young people. The introduction of entrepreneurship and business ownership into the curriculum helps send a strong message that there is a future for them in the community.

**What has been done**

Extension Community Entrepreneurship and Economic Development programs made entrepreneurship curriculum available to schools for integration into the overall curriculum. 112 sets of "Entrepreneurship Investigation" (ESI) curriculum, (University of Nebraska-Lincoln) were provided to schools and 54 to a youth EXCEL (leadership) program. We supported the student/school engagement project in the south central part of the state and helped sponsor university's high school entrepreneurship camp.

**Results**

ExCEED projects, including Ozark Heritage Region and Chariton County, have schools with active programs. Schools in both northwest and northeast Missouri are using parts of the curriculum. The primary challenge in working with the schools to include entrepreneurship in their curriculum comes from pressures on schools to meet mandates on student progress; therefore, it can be difficult to add another topic. We have had the most success when we can assist teachers in expanding current content and courses and provide summer training for teachers. Student camps have proven to be an excellent way for the local organization, in partnership with the school, to engage students in entrepreneurship. Another successful strategy has been the offering of scholarships to high school students to attend the annual entrepreneurship camp on the MU campus.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

#### Outcome #5

##### 1. Outcome Measures

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

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	0

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

For many complicated reasons, having a large, diverse group of potential leaders is a real challenge for many rural communities. We often see the same small number of people taking, or being asked to take, leadership roles in the community. The reasons vary from a reluctance to take on these roles, lack of self-confidence, lack of willingness on the part of the community, reluctance to welcome new leaders, and no thought to including youth.

###### **What has been done**

Leadership development is a corner stone of Extension Community Entrepreneurship and Economic Development engagement process. Three of our community projects have sponsored leadership development programs for both youth and adults. Many have used University of Missouri Extension's EXCEL program while others have developed their own programs.

###### **Results**

Regardless of the approach, all projects have seen new faces in the community leadership pool; however, we are seeing a decline in the number of projects sponsoring leadership programs. This year only one program was held with 16 participants and none of the projects reported folks assuming new leadership roles in community. There may be many reasons for this decrease, some of which can be attributed to the graduation of many of our original project communities, which no longer report to us. In addition, many of the new projects we are engaging with have not yet moved to the point of undertaking leadership programs. In total, the eleven ExCEED projects have sponsored 19 leadership programs with 236 participants.

#### 4. Associated Knowledge Areas

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

#### Outcome #6

##### 1. Outcome Measures

Number of jobs created by new businesses or business expansion/growth.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	0	766

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Failure of traditional economic development strategies has forced rural regions to seek new ways to spur economic activity. Communities create wealth through businesses, jobs and services to sustain the population. Lack of new businesses creates loss of residents, in particular youth, and erosion of the sustainability of the community over time. Entrepreneurship can create new businesses, strengthen/expand existing businesses and generate jobs and careers essential to the vitality of the community.

###### **What has been done**

We are focused on training and awareness building opportunities that encourage youth and adults to consider self-employment/entrepreneurship, tapping MU Extension's Business Development Program and SBDCs for business training and counseling services. We helped communities identify existing and potential entrepreneurs and offered workshops on developing a regional approach to economic development, community economic development planning, tourism and local foods.

###### **Results**

The Business Development Program reported 766 new jobs and \$13,243,569 in new investment created in the counties participating in the Extension Community Entrepreneurship and Economic Development program. Most of the community programs were focused on supporting a positive environment for entrepreneurship.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
608	Community Resource Planning and Development

**Outcome #7**

**1. Outcome Measures**

Percent of communities/organizations reporting increased cooperation across community services/Increase in networks and partnerships.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Community-based collaboration is the process by which citizens, agencies, organizations and businesses make formal, sustained commitments to work together to accomplish a shared vision. Collaboration is the highest and most difficult level of working with others - more formal than networking, cooperation and coordination. But in many rural regions, even networking across sectors (e.g., elected officials and community leaders) is challenging.

**What has been done**

The Extension Community Entrepreneurship and Economic Development program required communities to have a diverse leadership team. We actively fostered partnerships at local, regional and state levels. We partnered with NCRCRD, SRDC, USDA-RD and a number of other national partners this year on the development of several publications and new curriculum products.

