

# 2007 Clemson University and South Carolina State University Combined Research and Extension Annual Report

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## I. Report Overview

### 1. Executive Summary

Extension and research activities in Fiscal Year 2007 reflected an increase in capacity with the addition of new faculty and agents, made possible by retirements and a strategic programmatic shift of support for technicians and equipment to grant resources. Research facilities on campus and at the research and education centers benefited from a wide range of improvements and the delivery capacity of Extension was improved uniformly across the state. Research and Extension continued to improve the effectiveness of integrating and supporting teaching, research, extension and public service.

Working relationships between South Carolina State University and Clemson University have expanded with researchers and agents working together on issues impacting the state. The institutions continued to raise the educational consciousness and awareness of national issues that impact limited-resource clientele as well as others, in order to improve their quality of life. Partnerships and collaborative efforts were increased to strengthen community, governmental and international relations.

Memorandum of Understandings were established with school districts and educational partners across the state. The institutions continue to improve the social, economic and physical well-being of citizens in South Carolina.

There was increasing emphasis on research into a wide range of biofuel options using algeand unused agricultural and forestry resources. New developments were realized in the use of remote sensing to monitor water quality, and the larger issue of water use options for South Carolina, and food safety. Researchers are focusing on developing new crops and crop products enhanced through biotechnology, which will in turn have a positive impact on economic development in the state.

#### Total Actual Amount of professional FTEs/SYs for this State

Year:2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	125.0	42.0	35.1	13.0
<b>Actual</b>	197.0	42.0	44.3	13.0

## II. Merit Review Process

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

- Internal University Panel
- External Non-University Panel
- Expert Peer Review

### 2. Brief Explanation

All research projects continue to be peer reviewed before they are finalized and submitted to CSREES. Clemson and South Carolina State work cooperatively on the peer review process. Merit review continues to be a function of the South Carolina Extension Advisory Board.

## III. Stakeholder Input

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

- Use of media to announce public meetings and listening sessions
- Targeted invitation to traditional stakeholder groups
- Targeted invitation to non-traditional stakeholder groups
- Targeted invitation to traditional stakeholder individuals
- Targeted invitation to non-traditional stakeholder individuals
- Targeted invitation to selected individuals from general public
- Survey specifically with non-traditional groups

### Brief Explanation

There is a customer centered approach to encouraging stakeholders to participate in the programs. There is an open door policy. Customers are free to visit the research and Extension Offices, at any time. Forums or group meetings were held to discuss issues and gain input. Staff members attended various town/county meetings. Focus groups were held with participants to acquire information about their quality of life as we their community.

**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
- Open Listening Sessions
- Needs Assessments
- Use Surveys

**Brief Explanation**

Individuals and groups are identified through referrals, surveys, evaluations, as well as other modes of communication. There is a customer centered approach to encouraging stakeholders to participate in the programs by keeping in touch with the participants. There is an open door policy. Customers are free to visit the research and Extension offices, at any time. Forums or group meetings were held to discuss issues and gain input. Staff members attended various town/county meetings. Focus groups were held with participants to acquire information about their quality of life and their community.

**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
- Survey of traditional Stakeholder groups
- Meeting with traditional Stakeholder individuals
- Survey of traditional Stakeholder individuals
- Meeting with the general public (open meeting advertised to all)
- Meeting specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Meeting with invited selected individuals from the general public

**Brief Explanation**

Forums or group meetings are held to discuss issues and gain input. Attendance at town/county meetings are helpful ways of collecting stakeholder input. Individuals will visit the county offices and voice their concerns. Also, the agents will make home/farm visits. Surveys and evaluations help the research and Extension Program to collect valuable data.

**3. A statement of how the input was considered**

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

**Brief Explanation**

The input given by stakeholders is used to develop new and innovative programs/activities. The data received is very helpful toward the development of new services/programs. The research and Extension programs are able to provide for continuous improvement when the funding is available and impact is made.

**Brief Explanation of what you learned from your Stakeholders**

Stakeholders want the research and Extension Programs to listen to their concerns and provide action. They will adopt and participate in programs that benefit them. The stakeholders request additional and continuing educational programs.

**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>
5367990	1502479	5746228	1811507

<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>	4453409	1431564	3180120	1667254
<b>Actual Matching</b>	4453409	1431564	4063129	1667254
<b>Actual All Other</b>	3769440	0	10005564	0
<b>Total Actual Expended</b>	12676258	2863128	17248813	3334508

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

**V. Planned Program Table of Content**

<b>S. NO.</b>	<b>PROGRAM NAME</b>
1	Sustainable Animal Production Systems
2	Sustainable Agriculture Production for Horticultural Crops
3	Sustainable Agronomic Crop Systems
4	Water Quality and Water Quantity
5	Biotechnology
6	Food Safety and Nutrition
7	Community, Leadership, and Economic Development
8	Integrated Pest Management
9	4-H Youth Development and Families
10	Environmental Conservation for Wildlife
11	Sustainable Forest Management

**Program #1**

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

**1. Name of the Planned Program**

Sustainable Animal Production 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
301	Reproductive Performance of Animals	20%	20%	20%	20%
302	Nutrient Utilization in Animals	20%	20%	20%	20%
303	Genetic Improvement of Animals	15%	15%	15%	15%
307	Animal Management Systems	20%	20%	20%	20%
308	Improved Animal Products (Before Harvest)	15%	15%	15%	15%
315	Animal Welfare/Well-Being and Protection	10%	10%	10%	10%
<b>Total</b>		100%	100%	100%	100%

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	8.0	5.5	3.9	0.0
<b>Actual</b>	12.0	5.5	3.5	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
400807	260806	406319	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
400807	260806	359412	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
352857	0	988549	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

Activities will include research on animal health and animal productivity in beef and dairy cattle through integrated resource management, grazing initiatives, and specific work on the effects of fumonisin B-1 on chicken immunity.

Educational programs were conducted that focus on animal production systems and livestock and forages.

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

Producers, Limited-Resource Farmers and Extension personnel, agency personnel

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	20200	4000	110	110
2007	14066	24679	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	1
2007 :	2

**Patents listed**

Methods of isolating Specific Compounds from Lymphatic Tissue.  
 Methods and Materials for Culturing Cells.

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	2	2	4

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

**Output Target**

**Output #1****Output Measure**

- Disclosures

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2	2

**Output #2****Output Measure**

- Licenses

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	1

**Output #3****Output Measure**

- Publications

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	12	2

**Output #4****Output Measure**

- New products, processes, procedures and policies

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	5

**Output #5****Output Measure**

- National Media Placements

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	4

**Output #6****Output Measure**

- Increase of outside funds through grants, contracts and gifts

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	6

**Output #7****Output Measure**

- Number of educational workshops conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	310	321

**Output #8****Output Measure**

- Number of people completing educational workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5300	14066

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

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

O No.	OUTCOME NAME
1	Number of publications authored or co-authored (fact sheets, papers presented at Extension meetings, etc.)
2	Increased forage fed beef production in the state and the region.
3	Number of people reporting increased knowledge
4	Number of people using grazing management practices



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

Number of publications authored or co-authored (fact sheets, papers presented at Extension meetings, etc.)

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	5	0

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
301	Reproductive Performance of Animals
307	Animal Management Systems

**Outcome #2****1. Outcome Measures**

Increased forage fed beef production in the state and the region.

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

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

**Issue (Who cares and Why)**

Forage fed beef presents a niche marketing opportunity for growers in the specialty foods area. Producers care because it has the potential to expand markets, consumers care because they are interested in the potential health advantages of this variety of beef.

**What has been done**

This is a new initiative. Initially warm season forage systems are being examined for potential to support forage-finished beef production.

**Results****4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
302	Nutrient Utilization in Animals
307	Animal Management Systems

**Outcome #3****1. Outcome Measures**

Number of people reporting increased knowledge

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	3000	12296

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Certified producers are required to obtain 10 hours of training credit every 5 years to maintain their certification

In addition, there is a need to deliver educational information to livestock and forage producers in SC that will enhance their production systems in a variety of ways.

**What has been done**

Developed and delivered 39 educational programs for training and certification of animal facility operators. In addition, delivered 282 educational programs on livestock and forages.

**Results**

349 growers who attended the recertification trainings obtained 2 hours of credit for this year. Over 87% of producers attending other educational programs reported knowledge gained. 92 producers established improved forage cultivars and 144 improved breeding by utilizing EPD's in sire selection/proper breed complementation and/or adopted improved health and reproduction methods.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
302	Nutrient Utilization in Animals
307	Animal Management Systems

**Outcome #4****1. Outcome Measures**

Number of people using grazing management practices

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1000	120

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Public concern over the management of animal manure has become a major environmental issue in South Carolina, with major focus on water quality (surface and groundwater) and gaseous emissions including odors. There is less tolerance for odors yet more potential for neighbors to be impacted by odors because of the location of operations in communities. Social problems have created an ever-increasing hostility between animal producers and neighbors. In addition, animals have not been efficient users of nutrients supplied in their diets. Therefore, significant plant nutrients are found in animal manures. These nutrients, particularly nitrogen, phosphorus, and potassium, are needed for crop inputs for our major crops of corn and soybean. Surveys indicate that nearly one half of all animal manure applied to land is not credited as a nutrient source. Therefore, animal manure nutrients may be applied at excessive rates if better management practices are not adopted, which can lead to both surface and groundwater pollution. Clemson is the sole source for providing training as required by law for all livestock and poultry producers to receive their waste permits.

The Confined Animal Manure Management Training Program (CAMM) is an educational program that is required by state law for all livestock and poultry producers as a condition of their waste permit. All new producers must attend the program within one year of beginning operation. A new version of the state regulation, passed in 2002, requires that all existing producers to attend the training as well. In addition, all swine producers, and all large dairy and poultry producers are required to be certified animal manure managers. Producers are required to pass a comprehensive exam on manure management to obtain certification. All animal waste permit holders are required to obtain 10 hours of recertification credit every five years. Clemson Extension provides seminars, field days, and conference presentations to provide the required continuing education.

**What has been done**

Over 1,260 persons have been certified (some growers have more than one species certification). Certified producers are required to obtain 10 hours of training credit every 5 years to maintain their certification. The Confined Animal Manure Manager program team is charged with developing a recertification program for this need.

**Results**

120 growers used grazing management practices enhance their production systems. Many growers were initially less than enthusiastic concerning the training but after the trainings the vast majority indicated that the information was beneficial and they really appreciated our efforts to provide up to date, relevant information concerning their operations.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
307	Animal Management Systems
302	Nutrient Utilization in Animals

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

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

**Brief Explanation**

There were no youth reported because decisions were made to report all youth work under 4-H.

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

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

- After Only (post program)

### **Evaluation Results**

There were positive attitude changes. Many growers were less than enthusiastic concerning the training initially, but after the training the vast majority indicated that the information was beneficial and they really appreciated our efforts to provide up-to-date, relevant information concerning their operations.

### **Key Items of Evaluation**

**Program #2****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Sustainable Agriculture Production for Horticultural Crops

**V(B). Program Knowledge Area(s)****1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	10%	10%	10%	10%
202	Plant Genetic Resources	10%	10%	10%	10%
204	Plant Product Quality and Utility (Preharvest)	10%	10%	10%	10%
205	Plant Management Systems	15%	15%	15%	15%
211	Insects, Mites, and Other Arthropods Affecting Plants	10%	10%	10%	10%
212	Pathogens and Nematodes Affecting Plants	10%	10%	10%	10%
215	Biological Control of Pests Affecting Plants	10%	10%	10%	10%
216	Integrated Pest Management Systems	15%	15%	15%	15%
601	Economics of Agricultural Production and Farm Management	10%	10%	10%	10%
<b>Total</b>		100%	100%	100%	100%

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	26.0	5.5	3.5	2.0
<b>Actual</b>	28.0	5.5	10.6	2.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
801614	260807	915761	609007
1862 Matching	1890 Matching	1862 Matching	1890 Matching
801614	260807	1017177	609007
1862 All Other	1890 All Other	1862 All Other	1890 All Other
346532	0	2791552	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Educational programs will be conducted. Field trials will be conducted and demonstrated. Evaluation programs will provide growers with comprehensive and updated information on performance so that they can make informed decisions, especially about the selection of profitable peach varieties for new plantings. Promote and encourage activities that foster sustainable agriculture practices and policies. Research will focus on ways to eradicate, contain and manage viral diseases impacting fruit in SC. Research continues in turf, fruit, ornamentals, vegetables, organic and nutraceutical crops to increase productivity, manage pests and disease and provide information to assist growers. Biotechnology is used increasingly to enhance research efforts.

Educational programs and field trials were conducted.

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

Producers, small farmers and Extension personnel, horticulture professionals, residents in counties with Master Gardener programs, Master Gardeners, consumers

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

**1. Standard output measures**

Target for the number of persons (contacts) reached through direct and indirect contact methods

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	19400	4500	50	100
2007	19355	7000069	35	10

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

**Patent Applications Submitted**

Year	Target
Plan:	0
2007 :	0

**Patents listed**

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

**Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan			
2007	0	9	9

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

**Output Target**

**Output #1****Output Measure**

- Disclosures

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	1

**Output #2****Output Measure**

- Licenses

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #3****Output Measure**

- Publications

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	15	9

**Output #4****Output Measure**

- New Products, processes, procedures and policies

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	1

**Output #5****Output Measure**

- National Media Placements

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2	3

**Output #6****Output Measure**

- Percent Increase of outside funds through grants, contracts and gifts

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	4	4

**Output #7****Output Measure**

- Number of educational workshops conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	175	902

**Output #8****Output Measure**

- Number of people completing horticultural educational workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5000	19085

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Number of participants reporting profitability gain
2	Number of new people trained to become Master Gardeners
3	Number of Master Gardeners reporting activities and programs
4	Number of activities conducted by Master Gardeners
5	Number of hours of service contributed by Master Gardeners
6	Number of people receiving information from Master Gardeners
7	Improved profitability in the peach and melon industries
8	Ability to rapidly screen fruits for pesticide residues
9	Number of participants gaining knowledge
10	Number of acres affected by ICM
11	Number of acres planted to new alternative crops
12	Identifying and characterizing genes



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

Number of participants reporting profitability gain

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1800	417

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Need to inform horticulture professionals, master gardeners, and consumers on environmentally sound horticultural practices and to reduce negative environmental impacts of horticultural cropping systems.