**Results**

The Mississippi River Hills, Show Me E! and the Moniteau Bluffs Regional Association all created expanded and strengthened networks. New farmers markets were started in three northeast counties. Missouri is a partner, along with USDA-RD and the SRDC in the development of Stronger Economies Together, a regional economic development training and engagement program. In two MO regions involved in SET, the regional partnership was strengthened and some new people engaged: 1) Howard County hadn't been at the table with the Old Trails Regional Partnership prior to this year, and the OTRP expanded its engagement of people as

well; and 2) many of the people that are participating in the Lake Ozarks Regional Economic Development Council had not been previously involved with the regional economic development group. New networks are being formed along the Missouri River in Missouri, Iowa, Nebraska, and Kansas around cultural heritage and local foods and the effort is moving toward formation of a formal multi-state network.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
806	Youth Development

#### Outcome #8

##### 1. Outcome Measures

Total number of businesses created.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2010	35	53

##### 3c. Qualitative Outcome or Impact Statement

###### **Issue (Who cares and Why)**

Failure of traditional economic development strategies has forced rural regions to seek new ways to spur economic activity. Communities create wealth through businesses, jobs and services to sustain the population. Lack of new businesses creates loss of residents, in particular youth, and erosion of the sustainability of the community over time. Entrepreneurship can create new businesses, strengthen/expand existing businesses and generate jobs and careers essential to the vitality of the community.

###### **What has been done**

We focused on training and awareness building opportunities that encourage youth and adults to consider self-employment/entrepreneurship and engaged with Extension's Business Development Program and SBDCs for business training and counseling services. We helped communities identify existing and potential entrepreneurs.

###### **Results**

This measure continues to be a challenge to track and document. For 2010, the Extension Community Entrepreneurship and Economic Development program did not measure this impact. It will be part of the broader, long-term evaluation of the project. The Business Development program of Extension reported 53 new businesses were created in the ExCEED program counties. We anticipate an increase in the reporting in the coming years as the SET (Stronger Economies Together) communities and other new initiatives mature and begin to see impact.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

**Outcome #9**

**1. Outcome Measures**

Number of jobs retained.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2010	0	245

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Failure of traditional economic development strategies has forced rural regions to seek new ways to spur economic activity. Communities create wealth through businesses, jobs and services to sustain the population. Lack of new businesses creates loss of residents, in particular youth, and erosion of the sustainability of the community over time. Entrepreneurship can create new businesses, strengthen/expand existing businesses and generate jobs and careers essential to the vitality of the community.

**What has been done**

We are focusing on training and awareness building opportunities that encourage youth and adults to consider self-employment/entrepreneurship and linking with Extension's Business Development Program (BDP) and SBDCs for business training and counseling services; helping communities identify existing and potential entrepreneurs.

**Results**

There were a total of 245 retained jobs in the ExCEED counties. In parts of the state such as Northeast Missouri, the creation of three new farmers markets may not show up as job retention but they are adding value and income for farmers and often creating additional retail business activity in conjunction with the markets.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

#### Outcome #10

##### 1. Outcome Measures

Percent of new businesses created by youth.

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

The economic downturn has dramatically impacted our projects, all of which are rural. Communities, local governments, businesses, nonprofits, and residents are struggling financially. Support for some of the community programs has declined at the local level. Conversely, we are seeing communities and regions that recognize that new approaches to community economic development are needed and they are requesting assistance in the exploration of options and help with planning. In addition, our initial five pilot projects have graduated and no longer actively report outcomes, and two additional projects have closed due to local issues. As we engage with new regional groups, our participation varies from short-term training and planning to longer engagements. With fewer long-term engagements, our ability to track outcomes such as jobs, new businesses and contributions is limited. We are working on a number of new offerings (e.g., regional economic development planning; tourism development) and programs (e.g., Stronger Economic Together) that will generate new partnerships but these all take time to develop. Conversations are also underway with the state economic development agency about creating a "certified entrepreneurial community" program which would also lead to long-term engagements and would allow us to collect impact data.

## **V(I). Planned Program (Evaluation Studies and Data Collection)**

### **1. Evaluation Studies Planned**

- After Only (post program)
- Retrospective (post program)
- Before-After (before and after program)
- During (during program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants

### **Evaluation Results**

During the first five years of our Extension Community Entrepreneurship and Economic Development (ExCEED) program: Contributions to local foundation/endowments \$779,105, additional grants \$1,749,975,51 youth owned businesses started, 283 businesses started, 32 businesses expanded, 1,737 new jobs and 395 retained jobs. As part of the agreement with the first five pilot projects, we conducted an end-of-project evaluation to determine what happened in the communities beyond the numbers reported in their quarterly reports. We conducted semi-structured interviews with the project leaders and the leadership team in the five pilot projects (for the past three years). Some of the major findings include:

- 4 of the 5 projects reported substantial change in "attitude" within the region - both citizens belief in the future of the region and among students in their vision for their future.
- 4 of 5 projects all stated that they felt that this engagement changed their understanding and opinion of University of Missouri Extension - that this was Extension "thinking outside the box" and bringing new ideas and engagement to their communities.