**What has been done**

195 horticulture crop programs were conducted by agents.

**Results**

Over 90% of the program participants reported knowledge gained. Recommended Horticulture ICM practices were adopted on over 180,391 acres in SC, and over 33,583 acres were planted to new, alternative and high value horticultural crops.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #2****1. Outcome Measures**

Number of new people trained to become Master Gardeners

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1000	811

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to inform horticulture professionals, master gardeners, and consumers on environmentally sound horticultural practices.

**What has been done**

697 environmental programs were conducted by agents.

**Results**

89% of the program participants reported knowledge gained.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems
204	Plant Product Quality and Utility (Preharvest)

**Outcome #3****1. Outcome Measures**

Number of Master Gardeners reporting activities and programs

**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>
2007	1000	2447

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to inform horticulture professionals, master gardeners, and consumers on environmentally sound horticultural practices.

**What has been done**

811 persons trained as master gardeners.

**Results**

Master Gardeners reached over 23,437 persons with their programs and activities.

**4. Associated Knowledge Areas**

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

**Outcome #4****1. Outcome Measures**

Number of activities conducted by Master Gardeners

**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>
2007	500	3576

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

**Issue (Who cares and Why)**

There is a need to inform horticulture professionals, master gardeners, and consumers on environmentally sound horticultural practices.

**What has been done**

Master Gardeners conducted 3,576 programs and activities such as oral presentations, newsletters, radio programs, and TV appearances.

**Results**

89% of the program participants reported knowledge gained.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #5****1. Outcome Measures**

Number of hours of service contributed by Master Gardeners

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	32000	23978

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to inform horticulture professionals, master gardeners, and consumers on environmentally sound horticultural practices.

**What has been done**

Master Gardeners contacted 23,437 individuals and contributed 23,978 hours of service, with a value of \$311, 714.

**Results**

A trained volunteer base has been established to increase Extension's educational outreach in consumer environmental horticulture.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #6****1. Outcome Measures**

Number of people receiving information from Master Gardeners

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	30000	23437

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to inform horticulture professionals, master gardeners, and consumers on environmentally sound horticultural practices.

**What has been done**

Over 23,437 consumers received information through PAWS hotline and HGIC Information Center and other programs. There were over 7 million visits to the university horticulture website.

**Results**

87% of the consumers reported knowledge gained.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #7****1. Outcome Measures**

Improved profitability in the peach and melon industries

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

All growers benefit from increased profitability. They have the option to improve their operations and increase production. Local and out of state consumers have greater access to fresh fruits.

**What has been done**

New varieties have been released and new management practices have reduced pesticide needs and related costs. This information will be released to producers through the Extension Service

**Results**

Growers are able to realize higher profits on their annual investments.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
216	Integrated Pest Management Systems
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants

**Outcome #8****1. Outcome Measures**

Ability to rapidly screen fruits for pesticide residues

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Consumers increasingly want fruits free of pesticide contamination and the new method will reduce costs and allow a larger percentage of samples of fruit to be screened.

**What has been done**

The investigator has left the university and a new principal investigator is being sought.

**Results****4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management

**Outcome #9****1. Outcome Measures**

Number of participants gaining knowledge

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	4950	13352

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to inform horticulture professionals, master gardeners, and consumers on environmentally sound horticultural practices.

**What has been done**

697 environmental programs were conducted by agents reaching over 13,352 persons.

**Results**

89% of the program participants reported knowledge gained.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #10**

**1. Outcome Measures**

Number of acres affected by ICM

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	30200	180391

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

**Issue (Who cares and Why)**

There is a need to inform producers on environmentally sound horticultural practices and to reduce negative environmental impacts of horticultural cropping systems.

**What has been done**

190 horticulture crops programs were conducted by agents.

**Results**

Over 90% of the program participants reported knowledge gained. Recommended Horticulture ICM practices were adopted on over 180,391 acres in SC.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems
601	Economics of Agricultural Production and Farm Management
204	Plant Product Quality and Utility (Preharvest)

**Outcome #11**

**1. Outcome Measures**

Number of acres planted to new alternative crops

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	15000	33583

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to reduce negative environmental impacts of horticultural cropping systems.

**What has been done**

190 horticulture crops programs were conducted reaching over 5,761 persons.

**Results**

Over 90% of the program participants reported knowledge gained. Over 33,583 acres were planted to new, alternative and high value horticultural crops.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
204	Plant Product Quality and Utility (Preharvest)

**Outcome #12****1. Outcome Measures**

Identifying and characterizing genes

**2. Associated Institution Types**

•1890 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Farmers and other users would benefit from evaluating and adopting integrated pest management techniques. Knowledge about the regulation of pheromone genes could lead to more effective pest control measures. The use of novel bacteria to clean areas contaminated with recalcitrant compounds such as PAHs is a potential benefit to the environment. Once cleaned, sphingomonas could be used for agricultural purposes.

**What has been done**

Mapping and isolating genes of fruitflies. Crosses were conducted to isolate specific genetic regions from one fruitfly strain on a background from the other. The lines were analyzed by gas chromatography to detect variation in male sex pheromones. Females and male fruitflies mate from their own strain and males of other strains to determine the effect of variation.

Also, research has been done on the generation of PAH-degrading mutants and their initial characterization. Generated phenanthrene utilization mutants (#257, #1778 and #1782) of Sphingomonas strain BPH were analyzed with primers specific for known PAH genes.

**Results**

Research is on-going.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
215	Biological Control of Pests Affecting Plants
211	Insects, Mites, and Other Arthropods 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

##### Brief Explanation

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

##### 1. Evaluation Studies Planned

- After Only (post program)

##### Evaluation Results

Over 90% of the program participants reported knowledge gained.

##### Key Items of Evaluation



**Program #3****V(A). Planned Program (Summary)****1. Name of the Planned Program**

Sustainable Agronomic Crop 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
204	Plant Product Quality and Utility (Preharvest)	10%	10%	10%	10%
205	Plant Management Systems	10%	10%	10%	10%
211	Insects, Mites, and Other Arthropods Affecting Plants	10%	10%	10%	10%
212	Pathogens and Nematodes Affecting Plants	15%	15%	15%	15%
213	Weeds Affecting Plants	10%	10%	10%	10%
215	Biological Control of Pests Affecting Plants	10%	10%	10%	10%
216	Integrated Pest Management Systems	15%	15%	15%	15%
601	Economics of Agricultural Production and Farm Management	10%	10%	10%	10%
604	Marketing and Distribution Practices	10%	10%	10%	10%
	<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

**V(C). Planned Program (Inputs)****1. Actual amount of professional FTE/SYs expended this Program**

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	12.0	0.0	6.9	0.0
<b>Actual</b>	24.0	0.0	8.3	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
890682	0	576196	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
890682	0	853583	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
647576	0	2351307	0

**V(D). Planned Program (Activity)****1. Brief description of the Activity**

Educational workshops were conducted focused on programs and activities related to integrated crop management, integrated pest management, water resources, risk management, and marketing. Research activities center on ways to increase disease and insect resistance levels and improve management systems. The use of biotechnology is increasingly evident in the research initiatives with work on transgenic crops, and efforts continue in agroecology and conservation tillage.

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

Producers, Extension and other agency personnel

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	25000	2000	100	50
2007	11004	400000	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	1
2007 :	2

**Patents listed**

Tobacco Harvester for the prevention of the spread of bacterial wilt.  
Method of controlling insect pests in cotton

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	11	11

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

**Output Target**

**Output #1****Output Measure**

- Disclosures

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	1

**Output #2****Output Measure**

- Licenses

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #3****Output Measure**

- Publications

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	18	11

**Output #4****Output Measure**

- New products, processes, procedures and policies

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	3

**Output #5****Output Measure**

- National media placements

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2	0

**Output #6****Output Measure**

- Percent Increase of outside funds through grants, contracts and gifts

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	5

**Output #7****Output Measure**

- Number of people completing educational workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	4000	11994

**Output #8****Output Measure**

- Number of educational workshops conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	300	555

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Number of participants reporting iprofitability gain
2	Number of acres affected by ICM programs
3	Number of acres planted to new agronomic crops
4	Numbers of acres with animal, municipal, or industrial wastes applied
5	Number of people reporting increased knowledge
6	New wheat varieties with increased disease and pest resistance.
7	High yielding soybean cultivars with resistance to nematodes which will improve profitability for growers

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

Number of participants reporting iprofitability gain

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	150	111

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for improved profitability and reduction of negative environmental impacts of agronomic cropping systems and a yield of high quality supplies of food and fiber products.

**What has been done**

Developed and delivered 555 agronomic crop programs, addressing fruits and vegetables, financial management, and economic analysis of enterprises.

**Results**

Foliar nutritional supplements are aggressively marketed for agronomic crops including peanuts. These products typically cost about \$20 - \$30 per acre annually, which is a substantial expense for producers. A comprehensive set of fertility recommendations were developed for peanuts, and the results of multi-year foliar nutrient testing program were presented to growers. This program has resulted in a savings of \$20 per acre on at least 20,000 acres per year (\$400,000 per year).

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management

**Outcome #2****1. Outcome Measures**

Number of acres affected by ICM programs

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25000	154311

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for improved profitability and reduction of negative environmental impacts of agronomic cropping systems and a yield of high quality supplies of food and fiber products.

**What has been done**

Developed and delivered 555 agronomic crop programs, addressing fruits and vegetables, financial management, and economic analysis of enterprises.

**Results**

Freezing temperatures in early April 2007 severely damaged corn plants in the state, giving the appearance of dead plants. Using Extension information, County Agents, growers, and seed companies were able to check for damage levels and signs of new growth. It is estimated that replanted corn varied from zero to 80 percent, depending upon the county. Growers replanted approximately 27% of corn in SC. The estimated replanting costs were \$3.6 million, assuming that growers had insurance to replant. It would have cost approximately \$13.3 million to replant all of the corn in SC; thus, the estimated economic savings was \$9.7 million

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems
204	Plant Product Quality and Utility (Preharvest)

**Outcome #3****1. Outcome Measures**

Number of acres planted to new agronomic crops

**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>
2007	10000	796

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for improved profitability and reduction of negative environmental impacts of agronomic cropping systems and a yield of high quality supplies of food and fiber products.

**What has been done**

Developed and delivered 555 agronomic crop programs, addressing fruits and vegetables, financial management, economic analysis of enterprises, and food security.

**Results**

111 persons reported profitability gain. Over 796 acres were planted to new agronomic crops.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
601	Economics of Agricultural Production and Farm Management

**Outcome #4****1. Outcome Measures**

Numbers of acres with animal, municipal, or industrial wastes applied

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10000	34750

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for producers to learn and apply best management practices for improved profitability, a reduction of negative environmental impacts of agronomic cropping systems and a yield of high quality supplies of food and fiber products.

**What has been done**

Developed and delivered 555 agronomic crop programs, addressing fruits and vegetables, financial management, and economic analysis of enterprises.

**Results**

85% of the participants in agronomic crops programs reported knowledge gained. Animal, municipal, or industrial wastes were applied to over 34750 acres.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
205	Plant Management Systems

**Outcome #5****1. Outcome Measures**

Number of people reporting increased knowledge

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	3000	10205

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for improved profitability and reduction of negative environmental impacts of agronomic cropping systems and a yield of high quality supplies of food and fiber products.

**What has been done**

Developed and delivered 555 agronomic crop programs, addressing fruits and vegetables, financial management, and economic analysis of enterprises.

**Results**

85% of the participants in agronomic crops programs reported knowledge gained.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
601	Economics of Agricultural Production and Farm Management
205	Plant Management Systems

**Outcome #6****1. Outcome Measures**

New wheat varieties with increased disease and pest resistance.

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Growers and consumers will benefit from new wheat varieties with increased disease and pest resistance. They will require fewer pesticides and will be safer and will have decreased production costs

**What has been done**

Work is under way to develop to develop high yielding, disease resistant barley varieties that give farmers a choice between hulled and hull-less types. Work is also proceeding to develop high yielding, high test weight oat varieties with good nutritional value and improved disease resistance.

**Results**

Research is continuing

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
213	Weeds Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
212	Pathogens and Nematodes Affecting Plants
215	Biological Control of Pests Affecting Plants

**Outcome #7****1. Outcome Measures**

High yielding soybean cultivars with resistance to nematodes which will improve profitability for growers

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Abiotic and biotic stresses on the soybean plant combine to decrease seed yields and limit grower profits



**What has been done**

Researchers are developing high-yielding soybean cultivars, both conventional and glyphosate tolerant, adapted to South Carolina and to develop cultivars or germplasm with resistance/tolerance to Root-Knot, Soybean Cyst, and the Columbia Lance Nematodes, and other economically important pests

**Results**

Research is continuing

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
211	Insects, Mites, and Other Arthropods Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems

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

**External factors which affected outcomes**

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

**Brief Explanation**

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

**1. Evaluation Studies Planned**

- After Only (post program)

**Evaluation Results**

85% of the participants in agronomic crops programs reported knowledge gained.

**Key Items of Evaluation**

**Program #4**

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

**1. Name of the Planned Program**

Water Quality and Water Quantity

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
111	Conservation and Efficient Use of Water	30%	30%	30%	30%
112	Watershed Protection and Management	20%	20%	20%	20%
131	Alternative Uses of Land	20%	20%	20%	20%
133	Pollution Prevention and Mitigation	20%	20%	20%	20%
134	Outdoor Recreation	10%	10%	10%	10%
<b>Total</b>		100%	100%	100%	100%

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	2.7	0.0
<b>Actual</b>	6.6	0.0	3.5	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
178136	0	206159	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
178136	0	167031	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
62571	0	458254	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

1. Educate agriculture producers to increase acceptance of BMPs that protect and improve water quality.
  2. Educate homeowners to increase acceptance of BMPs that prevent water pollution from the homestead, as through the Home-A-Syst and Coast-A-Syst programs.
  3. Educate the public on how their different land use practices impact the quality and quantity of water in urban streams.
  4. Develop and deliver educational programming on stream restoration and water quality protection.
  5. Develop participation in water quality volunteer groups, and train county volunteers to deliver WQ programming
  6. Present water quality and NPS pollution education for municipal and local government officials, as using Project NEMO.
  7. Design, demonstrate and promote the installation of riparian buffers and other environmentally appropriate plantings to protect water quality.
  8. Promote environmentally sound natural resource recreation and tourism opportunities in South Carolina.
  9. Conduct field research focused on toxicity of metals and pesticides and on TMDL watershed modeling.
- Remote sensing of water quality is an emerging approach to water quality research, as efforts expand to monitor water quality in rivers. Work is also expanding to gauge the impact of new residential development on natural water systems. Research is expanding on the impact of drought on all aspects of the state's watersheds and supply systems.

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

Farm and forest landowners, Extension agents, and administrators, natural resource professionals, Land management agency personnel, and user groups, nature-based tourism operators, South Carolina citizens, tourists, nature base, tourism industry, children in school, after-school, summer and 4-H programs, agents and volunteers, urban, suburban and rural residents, farmers, ranchers, poultry and swine producers, foresters urban agents, agency personnel, urban planners and land owners/managers, municipal officials, and local community groups statewide, managers, government officials, and recreation and tourism operators

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	6000	1500	0	0
2007	7855	400000	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	1

**Patents listed**

System and Process for reducing waste water

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	2	2

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

**Output Target**

**Output #1****Output Measure**

- Disclosures

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #2****Output Measure**

- Licenses

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #3****Output Measure**

- Publications

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	8	2

**Output #4****Output Measure**

- New Products, processes, procedures and policies

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	0

**Output #5****Output Measure**

- National Media Placements

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	2

**Output #6****Output Measure**

- Percentage increase in outside funds from grants, contracts and gifts

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3	4

**Output #7****Output Measure**

- Number of educational workshops conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	150	258

**Output #8****Output Measure**

- Number of people completing educational workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	4000	7855

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Number of people gaining knowledge
2	Number of people using practices learned
3	Number of people reporting enhanced income opportunities from natural resources
4	Policies for economically viable land use preserving water quality
5	Strategies for TMDL development and implementation at the watershed level

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

Number of people gaining knowledge

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	3000	7096

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to reduce animal waste and pollution in streams and to improve water quality, wetland and wetland management.

**What has been done**

Presented 258 water quality and quantity programs.

**Results**

90% of the program participants gained knowledge.

**4. Associated Knowledge Areas**

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

**Outcome #2****1. Outcome Measures**

Number of people using practices learned

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2000	7096

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to reduce animal waste and pollution in streams and to improve water quality, wetland and wetland management.

**What has been done**

Extension received \$300,000 in grant funding from the Environmental Protection Agency under section 319 of the Clean Water Act. Projects have been implemented throughout the state to determine and reduce the Total Maximum Daily Loads (TDML) of fecal Coliform bacteria in watersheds. In one county, the water bodies within the 67,805 acre Twelve Mile watershed were identified as containing excessive fecal Coliform bacteria. Surface runoff from livestock farms were identified as a source of the bacteria. In partnership with the Natural Resources Conservation Service, Extension agents identified livestock producers within the watershed willing to implement best management practices (BMPs) to help reduce fecal Coliform levels in nearby water bodies. Project participants received a 60% cost-share for properly installed and approved BMPs.

**Results**

As of March 2007, 34 livestock operations within the Twelve Mile watershed were under contract and had implemented 184 BMPs. These farms will be receiving \$290,430 in cost-share funds for efforts in reducing fecal Coliform levels. Fecal Coliform counts were taken downstream of each farm prior to BMP implementation. Levels will be reviewed upon completion of the project to quantify the impacts. A reduction in fecal Coliform levels is expected as a result of those implementing BMP's.

**4. Associated Knowledge Areas**

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

**Outcome #3**

**1. Outcome Measures**

Number of people reporting enhanced income opportunities from natural resources

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	200	442

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

**Issue (Who cares and Why)**

There is a need for improved profitability and systems that yield high quality supplies of food and fiber products.

**What has been done**

Water quality and quantity programs were conducted, including natural resource enterprise workshops and farmer's market managers' training.

**Results**

90% of the program participants gained knowledge. One third of the participants in a workshop reported that it either saved or would potentially make them a cumulative total of \$345,000. In another project, EBT equipment was acquired and installed at the Jasper County Farmer's Market.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
131	Alternative Uses of Land

**Outcome #4**

**1. Outcome Measures**

Policies for economically viable land use preserving water quality

**2. Associated Institution Types**

- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Residents and developers and government officials are all concerned about viable land use which preserves water quality.

**What has been done**

Existing and future development contributes to storm water, polluted runoff, and nonpoint source pollution in coastal areas. Researchers are examining the effectiveness of specific storm water best management practices in coastal areas on water quality improvement at both the individual practice and watershed scales. The research will focus on linking land use and storm water management practices to water quantity and quality impacts.

**Results**

Research continues

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
131	Alternative Uses of Land

**Outcome #5****1. Outcome Measures**

Strategies for TMDL development and implementation at the watershed level

**2. Associated Institution Types**

- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to develop new tools that are based on the best science available and to insure that required water quality improvements are obtained with minimum impact on the American agricultural community and taxpayers.

**What has been done**

Researchers are focused on the development of TMDL tools for assessing sediment, nutrient, pesticide, pathogen, and ecological impairment related to TMDLs. The purpose of this research is to go beyond farm profitability and water quality to link human choices, policy variables, and environmental quality.

**Results**

Research is continuing



#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
111	Conservation and Efficient Use of Water

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

##### External factors which affected outcomes

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

##### Brief Explanation

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

##### 1. Evaluation Studies Planned

- After Only (post program)
- During (during program)

##### Evaluation Results

One third of the participants in a workshop reported that the program either saved or would potentially make them a cumulative total of \$345,000.

##### Key Items of Evaluation

**Program #5**

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

**1. Name of the Planned Program**

Biotechnology

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	25%	25%	25%	25%
202	Plant Genetic Resources	25%	25%	25%	25%
303	Genetic Improvement of Animals	20%	20%	20%	20%
304	Animal Genome	20%	20%	20%	20%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	10%	10%	10%	10%
<b>Total</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	0.0	0.0	9.0	0.0
<b>Actual</b>	0.0	0.0	7.9	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
0	0	489185	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	677857	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	1861034	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

Scientists are working to identify and characterize genes that confer natural resistance to plum pox virus, one of the 10 most dangerous threats of bioterrorism. Work also continues on the use of transgenic technologies to improve fruit tree stress resistance, produce superior fruit and expand the growing area.

Research has continued in mammary development to increase profitability in dairy, beef, swine and lamb operations.

Scientists are beginning to understand how legumes interact with bacteria in the soil to generate their own fertilizer, and the goal is to transfer this ability to other crops.

Work in biofuels is focused on improving production efficiencies and reducing the cost of biofuels by testing new strains of yeast of the fermentation process, and algae and other microorganisms are being studied as bioprocessors to produce high value compounds from agricultural waste.

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

Agricultural biotechnology research has a grower and industry focus. New approaches to improving crop and animal lines are one result of biotechnology research and the ability to better deal with a variety of pests which negatively impact productivity is another.

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Year	Target	Target	Target	Target
Plan	0	0	0	0
2007	0	0	0	0

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

**Patent Applications Submitted**

Year	Target
Plan:	2
2007 :	2

**Patents listed**

The concentration and separation of lipids from renewable resources.  
Therapeutic benefits of Gossypol, 6-Methoxy Gossypol and 6,6'-Dimethoxy Gossypol

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

**Number of Peer Reviewed Publications**

	Extension	Research	Total
Plan			
2007	0	10	10

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

**Output Target**

**Output #1****Output Measure**

- Disclosures

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2	4

**Output #2****Output Measure**

- Licenses

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #3****Output Measure**

- Publications

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	10	10

**Output #4****Output Measure**

- New products, processes procedures and policies

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	1	6

**Output #5****Output Measure**

- National media placements

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5	5

**Output #6****Output Measure**

- Percentage increase of funds through grants, contracts and gifts

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	20	22

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

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

O No.	OUTCOME NAME
1	Development of expanded applications of legumes in nitrogen poor environments
2	Improved profitability for beef and dairy producers

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

Development of expanded applications of legumes in nitrogen poor environments

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Benefits to consumers and producers include increased yield of crop legumes (peas, soybeans, alfalfa) and perhaps reduced fertilization in non-legumes and resulting reduced pollution from fertilizer run-off, a major source of agricultural pollution in SC.

**What has been done**

Legumes are unique among crop plants in that they are able to utilize nitrogen fixed from the atmosphere by the bacteria living within specialized root structures (nodules) makes legumes ideally suited to soils where nitrogen is limiting. Researchers are beginning to manipulate genes involved in nodulation for agricultural benefits.

**Results**

Research is continuing

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
202	Plant Genetic Resources
201	Plant Genome, Genetics, and Genetic Mechanisms

**Outcome #2****1. Outcome Measures**

Improved profitability for beef and dairy producers

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Mammary development is critical to profitability in dairy, beef, swine, and lamb operations because milk production controls growth of offspring and profitability in dairy operations. This is of primary concern of growers.

**What has been done**

This project is learning more about a specific population of cells in the mammary gland that are likely critical in controlling mammary development.

**Results**

Research continues

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
303	Genetic Improvement of Animals
304	Animal Genome

**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****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)
- 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.
- Comparison between locales where the program operates and sites without program intervention

**Evaluation Results****Key Items of Evaluation**

**Program #6**

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

**1. Name of the Planned Program**

Food Safety and Nutrition

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
503	Quality Maintenance in Storing and Marketing Food Products	5%	5%	5%	5%
703	Nutrition Education and Behavior	30%	30%	30%	30%
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	30%	30%	30%	30%
723	Hazards to Human Health and Safety	30%	30%	30%	30%
724	Healthy Lifestyle	5%	5%	5%	5%
<b>Total</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	25.0	12.0	2.5	3.0
<b>Actual</b>	8.5	12.0	1.5	3.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
267204	145659	70963	167671
1862 Matching	1890 Matching	1862 Matching	1890 Matching
267204	145659	69407	167671
1862 All Other	1890 All Other	1862 All Other	1890 All Other
273581	0	190105	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**



Nutrition education will center on the Food Guide Pyramid and the Dietary Guidelines for Healthy Americans. Special focus will be given to programming in the prevention of childhood obesity, increasing physical activity in all ages, and the development of food preparation skills which fit current nutritional needs and lifestyle. Safe handling of food will be taught to handlers in the food service industry and the general public. Commercial food processors will be targeted in an effort to improve commercial food processing efficiencies and effectiveness/develop new markets/improve commercial handling, processing, preservation and packaging to provide safe and high quality foods. Attention will be given to providing consumers with scientifically based, reasonable nutrition and food safety information via the media. Food borne illnesses will be defined and conditions discussed that encourage bacteria growth. Most common food borne pathogens, additives, preservatives and basic kitchen safety techniques will be taught. The following activities will be conducted:

Communities will form coalitions that focus on improving the nutritional health and fitness of their citizens.

Participants will make healthy food choices after participating in Extension food/nutrition programs.

Participants will develop skills in procuring of food for good health.

Participants will demonstrate skills in preparing food with emphasis on healthy preparation techniques.

Participants will increase knowledge and skills for the safe handling of food.

Managers and supervisors will be certified to train food handlers in safe food handling techniques.

Food handlers will practice safe food handling techniques.

Volunteer food handlers at temporary events will increase their knowledge in safe food handling.

Regulatory compliance will be promoted

Specialists will assist in the development of new food businesses.

Public understanding of technology, with an emphasis upon food biotechnology will increase.

Media outlets will utilize Extension food safety and nutrition resources.

Outlets for publication will distribute or sell Extension food safety and nutrition resources.

The rapid detection of toxic food agents and the development of strategies to reduce their presence in food are problems that are being addressed to improve the safety of the food and water supply in South Carolina.

Rendered poultry co-products are high in bacterial populations and the quality and safety of the resulting products depend on the inactivation of bacteria present in the raw material. Scientists are working to determine optimum approaches to address this situation which is an economic burden to the poultry industry and health risk to consumers.

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

Community leaders, agencies, policy makers, general public, EFNEP - limited resource families, food service managers, supervisors, food handlers, producers, commercial food handlers, processing and packaging industry, entrepreneurs seeking to start food businesses or improve existing food business, media and other marketing contacts, and publication outlets – doctors' offices and grocers.

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	37500	1500	10000	4000
2007	18582	690167	14732	243

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	0

**Patents listed**

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	1	1

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

**Output Target**

**Output #1****Output Measure**

- Licenses

Year	Target	Actual
2007	0	0

**Output #2****Output Measure**

- Disclosures

Year	Target	Actual
2007	0	0

**Output #3****Output Measure**

- Publications

Year	Target	Actual
2007	8	1

**Output #4****Output Measure**

- New products, processes, procedures and policies

Year	Target	Actual
2007	1	0

**Output #5****Output Measure**

- National media placements

Year	Target	Actual
2007	3	8

**Output #6****Output Measure**

- Percent increase of outside funds through grants, contracts and gifts

Year	Target	Actual
2007	30	27

**Output #7****Output Measure**

- Number of participants entering the EFNEP program including foods from all five food groups.