In order to capture the overall impacts of the ExCEED program in the five pilot projects the responses to these two questions were combined: Was the project a success? Why? What was the most important outcome? Why? While the interviews identified a number of outcomes and impacts, the most frequently mentioned related to a change in attitude in the community among adults and youth. There was a renewed commitment to the community, a belief that there was a future for the community. Youth reported having a vision of their future - both in the community and in a career. Teachers reported seeing a distinct change in attitude among students that participated in the youth entrepreneurship programs. Interestingly, despite the large amount of money and time invested in these projects by ExCEED, it was rarely mentioned when the interviewees where asked about successes and outcomes. The funds were used to equip and empower people in these communities with knowledge and skills to be entrepreneurial. Their attitude changed and the ExCEED projects provided the spark in these communities to network which leads to the formation of social capital.

### **Key Items of Evaluation**

Our evaluation study of ExCEED 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.

**V(A). Planned Program (Summary)**

**Program # 32**

**1. Name of the Planned Program**

Business Development

**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	50%			
603	Market Economics	10%			
604	Marketing and Distribution Practices	20%			
607	Consumer Economics	10%			
608	Community Resource Planning and Development	10%			
	<b>Total</b>	100%			

**V(C). Planned Program (Inputs)**

1. Actual amount of professional FTE/SYs expended this Program

Year: 2010	Extension		Research	
	1862	1890	1862	1890
Plan	11.8	0.0	0.0	0.0
Actual	10.0	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
347745	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
378286	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.

**V(E). Planned Program (Outputs)**

**1. Standard output measures**

2010	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Plan</b>	1562	57656	0	0
<b>Actual</b>	3946	873192	0	0

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

**Patent Applications Submitted**

Year: 2010  
 Plan: 0  
 Actual: 0

**Patents listed**

**3. Publications (Standard General Output Measure)**

**Number of Peer Reviewed Publications**

2010	Extension	Research	Total
<b>Plan</b>	0	0	
<b>Actual</b>	0	0	0

**V(F). State Defined Outputs**

**Output Target**

**Output #1**

**Output Measure**

- Number of counseling clients.

Year	Target	Actual
2010	150	709

**Output #2**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	6	6

**Output #3**

**Output Measure**

- Number of applied research projects.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	1	1

**Output #4**

**Output Measure**

- Website statistics (in millions).

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	0	1

**Output #5**

**Output Measure**

- Counseling hours.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	750	2420

**Output #6**

**Output Measure**

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

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	6	6

**Output #7**

**Output Measure**

- Training attendees.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	975	3237

**Output #8**

**Output Measure**

- Training events.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	95	212

**Output #9**

**Output Measure**

- Training hours x attendees.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	92000	12268

**Output #10**

**Output Measure**

- Number of counseling sessions.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2010	300	1208

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O. No.</b>	<b>OUTCOME NAME</b>
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	Quantitative Target	Actual
2010	1	1

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

This is to help BDP understand and manage effectiveness of teaching.

**What has been done**

Data collected, currently reviewing for better approaches.

**Results**

Results have only been constant, better approaches should improve result.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	0	47

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Business starts become the economic base of a community and of the owners.

**What has been done**

Develop more systematic approaches in teaching the process.

**Results**

47 businesses started.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
608	Community Resource Planning and Development

**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**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Business owners.

**What has been done**

This has not been deployed.

**Results**

N/A

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices

**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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Business owners.

**What has been done**

This is not deployed because it is not considered an effective result goal or leading indicator.

**Results**

N/A

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Not tracked or deployed.

**What has been done**

This is not deployed because it is not considered an effective result goal or leading indicator.

**Results**

N/A

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	0	7558800

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

This is important to communities, business owners and stakeholders.

**What has been done**

Fully developed and deployed.

**Results**

Closed over 7.5 million in loans and equity deals.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Any person or organization that cares about the competitiveness of the local businesses.