Year	Target	Actual
2007	100	272

**Output #8****Output Measure**

- Number of press kits distributed

Year	Target	Actual
2007	25	990

**Output #9****Output Measure**

- Number of educational workshops conducted

Year	Target	Actual
2007	1025	7231

**Output #10****Output Measure**

- Number of people completing educational workshops

Year	Target	Actual
2007	14000	31267

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Number of participants leaving the EFNEP program including foods from all five food groups
2	Number of people demonstrating skills learned in healthy food preparation.
3	Number of participants reporting increase knowledge in safe food handling and nutrition
4	Number of managers/supervisors/food handlers completing educational program and receiving a course certificate
5	Number of coalitions formed (partners, public/private, academic)
6	Number of food establishments represented by food handlers.
7	Number of people served in the food establishments represented by trained food handlers
8	Number of participants reached with food safety information by volunteers who participated in an Extension training program
9	Number of facilities meeting HACCP standards for food safety
10	Number of new or improved food products entering the market as a result of adopting recommended practices
11	Number of outlets distributing or selling Extension food safety and nutrition developed-resources
12	Number of people reached through media outlets that utilize Extension food safety, food biotechnology and nutrition resources
13	Improved food safety at the microbiological level
14	Improve health and well-being by reducing environmental pollutants

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

Number of participants leaving the EFNEP program including foods from all five food groups

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1200	746

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Participants need to make healthy food choices, develop skills in the procurement of food for good health, and demonstrate skills in healthy food preparation.

**What has been done**

Expanded Food and Nutrition Education Program (EFNEP) Nutrition Educator Assistants (NEAs) conducted educational programs in nutrition and health reaching 13,377 adults.

**Results**

Pre-program surveys indicated that 13% of participating adults reported diets containing foods from all five food groups. Based on post-program surveys, the percentage increased to 36%.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
724	Healthy Lifestyle

**Outcome #2****1. Outcome Measures**

Number of people demonstrating skills learned in healthy food preparation.

**2. Associated Institution Types**

•1862 Extension  
•1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10000	1673

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Participants need to make healthy food choices, develop skills in the procurement of food for good health, and demonstrate skills in healthy food preparation.

**What has been done**

Agents taught 727 programs reaching 4,085 people. 1890 provided ServSafe training for food preparers and servers, particularly those who work in churches, that wanted to learn more about food safety and earn certification.

### Results

Participants improved their quality of life by making healthy food choices and demonstrating skills in healthy food preparation and procurement. Over 91% of the program participants indicated that they gained knowledge. Over 1673 participants demonstrated skills in healthy food preparation. The ServSafe trainings resulted in potential savings of about \$3400 per year.

#### 4. Associated Knowledge Areas

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

### Outcome #3

#### 1. Outcome Measures

Number of participants reporting increase knowledge in safe food handling and nutrition

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	9000	17748

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

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

The National Restaurant Association has estimated that the average cost of a foodborne illness outbreak to an establishment is about \$75,000. Food handlers should be trained in safe food handling techniques.

##### What has been done

Agents taught 879 programs reaching 6,437 people. EFNEP agents taught 11,311 people. Through the ServSafe training, participants learned where contaminations starts, the components for good personal hygiene and how every employee can be a safe food handler. Participants discovered how to prevent cross-contamination and how to utilize time and temperature control effectively.

##### Results

The approximate economic value of the trainings in South Carolina was \$31,575,000 due to a reduction of incidence of foodborne illness, which reduces the likelihood of medical costs that are incurred due to food-borne illness. ServSafe Certification is accredited by the American National Standards Institute (ANSI)-Conference for Food Protection (CFP). The training is provided at no cost to restaurants and other food service agencies. As a result of the trainings, there was a potential savings of about \$3400 per year.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
503	Quality Maintenance in Storing and Marketing Food Products

### Outcome #4

#### 1. Outcome Measures

Number of managers/supervisors/food handlers completing educational program and receiving a course certificate

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	500	1250

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The National Restaurant Association has estimated that the average cost of a foodborne illness outbreak to an establishment is about \$77,550. Food handlers should be trained in safe food handling techniques.

**What has been done**

Extension trained food handlers from 421 food establishments and taught 155 programs reaching 2,386 people. Of this number, 840 persons were managers and supervisors of eating establishments.

**Results**

The approximate economic value of the trainings in South Carolina was \$31,578,375 due to a reduction of incidence of foodborne illness, which reduces the likelihood of medical costs that are incurred due to foodborne illness.

Another potential 130 people would be trained by those who participated in Extension programs.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
503	Quality Maintenance in Storing and Marketing Food Products

**Outcome #5****1. Outcome Measures**

Number of coalitions formed (partners, public/private, academic)

**2. Associated Institution Types**

- 1862 Extension
- 1890 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	75	7

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Participants need to make healthy food choices, develop skills in the procurement of food for good health, and demonstrate skills in healthy food preparation.

**What has been done**

Coalitions were formed in an attempt to reach greater numbers of people with food and nutrition information. Coalitions included the Catawba Diabetes Coalition, the School Health Council in York, York County Leadership, Chester Diabetes Coalition, area churches, councils on aging, Richland County Health Coalition. Research collaborations were established with University faculty and staff and other states.

### Results

Over 4,085 people were reached through educational workshops and coalitions. The research efforts are on-going.

#### 4. Associated Knowledge Areas

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

### Outcome #6

#### 1. Outcome Measures

Number of food establishments represented by food handlers.

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	464

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

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

The National Restaurant Association has estimated that the average cost of a foodborne illness outbreak to an establishment is about \$75,000. Food handlers should be trained in safe food handling techniques. According to the Food and Drug Administration, an estimated two to three percent of all foodborne illnesses lead to secondary long-term illnesses.

##### What has been done

Agents taught 884 food handlers representing 429 food establishments.

##### Results

A total of 769 (87%) people gained knowledge and received a course certificate.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

### Outcome #7

#### 1. Outcome Measures

Number of people served in the food establishments represented by trained food handlers

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension



**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1000	219771

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The National Restaurant Association has estimated that the average cost of a foodborne illness outbreak to an establishment is about \$75,000. Food handlers should be trained in safe food handling techniques. According to the Food and Drug Administration, it is estimated that two to three percent of all foodborne illnesses lead to secondary long-term illnesses.

**What has been done**

Food handlers representing 464 food establishments attended safe food handling educational programs.

**Results**

The approximate economic value of the trainings in South Carolina was \$31,577,550 due to a reduction of incidence of foodborne illness, which reduces the likelihood of medical costs that are incurred due to food-borne illness.

A total of 219,771 people are served by food establishments represented by participants in the training.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

**Outcome #8****1. Outcome Measures**

Number of participants reached with food safety information by volunteers who participated in an Extension training program

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	110	669

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Volunteers are needed to extend Extension's outreach in the area of food safety.

**What has been done**

A total of 669 volunteers were trained and taught food safety programs, contributing over 576 volunteer hours.

**Results**

Volunteers donated time valuing at \$9,682 to teach food safety programs.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
723	Hazards to Human Health and Safety

**Outcome #9****1. Outcome Measures**

Number of facilities meeting HACCP standards for food safety

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1	1

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The National Restaurant Association has estimated that the average cost of a foodborne illness outbreak to an establishment is about \$75,000. Food handlers should be trained in safe food handling techniques to meet HACCP standards.

**What has been done**

One restaurant was evaluated and met HACCP standards.

**Results**

The approximate economic value of the trainings in South Carolina was \$31,575,000 due to a reduction of incidence of food-borne illness, which reduces the likelihood of medical costs that are incurred due to food-borne illness.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety

**Outcome #10****1. Outcome Measures**

Number of new or improved food products entering the market as a result of adopting recommended practices

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	87

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

**Issue (Who cares and Why)**

Consumers want to make healthy food choices and need high quality supplies of food and fiber products.

**What has been done**

Shelf life determination of salsa products was performed. A total of 39 dairy food products were analyzed for improvement and nutrition labeling for a company. In addition a canning course proposals was submitted.

**Results**

A total of 87 new or improved food products entered the market as a result of adopting recommended practices.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products

**Outcome #11****1. Outcome Measures**

Number of outlets distributing or selling Extension food safety and nutrition developed-resources

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10	6

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Participants need to make healthy food choices, develop skills in the procurement of food for good health, and demonstrate skills in healthy food preparation.

**What has been done**

Agents and specialists developed and marketed food safety and nutrition educational material.

**Results**

Six outlets distributed or sold Extension food safety and nutrition resources.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
724	Healthy Lifestyle

**Outcome #12****1. Outcome Measures**

Number of people reached through media outlets that utilize Extension food safety, food biotechnology and nutrition resources

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	30000	2000000

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Participants need to make healthy food choices, develop skills in the procurement of food for good health, and demonstrate skills in healthy food preparation.

**What has been done**

News articles for newspapers and trade magazines, television shows and radio were utilized.

**Results**

There was the potential of reaching over 2,000,000 people through media.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
723	Hazards to Human Health and Safety
703	Nutrition Education and Behavior
724	Healthy Lifestyle

**Outcome #13****1. Outcome Measures**

Improved food safety at the microbiological level

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The rapid detection of toxic food agents and the development of strategies to reduce their presence in food are problems that need to be addressed to improve the safety of the food and water supply in South Carolina.

**What has been done**

Researchers are utilizing nanotechnology to develop rapid and simple biosensors to detect the presence of intentional and ubiquitous toxic agents in food and water. Additionally, active antimicrobial and antioxidant packaging films are being developed to reduce the risk from these toxic agents by using natural materials.

**Results**

Research is continuing.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
503	Quality Maintenance in Storing and Marketing Food Products
723	Hazards to Human Health and Safety

**Outcome #14****1. Outcome Measures**

Improve health and well-being by reducing environmental pollutants

**2. Associated Institution Types**

•1890 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

A direct economic impact on soybean farmers as well as a health and environmental impact for the country. Billions of candles are sold each year to people to enjoy inside the home for look and beauty. Many are unaware of the harmful emissions and products concentrated indoors and inhaled. Certain brands of candles may cause skin irritation as well as exposure to smoke which cause illnesses. Soybeans are a renewable and biodegradable resource and a prime source for candle wax.

**What has been done**

Test are underway to see if candles from soybean products could replace parafin wax, in order to produce better and safer products.

**Results**

Research is on-going.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
724	Healthy Lifestyle
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

**Brief Explanation****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**

**Program #7**

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

**1. Name of the Planned Program**

Community, Leadership, and Economic 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
608	Community Resource Planning and Development	15%	15%	15%	15%
609	Economic Theory and Methods	10%	10%	10%	10%
610	Domestic Policy Analysis	15%	15%	15%	15%
801	Individual and Family Resource Management	15%	15%	15%	15%
802	Human Development and Family Well-Being	15%	15%	15%	15%
803	Sociological and Technological Change Affecting Individuals, Families and Communities	15%	15%	15%	15%
806	Youth Development	15%	15%	15%	15%
<b>Total</b>		100%	100%	100%	100%

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	14.0	6.0	4.3	8.0
<b>Actual</b>	15.0	6.0	7.4	8.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
534409	232809	263239	269980
1862 Matching	1890 Matching	1862 Matching	1890 Matching
534409	232809	677857	269980
1862 All Other	1890 All Other	1862 All Other	1890 All Other
928842	0	703396	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

1. Conduct leadership programs and workshops in counties or municipalities, teaching facilitation skills and best practices of conflict resolution to be used in public meetings and public forums.
2. Communicate leadership principles through printed materials.
3. Collaborate with organizations to offer leadership and team building programs.
4. Promote participation in task forces/committees that have programmed outcomes.
5. Offer board development training and organizational capacity building to nonprofit organizations annually.
6. Promote the participation of youth and adults in Intergenerational Service-Learning or Community Youth Development activities and in Children, Youth and Families At Risk Extension programming. (CYFAR)
7. Convey community and regional economic impact assessment data to business leaders and economic development organizations.
8. Provide local leaders with local socio-economic trend and pattern data to support local economic development strategic planning efforts.
9. Review federal and state legislation and offer critiques to advance understanding among agency representatives and association members.
10. Prepare materials for public distribution in print or through electronic means (video, television, radio, media) that promote understanding of public issues.
11. Engage citizens in community promotion projects annually.
12. Facilitate the work of task forces/groups that formulate action plans and policies.
13. Communicate community improvement accomplishments through news releases, fact sheets, reports, articles, and newsletters.
14. Establish a Brownfields Community Redevelopment Center.
15. Address issues associated with youth through a Youth Empowerment/Leadership program.
16. Increase statewide collaborations by continuing to share information with potential partners and engaging them in community projects.
17. Provide leadership in cultural and environmental stewardship.
18. Convene practitioners and researchers in an interactive environment that results in innovative, sustainable solutions.
19. Foster research, collaborations, capacity building and leadership for sustainable community and economic development.

20. Conduct design/master plan Charrettes in all of the state's distressed counties (The Charrette is a tool that allows CIECD in a collaborative manner to interact with communities in designing a master plan of transformative change. The essential elements of the Charrette are the use of experts in areas of landscape design, community design, visioning and architecture with vital input from the community to create the transformative plan or change).

21. Projections will be made for labor needs by occupational category under current situations and for proposed projects. (These estimates will be linked to process-based models and tied to industry targeting recommendations. The information generated will be critical in assisting local organizations with training responsibilities to develop a local workforce capable of competing in the knowledge-based economy. Other possible areas of work include evaluating and working to strengthen linkages between rural and urban-based clusters in terms of backward and forward linkages.)

22. Provide home buyer education, home rehabilitation and homeownership opportunities.

The role of workforce development (including entrepreneurial development) in economic growth is receiving special research emphasis. Economic models are being developed to estimate regional impacts, with a focus on improving the accuracy of standard procedures, especially in regards to estimating impacts on income distribution.

Researchers are examining the conditions under which public sector investment in broadband access is more or less likely to produce return on investment.

Researchers are increasing the understanding of entrepreneurship and community-based enterprises as potential components of a comprehensive statewide community and economic development strategy. They are also working to improve the ability of rural areas to be full participants in the emerging economic clusters and innovation centers in S.C. Faculty are examining the concept of agricultural tourism or agritourism as a diversification strategy in South Carolina.

## 2. Brief description of the target audience

Students, child care providers, limited-resource persons, Community leaders, board/council members, nonprofit organization boards and groups, adults, youth, business and workforce preparation agencies and disadvantaged citizens and communities, state, federal, and local agency personnel, association members, citizens faced with public issues, and citizens engaged in economic and tourism development.

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	22600	2400	800	200
2007	20969	515500	196	50

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
Plan:	0
2007 :	0

**Patents listed**

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

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

**Output Target**



**Output #1****Output Measure**

- Disclosures

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #2****Output Measure**

- Licenses

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #3****Output Measure**

- Publications, business plans and housing grants

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	9	13

**Output #4****Output Measure**

- New Products, processes, procedures and policies

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2	0

**Output #5****Output Measure**

- Percent Increase of Outside funds from grants, contracts and gifts

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	15	18

**Output #6****Output Measure**

- National Media Placements

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	4	4

**Output #7****Output Measure**

- Number of CYFAR-related youth participants in academic enhancement activities

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	140	83

**Output #8****Output Measure**

- Number of CYFAR-related youth and adult participants in Leadership Development training

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	85	30

**Output #9****Output Measure**

- Number of CYFAR-related youth and adult participants in entrepreneurship training and/or activities

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	115	14

**Output #10****Output Measure**

- Number of educational workshops conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	800	671

**Output #11****Output Measure**

- Total number of people completing educational workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	11500	20928

**Output #12**

**Output Measure**

- Number of board members trained

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	170	95

**Output #13**

**Output Measure**

- Number of youth and adult participants in CYFAR-related community visioning and strategic planning activities

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	125	100

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Total number of people reporting increased knowledge as a result of participation in CLED activities
2	Number of nonprofit organization members who increase knowledge about effective operations of boards and organizations
3	Number of individuals completing leadership programs who collaborate with others in the region to address an issue or concern
4	Number of facilitated public meetings addressing public issues
5	Number of public appearances used to promote understanding of public issues
6	Number of printed materials used to promote understanding of public issues
7	Number of National Issues Forums convened or moderated
8	Number of groups or agencies that collaborate or partner on a task group
9	Number of community improvement programs conducted
10	Number of participants engaged in community promotion projects
11	Number of youth and adult CYFAR-participants who increase knowledge and skills in community visioning and strategic planning activities
12	Number of youth and adult CYFAR participants who practice skills Intergenerational Service-Learning or Community Development Projects
13	Number of CYFAR-related youth and adult participants who gain skills in Leadership Development training
14	Number of CYFAR-related youth and adult participating in deliberative dialogue forums or activities
15	Number of CYFAR-related youth participants who learn entrepreneur concepts and/or practice entrepreneur skills
16	Number of youth participants who improve academic performance as a result of participating in CYFAR-related activities
17	The rate of economic growth in rural areas of the state will increase.
18	Knowledge of bankruptcy filings increase
19	Formulating development policies for low and moderate incomes
20	The rate of technological change in agriculture.

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

Total number of people reporting increased knowledge as a result of participation in CLED activities

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	7500	16897

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to assist in building local economies and to track completion of community visioning.

**What has been done**

A Market Analysis & Branding Charrette for the Town of Cheraw was coordinated. Seven sessions were conducted with teams of planners, design architects and community development specialists. Extension recommendations were made. The Town of Cheraw secured an \$844,000 Opportunity Grant from the Department of Commerce.

**Results**

The total project impact was \$1.2 million in complete funding. In addition, CIECD conducted a Fiscal Impact Assessment on the proposed annexation of two large parcels of land in Northern Beaufort County. One scenario found that the county's project expenditures would exceed the revenue generated by approximately \$164 million; and under the second scenario the county's expenditure would exceed it's revenues by \$140 million. While the revenues generated may be sufficient to cover the operating expenditures, the cost of capital improvements would result in deficits under each of these scenarios.

Over 258 individuals who completed Extension leadership programs collaborated with others in the region to address an issue or concern. Over \$8,550 was raised to support local programs and collaborative efforts. 86% of the program participant increased knowledge.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development
802	Human Development and Family Well-Being
806	Youth Development

**Outcome #2****1. Outcome Measures**

Number of nonprofit organization members who increase knowledge about effective operations of boards and organizations

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	150	16897

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

**Issue (Who cares and Why)**

There is a need to assist in building local economies and track completion of community visioning.

**What has been done**

A total of 19,668 persons were reached with educational programming and trainings.

**Results**

Over 86% of the participants reported that they gained knowledge about effective operations of boards and organizations.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being
608	Community Resource Planning and Development
801	Individual and Family Resource Management

**Outcome #3**

**1. Outcome Measures**

Number of individuals completing leadership programs who collaborate with others in the region to address an issue or concern

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	300	751

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

**Issue (Who cares and Why)**

There is a need to build leadership capacity among citizens.

**What has been done**

Over 300 educational programs and trainings were conducted.

**Results**

As a result of educational programs and trainings over 751 persons identified 27 specific actions taken, such as facilitating meetings and addressing public issues.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being
608	Community Resource Planning and Development

**Outcome #4****1. Outcome Measures**

Number of facilitated public meetings addressing public issues

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10	14

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need to assist in building local economies and track completion of community visioning.

**What has been done**

A total of 14 facilitated public meetings addressing public issues were conducted.

**Results**

People trained in CEID programs used knowledge and skills learned to address issues of concern in their communities.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

**Outcome #5****1. Outcome Measures**

Number of public appearances used to promote understanding of public issues

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	42

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Need to assist in building local economies and track completion of community visioning.

**What has been done**

A total of 42 public appearances occurred to promote understanding of public issues

**Results**

People trained in CEID programs used knowledge and skills learned to address issues of concern in their communities.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

**Outcome #6**

**1. Outcome Measures**

Number of printed materials used to promote understanding of public issues

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	30	63

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

**Issue (Who cares and Why)**

There is a need to assist in building local economies and track completion of community visioning.

**What has been done**

Printed material was developed and distributed throughout the state addressing leadership and public issues.

**Results**

Approximately 85% of the program participants reported that they gained knowledge.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development
801	Individual and Family Resource Management

**Outcome #7**

**1. Outcome Measures**

Number of National Issues Forums convened or moderated

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2	9

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

**Issue (Who cares and Why)**

There is a need to assist in building local economies and track completion of community visioning.

**What has been done**

Nine National Issues Forums were conducted. Eighteen teens from Ft. Jackson participated in a Democracy's Challenge NIF. They learned and demonstrated deliberation skills. Youth felt that their voices were not heard in America. They felt that a 'youth rights' movement was needed and discussed some unique ideas on how to begin such movement by doing positive things to help their communities and by getting media attention. In addition, youth and adults from other counties were involved in forums on health and financial security.

### Results

Post questionnaires were given and later shared with Public Agenda. Public Agenda is writing a national report on the issue of Democracy's Challenge.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development
801	Individual and Family Resource Management
608	Community Resource Planning and Development

### Outcome #8

#### 1. Outcome Measures

Number of groups or agencies that collaborate or partner on a task group

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

#### 3a. Outcome Type:

Change in Action Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	300	256

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

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

There is a need to assist in building local economies and track completion of community visioning.

##### What has been done

A total of 256 groups collaborated or partnered on a task to address a public issue.

### Results

People trained in CEID programs used knowledge and skills learned to address issues of concern in their communities. In 1890's community development program, the living and economic conditions improved by providing education and counseling services to enable underserved individuals to overcome barriers to homeownership through partnerships.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
802	Human Development and Family Well-Being
801	Individual and Family Resource Management

### Outcome #9

#### 1. Outcome Measures

Number of community improvement programs conducted

#### 2. Associated Institution Types



- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	36	65

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

**Issue (Who cares and Why)**

There is a need to assist in building local economies and track completion of community visioning.

**What has been done**

A total of 65 community improvement programs were conducted.

**Results**

People trained in CEID programs used knowledge and skills learned to address issues of concern in their communities. Strategy sessions for collaboration were held to recruit and process information.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development

**Outcome #10**

**1. Outcome Measures**

Number of participants engaged in community promotion projects

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	375	1149

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

**Issue (Who cares and Why)**

There is a need to assist in building local economies and track completion of community visioning.

**What has been done**

A total of 1,149 participants engaged in community promotion projects such as downtown revitalization work, drug-free communities, town beautification projects, Rail Trail, and children of prisoners project. The Fine Arts Cultural Enrichment Teaching Studios (FACETS) is a studio/workshop/institute concept designed to provide instruction, professional development, and leadership opportunities in the visual and performing arts for constituencies for Orangeburg County and surrounding areas.

FACETS organized and traveled, 'GRIDDED CONNECTIONS', an exhibition of drawings and prints created by executive director Dr. Terry K. Hunter at the National Center for the Study of Civil Rights and African-American Culture at Alabama State University in Montgomery, Alabama. FACETS also designed and produced a twelve page illustrated catalogue for this presentation. FACETS partnered with True Vine Health Services, which engages underserved youth from Orangeburg, Bamberg and Calhoun counties by introducing them to various activities designed to help students develop life skills and to expand the knowledge base of middle school students who have previous public school art experience and provided exposure to qualitative arts instruction that otherwise may not have been available.

### Results

This activity also sensitized students to the socio-cultural significance of the arts and assisted in assessing and planning programming needs of student populations served by FACETS. Through this collaboration with True Vine, FACETS established a network of students who may participate in future programming. This activity has determined the extent to which programming can effectively impact cultural and social awareness through the arts.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
802	Human Development and Family Well-Being
806	Youth Development

### Outcome #11

#### 1. Outcome Measures

Number of youth and adult CYFAR-participants who increase knowledge and skills in community visioning and strategic planning activities

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	80	153

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

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

The Children, Youth, Family Education and Research (CYFAR) program was established to work with at-risk audiences and to build community level capacity to improve the lives of youth and families. Skills targeted are team building, leadership, civic engagement and service learning.

##### What has been done

Youth and adults in the program participated in visioning and strategic planning.

##### Results

86% of the program participants increased their knowledge.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
806	Youth Development

**Outcome #12****1. Outcome Measures**

Number of youth and adult CYFAR participants who practice skills  
Intergenerational Service-Learning or Community Development Projects

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2000	12

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The Children, Youth, Family Education and Research (CYFAR) program was established to work with at-risk audiences and to build community level capacity to improve the lives of youth and families. Skills targeted are team building, leadership, civic engagement and service learning.

**What has been done**

A total of 12 youth and adults worked to engage in intergenerational service-learning and community development projects such as Operation Military Kids projects.

**Results**

Youth gained a sense of community responsibility.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development
608	Community Resource Planning and Development

**Outcome #13****1. Outcome Measures**

Number of CYFAR-related youth and adult participants who gain skills in  
Leadership Development training

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	90	188

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The Children, Youth, Family Education and Research (CYFAR) and the Builders of Tomorrow programs were established to work with at-risk audiences and to build community level capacity to improve the lives of youth and families. Skills targeted are team building, leadership, civic engagement and service learning.

**What has been done**

Leadership training was conducted for volunteers.

**Results**

A total of 70 youth and adults in the CYFAR program and 90 youth in the Builders of Tomorrow programs demonstrated leadership, team-building, and civic engagement skills.

**4. Associated Knowledge Areas**

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

**Outcome #14**

**1. Outcome Measures**

Number of CYFAR-related youth and adult participating in deliberative dialogue forums or activities

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	65	3

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

**Issue (Who cares and Why)**

The Children, Youth, Family Education and Research (CYFAR) program was established to work with at-risk audiences and to build community level capacity to improve the lives of youth and families. Skills targeted are team building, leadership, civic engagement and service learning.

**What has been done**

Educational programs were conducted to train youth and adults in leadership skills and prepare them for deliberative dialogues.

**Results**

Three youth in the program co-led forums which addressed community issues.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
608	Community Resource Planning and Development
802	Human Development and Family Well-Being

**Outcome #15**

**1. Outcome Measures**

Number of CYFAR-related youth participants who learn entrepreneur concepts and/or practice entrepreneur skills

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	100	3

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The Children, Youth, Family Education and Research (CYFAR) program was established to work with at-risk audiences and to build community level capacity to improve the lives of youth and families. Skills targeted are team building, leadership, civic engagement and service learning.

**What has been done**

Youth were mentored in entrepreneur concepts and practiced entrepreneurial skills learned.

**Results**

Three youth were involved in entrepreneurial projects.

**4. Associated Knowledge Areas**

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

**Outcome #16****1. Outcome Measures**

Number of youth participants who improve academic performance as a result of participating in CYFAR-related activities

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	60	106

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The Children, Youth, Family Education and Research (CYFAR) program was established to work with at-risk audiences and to build community level capacity to improve the lives of youth and families. Skills targeted are team building, leadership, civic engagement and service learning.

**What has been done**

Educational workshops were conducted in six schools. 1890 set-up a computer lab, which is opened daily.