**What has been done**

Design of this is in process with the first phase developed. Effectiveness cannot be evaluated until fully developed.

**Results**

Not fully deployed so measurable results not available at this time.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Compliance is important to the health of any business.

**What has been done**

Counselors work in this area now but through our Environmental Assessment Center we are developing formal energy and environmental assessment offerings.

**Results**

This part of the program is not deployed at this time.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Communities and business owners who want business growth will care.

**What has been done**

This is being addressed by the development of and economic gardening approach for the benefit of companies.

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics

**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	Quantitative Target	Actual
2010	0	0

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

This is important to the economic viability of Missouri's economy and the universities who host our program.

**What has been done**

Program is fully developed and deployed but is not currently delivered through the BDS counselors.

**Results**

Not delivered by the Business Development Specialist so no results show up on this source of funding.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	15	215

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Stakeholders and elected officials who care about small business and entrepreneurship as an economic driver.

**What has been done**

This is fully deployed as a communication system.

**Results**

Significant increased interest in Extension's Business Development Program.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	165	387

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

The people whose lives were improved by obtaining the job, stakeholders, university host and communities.

**What has been done**

This is fully developed and systematically deployed.

**Results**

387 jobs created.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	21	7

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Business owners, stakeholders and BDP program.

**What has been done**

Approach is fully developed but deployment has been uneven.

**Results**

Seven Million.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	6	7

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Business owners, stakeholders, communities.

**What has been done**

Approach is fully developed and deployed.

**Results**

7.5 million in 2010 and expect to do 8 million in 2011.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and Development

**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	Quantitative Target	Actual
2010	20	47

**3c. Qualitative Outcome or Impact Statement**

**Issue (Who cares and Why)**

Communities, economic developers and stakeholders.

**What has been done**

Approach is developed and deployed.

**Results**

47 new businesses started.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
607	Consumer Economics
608	Community Resource Planning and 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

Results have been impacted by the worst recession in sixty years with many coming for help to address credit and recession issues.

## V(I). Planned Program (Evaluation Studies and Data Collection)

### 1. Evaluation Studies Planned

- After Only (post program)
- Retrospective (post program)
- Time series (multiple points before and after program)
- Case Study
- Comparisons between program participants (individuals, group, organizations) and non-participants
- Other (Customer satisfaction)

### Evaluation Results

Results have been effective but the focus of Extension's BDP is to move to a more systematic approach expected to increase results in 2013 and beyond.

### Key Items of Evaluation

The overarching strategy for the BPD is to transform itself into an organization where:  
The Strategic Vision is compelling, communicated, and actionable.  
The Financial Resources are adequate, flexible, and leveraged.  
The Performance Support System is need-based, systemic, and responsive.  
The key to success is ensuring the Strategic Vision, Fiscal Resources, and Performance Support System are aligned, monitored, and adaptive. In order to do that effectively, several models will be used. The overarching process will use the Performance Pyramid Model (Wedman & Graham, 2009) and the Model Netics strategies as a framework process for implementation in each part of the strategic vision and tactics.

### Strategic Vision & Impact:

The BDP is an efficient and effective networked organization where individuals and groups: 1) act interdependently; 2) link across boundaries; 3) share knowledge and

resources across and within programs; and, 4) team across programs and regions, all with the common purpose of improving the competitiveness of Missouri businesses and enhancing Missouri's economy. These efforts involve: technical assistance with finance, management, and marketing issues; government contract procurement; funding and investments; technology commercialization; and building relationships between Missouri universities and the firms seeking R&D or contract work. These efforts result in increased jobs created and retained, investments, procurement contracts, increased client revenues, businesses started, and BDP program income from a variety of projects and activities.

**Fiscal Resources:**

The fiscal resources fueling the Strategic Vision is currently coming primarily from Federal, State, and University funds, but will require much higher levels of BDP revenues in the future. The future of the BDP program will be dependent on program revenue generation, since State and Federal sources have either already been reduced significantly or are likely to be in the next fiscal year.

**Performance Support System:**

The performance support system includes well-articulated performance expectations; accurate and timely feedback mechanisms; efficient business processes; helpful tools; needs-based infrastructure; performance-based rewards, recognition, and incentives; motivated staff across job responsibilities; and a well-trained staff with a differentiated skill set. The performance support system is sensitive to the organizational culture and change management aspects of transforming the BPD into a networked organization.