**Results**

Teachers have reported that youth participants have improved their academic performance as a result of participating in programs. Also, with internet and printing capabilities, youth are able to research and complete academic assignments.

**4. Associated Knowledge Areas**

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

**Outcome #17****1. Outcome Measures**

The rate of economic growth in rural areas of the state will increase.

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Characteristics of the New/Global Economy provide both opportunities and threats to residents of rural communities. Residents, farmers and businesses in rural areas are interested in capitalizing on available resources and opportunities for economic growth.

**What has been done**

Research is ongoing to examine emerging threats and opportunities to rural economies and investigate the efficacy of alternative public policies for mitigating threats and promoting opportunities. Researchers will document regional innovation systems in the South that may serve as models for South Carolina economic development.

**Results**

Research is continuing.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
610	Domestic Policy Analysis
608	Community Resource Planning and Development
609	Economic Theory and Methods

**Outcome #18****1. Outcome Measures**

Knowledge of bankruptcy filings increase

**2. Associated Institution Types**

•1890 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

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

**Issue (Who cares and Why)**

Small business administrations, individuals and schools should benefit from the data. A pattern of Chapter 13 bankruptcy filings are on the increase.

**What has been done**

Filings are being reviewed during the timeframe of 1996-2003. Data was collected from various sources.

**Results**

Research is on-going.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
801	Individual and Family Resource Management
608	Community Resource Planning and Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #19****1. Outcome Measures**

Formulating development policies for low and moderate incomes

**2. Associated Institution Types**

•1890 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	{No Data Entered}	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Information to assist policymakers in formulating development policies that ensure low and moderate income neighborhoods as major beneficiaries. Provide information to appropriate strategy to revitalize poor neighborhoods and enhance the quality of life. Assist in community development efforts.

**What has been done**

Tasks have been completed to determine the extent to which low to moderate income individual and communities benefit from community development in South Carolina. An ESRI ArcView map document has been created for each target city. Geographic boundaries of neighborhoods identified. City officials were contacted by visits, mail, telephone and/or email.

**Results**

Research is on-going.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
803	Sociological and Technological Change Affecting Individuals, Families and Communities
608	Community Resource Planning and Development
802	Human Development and Family Well-Being

**Outcome #20****1. Outcome Measures**

The rate of technological change in agriculture.

**2. Associated Institution Types**

- 1890 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Implications for producers, consumers, trade officials and trade policymakers. Derive technological improvement and efficiency gains in the hog and poultry sectors under NAFTA.

**What has been done**

The researchers were able to discuss and specify a model to address the impact of NAFTA on the environment.

**Results**

Research is on-going.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
609	Economic Theory and Methods
803	Sociological and Technological Change Affecting Individuals, Families and Communities
610	Domestic Policy Analysis

**V(H). Planned Program (External Factors)****External factors which affected outcomes**

- Economy

**Brief Explanation****V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

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

**Evaluation Results**

Through the use of an evaluation and assessment instrument, FACETS determined how effective the program is and determined the adjustments required to meet the needs of the participants. Follow-up with public school art instructors can further assist FACETS with assessment of the information retention level of these students. More importantly, knowledge application can be monitored to determine if these students are more advanced than their classmates as a result of having been involved in the FACETS experience.

**Key Items of Evaluation**



**Program #8**

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

**1. Name of the Planned Program**

Integrated Pest 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
211	Insects, Mites, and Other Arthropods Affecting Plants	50%	50%	50%	50%
216	Integrated Pest Management Systems	50%	50%	50%	50%
<b>Total</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	0.0	0.0	2.3	1.0
<b>Actual</b>	0.0	0.0	2.9	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
0	0	252298	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	240805	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	661367	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

With increased global travel and the threat of bioterrorism, the world faces growing concern over arthropod borne diseases. A multifaceted approach involving surveys, systematics, ecology, genetics, and natural enemies of arthropods of medical and veterinary importance is underway and offers the best approach to solving problems related to arthropod borne diseases.

Research is continuing to obtain pest management tools for high value specialty crop growers in South Carolina. Specific initiatives include obtaining the regulatory clearance of crop protection chemicals for high value specialty crops and minor uses on major crops with special emphasis on reduced risk chemicals,

Through ongoing research, the behavior and management of structure infesting black carpenter ants and subterranean termites will be better understood, allowing for improved control programs that target these pest species.

Researchers are examining the effectiveness of transgenic cotton on target insect pests and research methods for managing non-target insects with elevated pest status. This includes research into treatment thresholds, insecticide resistance, and sampling methods.

Researchers are working to discover and develop safe and economical methods to control honey bee pests in an integrated management approach.

Educational programs across the state make new knowledge available to producers and citizens.

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

Growers, Extension agents, pest managers, nursery owners and home owners.

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	0	0	0	0
2007	509	408	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	0

**Patents listed**

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	8	8

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

**Output Target**

**Output #1**

**Output Measure**

- Disclosures

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #2**

**Output Measure**

- Licenses

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #3**

**Output Measure**

- New Products, processes, procedures or policies

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	0

**Output #4**

**Output Measure**

- National media placements

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	0	1

**Output #5**

**Output Measure**

- Publications

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	10	8

**Output #6**

**Output Measure**

- Percent increase of outside funds through grants, contracts and gifts

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	15	0

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Increased knowledge of the evolution of resistance in pest species
2	Improved strategies for managing ants and other household pests
3	Number of people reporting increased knowledge as a result of participating in IPM programs and workshops.

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

Increased knowledge of the evolution of resistance in pest species

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Growers will benefit from transgenic technology which has allowed advances in protecting cotton from certain insect pests.

**What has been done**

Researchers are examining the effectiveness of transgenic cotton on target insect pests and research methods for managing non-target insects with elevated pest status. This includes research into treatment thresholds, insecticide resistance, and sampling methods.

**Results**

Research is continuing

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants
216	Integrated Pest Management Systems

**Outcome #2****1. Outcome Measures**

Improved strategies for managing ants and other household pests

**2. Associated Institution Types**

•1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	0	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

*Pachycondyla chinensis* (Emery), an invasive, stinging ant endemic to southeastern Asia. This ant poses a threat to public health in the United States. Systemic allergic reactions due to *P. chinensis* stings leading to anaphylaxis previously were documented in Japan and South Korea, but recently a case of anaphylaxis was documented in South Carolina.

**What has been done**

Research is underway to increase the awareness of this species in professional and public communities and gain a foundation for developing an integrated pest management program.

**Results**

Research is continuing

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
211	Insects, Mites, and Other Arthropods Affecting Plants

**Outcome #3**

**1. Outcome Measures**

Number of people reporting increased knowledge as a result of participating in IPM programs and workshops.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	414

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

**Issue (Who cares and Why)**

There is a need to increase the level of adoption of environmentally and economically sound integrated pest management practices.

**What has been done**

Over 128 programs were conducted. Over 500 peach production 37,000 cotton production acres used IPM strategies.

**Results**

Over 81% of the program participants reported increased knowledge. Approximately 80% of cotton acreage in SC is planted in cotton varieties genetically modified (GMO) for insect pest resistance. Cotton growers who produce GMO cotton and adopted the revised scouting and treatment thresholds developed by Clemson personnel have reduced their number of spray applications from an average of 13 per season to approximately 2-5 sprays. A recent survey indicated that cotton growers who usually or always follow Clemson University IPM program recommendations realized an increase of \$58 per acre in net returns above growers who never or seldom follow recommendations.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
216	Integrated Pest Management Systems

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

**External factors which affected outcomes**

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

**Brief Explanation**

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

**1. Evaluation Studies Planned**

- After Only (post program)

**Evaluation Results**

**Key Items of Evaluation**

**Program #9**

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

**1. Name of the Planned Program**

4-H Youth Development and 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
801	Individual and Family Resource Management	4%	4%	4%	4%
802	Human Development and Family Well-Being	15%	15%	15%	15%
803	Sociological and Technological Change Affecting Individuals, Families and Communities	10%	10%	10%	10%
806	Youth Development	71%	71%	71%	71%
<b>Total</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	26.0	13.0	0.0	3.0
<b>Actual</b>	40.0	13.0	0.0	3.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
1113353	531483	0	620596
1862 Matching	1890 Matching	1862 Matching	1890 Matching
1113353	531483	0	620596
1862 All Other	1890 All Other	1862 All Other	1890 All Other
701553	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

a)County programs will provide a wide variety of experiential educational opportunities and curricula through a number of different delivery modes such as clubs, short term interest programs, camps, etc. dependent upon their personnel and budgets.

)Emphasis will be on volunteer-led educational programming that provides productive youth-adult partnerships.

c)In addition statewide curriculum training for volunteers, staff and youth will be provided for replication at the club and county levels.

d)Provide programs designed to meet the needs of limited-resource audiences.Eight basic life skill programs were implemented.

e)Provided money management skills through formal and informal educational opportunities.

f)Created and strengthened community partnerships.



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

- a) All youth between the ages of nine and nineteen
- ) All youth between the ages of five and eight
- c) Parents and other adults interested in the development of South Carolina youth.
- i) 30-44 parent and young adult
- ii) 45-64 Mature volunteer
- iii) 65+ Grandparent and Senior Volunteer.
- d) Youth and grades PreK-12

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	2950	0	68000	0
2007	2054	12335	81029	62875

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	0

**Patents listed**

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	2	0

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

**Output Target**

**Output #1**

**Output Measure**

- Number of educational workshops conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	2500	3597

**Output #2**

**Output Measure**

- Total number of adult volunteers ( including non-Extension staff) trained in club, school enrichment, and special interest program delivery and management in all 4-H project areas.

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	300	1353

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

O No.	OUTCOME NAME
1	Number of trained adult volunteers and staff, ( including non-Extension staff) who teach subject matter and life skills to youth, meeting S.C. educational standards by utilizing National 4-H Cooperative Curriculum System (4-HCCS) curriculum materials as available
2	Number of 4-H youth, ages 9-19 reached by volunteers in 4-H projects
3	Number of youth, ages 5-8, who participate in (4-HCCS Exploring the Treasures of 4-H curriculum, and non-competitive) programs in order to sample the subject matter offered by Extension/4-H
4	Number of hours volunteers contribute to 4-H youth development programs
5	Number of 4-H clubs meeting standards of quality as indicated in "4-H Honor Club" standards during the current 4-H year
6	Number of youth submitting completed 4-H project record books this year in all 4-H project areas.
7	Number of youth who learn about the environment and develop life skills through a variety of Youth Camping opportunities
8	Number of military youth (children with a parent in the military) integrated into 4-H Camping (Day and Overnight) programs
9	Number of military youth (children with a parent in the military) integrated into 4-H Projects
10	Number of youth who gain knowledge in leadership and citizenship projects areas
11	Number of youth who provide leadership to service learning projects for the community and to improve themselves, and help others
12	Number of youth participating in service learning projects for the community and to improve themselves, and help others
13	Number of youth who set and achieve financial goals through regular savings
14	Number of youth who develop skills in workforce preparation through non-formal educational experiences
15	Number of youth who gain knowledge and skills about plants, livestock and/or pets.
16	Number of youth who develop hunter safety skills
17	Number of youth who develop knowledge and skills in science, engineering, and technology (including electricity, computers, pontoon classroom, etc.).
18	Number of school teachers/volunteers who implement Science Discovery Series curriculum in their classrooms
19	Number of youth completing Science Discovery Series activities
20	Number of youth gain knowledge in nutrition and fitness
21	Number of youth who make healthy food choices after participating in selected food and nutrition programs/projects
22	Number of youth who demonstrate their skills in food preparation after participating in selected food and nutrition programs/projects
23	Number of youth who gain knowledge in natural resources and shooting sports
24	Number of youth who develop good decision-making skills
25	Number of youth who develop and improve communication skills through speaking and debating
26	Identifying existing social and educational services to Hispanics
27	Improving the teaching and achievement of middle school-aged rural students
28	Alternative and augmentative communication/assistive technology

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

Number of trained adult volunteers and staff, ( including non-Extension staff) who teach subject matter and life skills to youth, meeting S.C. educational standards by utilizing National 4-H Cooperative Curriculum System (4-HCCS) curriculum materials as available

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2000	2767

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for an effective and sustained volunteer management system for 4-H Youth Development programs.

**What has been done**

Over 2,767 adults were trained in 4-H project areas.

**Results**

Volunteers were equipped for leadership roles and have made positive impacts in their communities, trained youth with new knowledge and skills, and provided positive contributions to their communities. A money management course was implemented. A pre and post test was conducted. As a result of training, the scores increased over 70%.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #2****1. Outcome Measures**

Number of 4-H youth, ages 9-19 reached by volunteers in 4-H projects

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	52000	19897

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for an effective and sustained volunteer management system for 4-H Youth Development programs.

#### What has been done

Volunteer adults trained 19,897 youth in various 4-H projects.

#### Results

Youth reported that they felt the care and concern of adult volunteers who taught them and would likely continue the mentoring given by 4-H volunteers. The youth did not want certain activities to end. They were eager to participate/learn based on the educational opportunities being offered.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

### Outcome #3

#### 1. Outcome Measures

Number of youth, ages 5-8, who participate in (4-HCCS Exploring the Treasures of 4-H curriculum, and non-competitive) programs in order to sample the subject matter offered by Extension/4-H

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

#### 3a. Outcome Type:

Change in Knowledge Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	100	1099

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

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

There is a need to offer 4-H projects and activities to youth at a younger age throughout the state. Young people learn and adapt better at an early age.

##### What has been done

1099 youth ages 5-8 participated in 4-H projects in order to sample the subject matter offered by Extension 4-H. The number including duplicated contacts was 766.

##### Results

Youth demonstrated knowledge and skills learned in 4-H projects and activities. Over half of this number of youth continued in 4-H projects as they get older.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

### Outcome #4

#### 1. Outcome Measures

Number of hours volunteers contribute to 4-H youth development programs

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	4000	13969

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for an effective and sustained volunteer management system for 4-H Youth Development

**What has been done**

Volunteers contributed over 13,969 hours of service to 4-H.

**Results**

The value of volunteer hours contributed to 4-H in SC was \$234,162.

**4. Associated Knowledge Areas**

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

**Outcome #5****1. Outcome Measures**

Number of 4-H clubs meeting standards of quality as indicated in "4-H Honor Club" standards during the current 4-H year

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10	37

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

All 4-H clubs should meet standards of quality as indicated in '4-H Honor Club.'

**What has been done**

37 clubs met standards of quality.

**Results**

37 clubs met standards of quality. 4-H Honor Club standards mean that clubs meet established criteria to offer a quality program. The 1890 4-H Youth Development Program provided quality educational training and service to youth in targeted areas.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #6**

**1. Outcome Measures**

Number of youth submitting completed 4-H project record books this year in all 4-H project areas.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	40	118

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

**Issue (Who cares and Why)**

Youth are encouraged to keep accurate records to reflect their involvement in 4-H activities.

**What has been done**

118 youth submitted record books in various 4-H projects.

**Results**

Record books require youth to organize their thoughts, develop a good grasp of spoken and written language, learn to meet deadlines, and present neatly organized work. These skills are valued and are transferable into the life of the youth outside of 4-H.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #7**

**1. Outcome Measures**

Number of youth who learn about the environment and develop life skills through a variety of Youth Camping opportunities

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1000	3360

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

**Issue (Who cares and Why)**

Youth should be exposed to positive experiences that help them develop physically, intellectually, and socially. They have opportunities for such development by participating in camping activities.

**What has been done**

3360 youth participated in activities to help them strengthen reasoning skills by undertaking challenging tasks. Camping activities helped them develop new friendships, learn independence, and offered opportunities for physical development. Some of the camps engaged in learn-by-doing basic life skill experiences. There were indoor as well as outdoor activities.

**Results**

Skills learned as a result of camping involvement are valued and can help youth to grow into positive, contributing members of society. An 1890 technology youth camp afforded children the opportunity to build a computer and take it home at the end of camp.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #8**

**1. Outcome Measures**

Number of military youth (children with a parent in the military) integrated into 4-H Camping (Day and Overnight) programs

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	25	7

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

**Issue (Who cares and Why)**

4-H camping programs can assist families with parents in the military by exposing youth to positive experiences that help them develop physically, intellectually, and socially.

**What has been done**

Seven youth from military families participated in camping activities to help them strengthen reasoning skills by undertaking challenging tasks, to help them develop new friendships, to learn independence, and to offer opportunities for physical development.

**Results**

Skills learned as a result of camping involvement are valued and can help youth to grow into positive, contributing members of society.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #9**

**1. Outcome Measures**

Number of military youth (children with a parent in the military) integrated into 4-H Projects

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1000	1648

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

4-H youth development programs can assist families with parents in the military (National Guard and Reserve) through the Operation Military Kids program by exposing youth to positive educational, recreational, and social support experiences.

**What has been done**

1,648 youth participated in 4-H activities to help them strengthen reasoning skills, develop new friendships, learn independence, and offer opportunities for physical development.

**Results**

Skills learned as a result of 4-H involvement are valued and can help youth to grow into positive, contributing members of society.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #10****1. Outcome Measures**

Number of youth who gain knowledge in leadership and citizenship projects areas

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2200	8106

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth have basic needs that include developing a sense that they are valuable, contributing members of the family and the community. They need to increase their knowledge in leadership and citizenship. Youth were taught parliamentary procedure. By using Roberts Rules of Order, youth learned rules for conducting business at meetings and public gatherings.

**What has been done**

A total of 502 programs were conducted in 4-H Leadership, Personal Development and Citizenship reaching 6,076 youth. A total of 14,975 youth represented the number of duplicated contacts this year. 286 youth received officer training to strengthen leadership skills. In addition, youth were trained as ambassadors and gave 12 presentations about 4-H to other groups. Youth learned how to discover leadership opportunities, develop creative service plans, and enhance youth adult partnerships. In other projects youth learned about county government and job opportunities. They learned lessons designed to help build a foundation for participation in the political election process.



**Results**

88% gained knowledge and skills as a result of their involvement in 4-H Leadership, Personal Development and Citizenship. 1890 youth participated in the state leadership conference and were able to utilize their parliamentary procedure skills. One 1890 youth was elected as a district representative at a State Leadership Conference.

**4. Associated Knowledge Areas**

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

**Outcome #11****1. Outcome Measures**

Number of youth who provide leadership to service learning projects for the community and to improve themselves, and help others

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	350	413

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth have basic needs that include developing a sense that they are valuable, contributing members of the family and the community. Youth are prepared to meet life challenges through educational processes, while developing life skills.

**What has been done**

A total of 413 youth provided leadership to service learning projects for the community and to improve themselves and help others. Youth are challenged to become leaders at school, in their communities and amongst their peers.

**Results**

Skills learned as a result of 4-H involvement are valued and can help youth to grow into positive, contributing members of society. Youth got an opportunity to see how various academic subjects could apply to life experiences.

**4. Associated Knowledge Areas**

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

**Outcome #12****1. Outcome Measures**

Number of youth participating in service learning projects for the community and to improve themselves, and help others

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	800	918

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth have basic needs that include developing a sense that they are valuable, contributing members of the family and the community.

**What has been done**

A total of 918 youth participated in service learning projects for the community and to improve themselves and help others. Projects included youth making diapers out of recycled t-shirts for families in Honduras. A total of 37,300 diapers were sent. In addition, youth made baby blankets for a local agency. An 1890 Club grew collard greens in a learn-by-doing approach; from breaking up the soil to fertilizing to harvesting.

**Results**

Skills learned as a result of 4-H involvement are valued and can help youth to grow into positive, contributing members of society. The youth learned to work as a team. Relationships were formed youth-to-youth as well as youth-to-agent. The harvest of collard greens were plentiful. Before leaving for the Thanksgiving holiday, each youth carried collard greens home to their families as well as to the community. The school's faculty and staff were able to get some of the vegetable. A hot meal for some of the senior citizens in the community was provided with some of the vegetables grown in the garden.

**4. Associated Knowledge Areas**

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

**Outcome #13****1. Outcome Measures**

Number of youth who set and achieve financial goals through regular savings

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	20	1635

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth need to learn how to make wise decisions regarding how to manage money. Many young people are unskilled in managing their personal finances. Money management skills are important for all youth, but critical for limited-resource youth. Helping youth to become informed and responsible consumers will positively impact virtually every area of their lives now and in the future.

**What has been done**

A total of 1,635 youth participated in High School Financial Planning Programs. 4-H and youth development programs gave youth an opportunity to set and achieve financial goals through regular savings. In addition to implementing the Money Management courses in high schools 1890 also assisted youth in a federal job training program with saving money.

### Results

All youth reported an increase in self-confidence while presenting before groups and gained knowledge and skills related to financial management. Youth were given pre and post test. Scores were significantly higher on the post-test. One 1890 class decided to begin an investment club.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development
801	Individual and Family Resource Management

### Outcome #14

#### 1. Outcome Measures

Number of youth who develop skills in workforce preparation through non-formal educational experiences

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Condition Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	40	2086

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

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

Youth need knowledge in workforce preparation and opportunities to develop assets such as communication skills, organizational abilities, wise decision-making skills, independence, and self-confidence and should demonstrate caring.

##### What has been done

-A total of 2,086 youth developed workforce preparation skills.

##### Results

Skills learned as a result of 4-H involvement are valued and can help youth to grow into positive, contributing members of society.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
806	Youth Development

### Outcome #15

#### 1. Outcome Measures

Number of youth who gain knowledge and skills about plants, livestock and/or pets.

#### 2. Associated Institution Types

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10000	12655

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth need opportunities to develop assets such as communication skills, organizational abilities, wise decision-making skills, independence, and self-confidence and should demonstrate caring. They have opportunities for such development by participating in the 4-H Plants and Animals project.

**What has been done**

669 programs on Plants and Animals were conducted, reaching 12,655 youth. A total of 25,372 youth represented the number of duplicated contacts this year. 5,062 youth were reached through volunteer efforts.

**Results**

91% of the youth gained knowledge and skills as a result of their involvement in this 4-H project. Youth participated in livestock (beef, dairy, lamb, goat, horse) shows, swine and pullet projects, and horse clubs. Over 1,000 youth participated in a series of learning stations showing how food gets from the farm to the grocery store. 88 youth participated in the Eastern National 4-H Horse Round-up Hippology contest; 287 participated in the state contest. Youth also learned vegetable gardening. Effective gardening principles were taught to youth. Youth gained knowledge on soil preparation, crop fertilization and pest management practices through hands-on experiences. On-site demonstrations and visual aids enhanced the learning process. An 1890 group planted a garden and learned first hand how to take care of the garden. Collard greens were taken home and enough were produced for faculty and staff to get some.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #16****1. Outcome Measures**

Number of youth who develop hunter safety skills

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	6000	290

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth interested in hunting need to learn skills in hunter safety.

**What has been done**

A total of 290 youth developed hunter safety skills as a result off participating in the 4-H Hunter Safety Program.

**Results**

All youth enrolled in the Hunter Safety Program learned knowledge and skills in hunting safety.

**4. Associated Knowledge Areas**

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

**Outcome #17****1. Outcome Measures**

Number of youth who develop knowledge and skills in science, engineering, and technology (including electricity, computers, pontoon classroom, etc.).

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Quantitative Target</b>	<b>Actual</b>
2007	1100	3058

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Science and technology skills are needed if youth are to keep up with the rapidly changing society. The 4-H program in SC offers youth the opportunity to develop knowledge and skills in science, engineering and technology.

**What has been done**

A total of 177 programs reached 2,998 youth. Duplicated contacts in this program were 4,502. 1890 established, TechBridge, a unique program focusing on the digital divide with 60 youth. 1890 partnered with a computer company to bridge the digital divide of limited-resource youth. Youth learned by doing. The program was implemented in 5 counties. Academic enhancement in reading, writing and math through the use of technology, introduction to keyboarding through the use of Mavis Beacon Software, employability skills training, internet explorer and safety were a few of the areas covered.

**Results**

82% of the youth gained knowledge in the programs. Youth learned 'e-radio' skills, worked on the computer to edit voice recording, planned and produced an e-radio program, which purpose was to provide a platform for youth to speak out for military kids. Youth participated in GPS/GIS and Leggo Robotics projects and 4-H2O Pontoon Classroom. In the 1890 TechBridge Program, students were introduced to computer assembly and software. Youth were tracked regarding their progress. All students improved at least one grade level in their reading and math skills. The motto was 'Build Me Keep Me' as the youth carried the computers home once camp was over.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities

**Outcome #18****1. Outcome Measures**

Number of school teachers/volunteers who implement Science Discovery Series curriculum in their classrooms

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	20	1

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The Science Discovery Series program provides teachers and volunteers with curriculum that supplements their in-class/club science curriculum.

**What has been done**

This year one teacher selected the Series and taught 19 youth.

**Results**

All youth reported gaining knowledge in this Series.

**4. Associated Knowledge Areas**

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

**Outcome #19****1. Outcome Measures**

Number of youth completing Science Discovery Series activities

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	200	19

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

The Science Discovery Series program provides teachers and volunteers with curriculum that supplements their in-class/club curriculum.

**What has been done**

This year one teacher selected the Series and taught 19 youth.

**Results**

All youth reported gaining knowledge in this Series.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #20**

**1. Outcome Measures**

Number of youth gain knowledge in nutrition and fitness

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	6000	6621

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Gaining knowledge and skills in nutrition and fitness can help youth make decisions that will positively affect their lifestyles as they mature into adulthood.

**What has been done**

474 Nutrition, Fitness, and Safety programs were conducted reaching 6,621 youth. Duplicated contacts in this program were 12,181. A Jump Into Fitness day camp was held for ages 5-8 and a Healthy Lifestyles Challenge was conducted. The Color Me Healthy Program was designed to stimulate all the senses of young children. Children learned to eat healthier while enjoying physical activity.

**Results**

Over 95% reported that they gained knowledge and skills in this project.

**4. Associated Knowledge Areas**

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

**Outcome #21****1. Outcome Measures**

Number of youth who make healthy food choices after participating in selected food and nutrition programs/projects

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	4000	3335

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth need to learn how to make healthy food choices. 4-H offers youth opportunities to make such choices through the Nutrition, Fitness, and Safety program.

**What has been done**

A total of 3,335 youth were reported as having made healthy food choices after they completed the project.

**Results**

Over 95% reported that they gained knowledge and skills in this project.

**4. Associated Knowledge Areas**

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

**Outcome #22****1. Outcome Measures**

Number of youth who demonstrate their skills in food preparation after participating in selected food and nutrition programs/projects

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	150	3200

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth should be able to demonstrate knowledge and skills learned in the Food and Nutrition project.

**What has been done**

Over 3,200 youth participated in activities to demonstrate their knowledge gained in food preparation.

**Results**

Over 95% reported that they gained knowledge and skills in this project.

**4. Associated Knowledge Areas**

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

**Outcome #23****1. Outcome Measures**

Number of youth who gain knowledge in natural resources and shooting sports

**2. Associated Institution Types**

- 1862 Extension



**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2000	3041

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

23. Youth need knowledge in and opportunities to develop assets such as communication skills, organizational abilities, wise decision-making skills, independence, and self-confidence and should demonstrate caring. They have opportunities for such development through participating in the 4-H Natural Resources and Shooting Sports project.

**What has been done**

314 programs on Natural Resources and Shooting Sports were conducted, reaching 3,041 youth. A total of 5,648 youth represented the number of duplicated contacts this year. 1,195 youth were reached through volunteer efforts.

**Results**

Over 92% of the youth gained knowledge and skills as a result of their involvement in this 4-H project.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #24****1. Outcome Measures**

Number of youth who develop good decision-making skills

**2. Associated Institution Types**

- 1862 Extension
- 1890 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1500	1181

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Youth need knowledge in workforce preparation and opportunities to develop assets such as communication skills, organizational abilities, wise decision-making skills, independence, and self-confidence and should demonstrate caring. They have opportunities for such development through participating in the 4-H Youth Development and Families projects.

**What has been done**

Over 7,122 Youth and Family programs were conducted reaching over 127,114 people.

**Results**

Based on a sample survey of just two educational activities involving 755 youth, agents and volunteers report that over 90% of the youth demonstrated good decision-making skills in projects such as Consumer Judging and Character Critters.

**4. Associated Knowledge Areas**

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

**Outcome #25****1. Outcome Measures**

Number of youth who develop and improve communication skills through speaking and debating

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10	156

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Research shows that having good communication skills can be a sign of good self-confidence and is one of the characteristics that employees look for when hiring. Youth have the opportunity to develop such skills in the 4-H Communications and Expressive Arts project.

**What has been done**

Over 156 youth were reached through the 4-H Communications and Expressive Arts project.

**Results**

95% of the participants in the project developed and improved their communication skills.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development

**Outcome #26****1. Outcome Measures**

Identifying existing social and educational services to Hispanics

**2. Associated Institution Types**

•1890 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

To educate and inform state agencies and communities about the impact and/or lack of social and educational services.

**What has been done**

Utilized established evidence data base of Hispanics. Reviewed medicaid and WIC data.

**Results**

Research on-going

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities
802	Human Development and Family Well-Being

**Outcome #27**

**1. Outcome Measures**

Improving the teaching and achievement of middle school-aged rural students

**2. Associated Institution Types**

•1890 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

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

**Issue (Who cares and Why)**

Improving the teaching and achievement of middle school students by pre-service teachers in rural settings.

**What has been done**

Trainings/institutes were held and data collected. Examined pre-service teachers' construction of professional beliefs, skills and practices during field-based experiences.

**Results**

Research is on-going.

**4. Associated Knowledge Areas**

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

**Outcome #28**

**1. Outcome Measures**

Alternative and augmentative communication/assistive technology

**2. Associated Institution Types**

•1890 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	{No Data Entered}	0

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

**Issue (Who cares and Why)**

Train graduate and undergraduate students in the field of speech pathology and audiology as well as health care administrators and practitioners.

**What has been done**

A survey targeting current knowledge and effective practices was disseminated.

**Results**

Research on-going.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
802	Human Development and Family Well-Being
806	Youth Development
803	Sociological and Technological Change Affecting Individuals, Families and Communities

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

**External factors which affected outcomes**

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

**Evaluation Results**

**Key Items of Evaluation**

**Program #10**

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

**1. Name of the Planned Program**

Environmental Conservation for Wildlife

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
135	Aquatic and Terrestrial Wildlife	100%	100%	100%	100%
	<b>Total</b>	100%	100%	100%	100%

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	4.0	0.0	0.0	0.0
<b>Actual</b>	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
133602	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
133602	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
111627	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

1. Develop and deliver educational programs and products on wildlife conservation and management on private lands.
2. Develop web-based educational programs on wildlife conservation and management on private lands.
3. Examine urban wildlife planning issues from the macro level-regions, states, counties, and cities-to the individual site.
4. Educate involved stakeholders of the diverse issues and concerns involved in attracting and/or managing existing urban/suburban wildlife.
5. Encourage civic and community/governmental leaders to plan for urban wildlife "green spaces" which include waterways and impoundments and educate each about the importance of urban wildlife and its priority on the urban/suburban agenda nationwide.
6. Assist and educate in the development and implementation of urban wildlife plans (i.e. green space, waterways and forested sections) and models for area municipalities and developers.
7. Continue to provide training to public and private sector natural resource professionals (NWCOs) on best management practices for nuisance wildlife management
8. Conduct Pond Clinics and programs to educate landowners/managers and Aquatic Pesticide Applicators about the most up to date control recommendations for aquatic weed management.
9. Furnish up to date information to landowners and managers concerning aquatic weed management and control recommendations.
10. Use trained volunteers to promote wildlife management programs among their peers.

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

State, local government and civic leaders, business owners, developers, home and garden clubs, area homeowners, wildlife specialists, state and federal biologists and administrators, potential volunteers, farm and forest owners, landowners/homeowners, Nuisance Wildlife Control Operators, natural resource professionals, Aquatic Pesticide Applicators, general public, farmers, ranchers, poultry and swine producers, foresters, urban, suburban and rural residents, urban planners and managers, concerned citizens, land owners/managers, agency personnel, citizens of South Carolina, Extension agents, youth, municipal officials, and local community groups statewide, children in school, after-school, summer and 4-H, programs, Extension administrators, and support staff

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	20000	1000	0	0
2007	3020	3500000	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	0

**Patents listed**

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

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

**Output Target**

**Output #1**

**Output Measure**

- Number of people completing educational workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	5000	3020

**Output #2**

**Output Measure**

- Number of workshops conducted

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	100	129

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Number of urban wildlife plans (i.e. greenspace, waterways, forested sections) and models for area developers and municipalities developed
2	Number of people reporting knowledge gained
3	Number of people using practices from this program



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

Number of urban wildlife plans (i.e. greenspace, waterways, forested sections) and models for area developers and municipalities developed

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	5	0

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

**Issue (Who cares and Why)**

**What has been done**

**Results**

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
135	Aquatic and Terrestrial Wildlife

**Outcome #2****1. Outcome Measures**

Number of people reporting knowledge gained

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2800	2580

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

**Issue (Who cares and Why)**

Over three fourths of the wildlife habitat in SC is owned by private landowners, primarily forest and farm owners. Consequently there is an information need related to managing wildlife on these lands and improving aquatic wildlife habitat.

**What has been done**

Over 129 educational programs were taught, including pond and beaver management, vitex eradication, aquatic species, and fisheries and wildlife habitat management.

The Outdoor Channel reaches 35 million viewers with episodes of National Wild Turkey Federation shows presented by Extension.

**Results**

Over 85% of the program participants reported knowledge gain.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
135	Aquatic and Terrestrial Wildlife

**Outcome #3****1. Outcome Measures**

Number of people using practices from this program

**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>
2007	2000	1647

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

Over three fourths of the wildlife habitat in SC is owned by private landowners, primarily forest and farm owners. Consequently there is an information need related to managing wildlife on these lands and improving aquatic wildlife habitat.

**What has been done**

Over 129 educational programs were taught, including pond and beaver management, vitex eradication, aquatic species, and fisheries and wildlife habitat management.

**Results**

64% of those who gained knowledge actually reported using practices learned.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
135	Aquatic and Terrestrial Wildlife

**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**

No activity was reported in this project for this year.

**V(I). Planned Program (Evaluation Studies and Data Collection)****1. Evaluation Studies Planned**

- After Only (post program)

**Evaluation Results**

**Key Items of Evaluation**

**Program #11**

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

**1. Name of the Planned Program**

Sustainable Forest 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
122	Management and Control of Forest and Range Fires	30%	30%	30%	30%
123	Management and Sustainability of Forest Resources	50%	50%	50%	50%
124	Urban Forestry	20%	20%	20%	20%
<b>Total</b>		100%	100%	100%	100%

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

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

Year: 2007	Extension		Research	
	1862	1890	1862	1890
<b>Plan</b>	5.0	0.0	0.0	0.0
<b>Actual</b>	2.2	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
133602	0	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
133602	0	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
344301	0	0	0

**V(D). Planned Program (Activity)**

**1. Brief description of the Activity**

1. Develop and conduct training programs to teach sustainable forestry principles
2. Utilize and expand demonstrations of longleaf pine restoration, even and uneven-age management, pine straw production, and alternative management systems throughout the state.
3. Provide natural resource professionals with programming on longleaf pine ecology, management technology, and hardwood management.
4. Write and produce news articles and radio programs and other forms of mass media on longleaf pine management and ecology.
5. Inform landowners of the economic and environmental benefits of using BMPs in all forest management operations.
6. Work with established groups within the forestry community to support and promote appropriate training and outreach programs related to sustainable forest management.
7. Use trained master landowners to promote forest management among their peers.
  
8. Utilize and expand existing demonstrations of hardwood (bottomland and upland) management to provide an understanding of even age and uneven age management systems.
- 9 Utilize the TOP Logger and other logger education programs to train loggers on sustainable forestry and alternative silvicultural systems.
10. Promote the use of prescribed fire.
11. Educate public officials and urban communities about the benefits of urban forests.
12. Develop methods of control and educate professionals and family forest landowners on these to eliminate or control invasive pests of forests and enhance forest health.

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

Private landowners, loggers, professional resource managers, foresters and other natural resource professionals, road building and site preparation contractors, family forest landowners, consulting foresters that assist private landowners, and the general public

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

**1. Standard output measures**

**Target for the number of persons (contacts) reached through direct and indirect contact methods**

	<b>Direct Contacts Adults</b>	<b>Indirect Contacts Adults</b>	<b>Direct Contacts Youth</b>	<b>Indirect Contacts Youth</b>
<b>Year</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>	<b>Target</b>
<b>Plan</b>	6000	250	0	0
2007	3023	54050	0	0

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

**Patent Applications Submitted**

<b>Year</b>	<b>Target</b>
<b>Plan:</b>	0
2007 :	0

**Patents listed**

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

**Number of Peer Reviewed Publications**

	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Plan</b>			
2007	0	0	0

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

**Output Target**

**Output #1**

**Output Measure**

- Number of people completing educational workshops

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	3000	3023

**Output #2**

**Output Measure**

- Number of training programs conducted to teach sustainable forestry principles

<b>Year</b>	<b>Target</b>	<b>Actual</b>
2007	100	114

**V(G). State Defined Outcomes****V. State Defined Outcomes Table of Content**

<b>O No.</b>	<b>OUTCOME NAME</b>
1	Number of people reporting increased knowledge
2	Number of people practicing skills learned
3	Number of landowner acres impacted.
4	Number of acres with 25% increase in productivity
5	Landowner contacts by master landowners
6	Number of landowners regenerating after harvest
7	Number of loggers completing logger education

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

Number of people reporting increased knowledge

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	2000	2892

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for participants to use best management practices learned in sustainable management of forest systems and other natural resources

**What has been done**

Over 114 educational programs were conducted. 18,380 additional acres were impacted this year through the Master Naturalist program. Over 1,000 acres were reported with 25% increase in productivity. Approximately 136,000 additional acres were under conservation forestry in the Lowcounty Forest Conservation Initiative. 84 conservation management plans were written.

**Results**

Approximately 96% of the participants reported knowledge gained and reported that the knowledge gained helped save \$75,000 and earn \$375,000.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #2****1. Outcome Measures**

Number of people practicing skills learned

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1200	1092

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for participants to use best management practices learned in sustainable management of forest systems and other natural resources.

**What has been done**



Of the 2,892 persons gaining knowledge, 1,092 persons reported that they actually practiced skills that they learned.

### Results

Approximately 96% of the participants reported knowledge gained.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

### Outcome #3

#### 1. Outcome Measures

Number of landowner acres impacted.

#### 2. Associated Institution Types

•1862 Extension

#### 3a. Outcome Type:

Change in Condition Outcome Measure

#### 3b. Quantitative Outcome

Year	Quantitative Target	Actual
2007	10000	154380

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

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

There is a need for participants to use best management practices learned in sustainable management of forest systems and other natural resources.

##### What has been done

18,380 additional acres were impacted this year through the Master Naturalist program. Over 1,000 acres were reported with 25% increase in productivity. Approximately 136,000 additional acres were under conservation forestry in the Lowcountry Forest Conservation Initiative.

### Results

Approximately 96% of the participants reported knowledge gained and reported that the knowledge gained helped save \$75,000 and earn \$375,000.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

### Outcome #4

#### 1. Outcome Measures

Number of acres with 25% increase in productivity

#### 2. Associated Institution Types

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	1000	1000

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for participants to use best management practices learned in sustainable management of forest systems and other natural resources.

**What has been done**

Over 114 educational programs were conducted reaching over 3,023 people.

**Results**

Over 1,000 acres were reported with 25% increase in productivity.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #5****1. Outcome Measures**

Landowner contacts by master landowners

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	20	9

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for participants to use best management practices learned in sustainable management of forest systems and other natural resources.

**What has been done**

Twenty-three Master Tree Farmer/Master Woodland Owner programs reached over 190 persons.

**Results**

Nine landowner contacts were made by master landowners.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #6**

**1. Outcome Measures**

Number of landowners regenerating after harvest

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10	1

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for participants to use best management practices learned in sustainable management of forest systems and other natural resources.

**What has been done**

One-on-one contact and consultations were made with landowner.

**Results**

One landowner reported thinning.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources

**Outcome #7****1. Outcome Measures**

Number of loggers completing logger education

**2. Associated Institution Types**

•1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Quantitative Target	Actual
2007	10	247

**3c. Qualitative Outcome or Impact Statement****Issue (Who cares and Why)**

There is a need for participants to use best management practices learned in sustainable management of forest systems and other natural resources.

**What has been done**

TOP Logger education programs were conducted. A course on Ethics for Natural Resource Professionals was offered as an on-line course to foresters and wildlife biologists.

**Results**

Over 247 loggers completed the training and all reported knowledge gained. All received a certificate of completion.

**4. Associated Knowledge Areas**

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

**Brief Explanation**

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

**1. Evaluation Studies Planned**

- After Only (post program)

**Evaluation Results**

**Key Items of Evaluation**