

# 2011 Louisiana State University Combined Research and Extension Annual Report of Accomplishments and Results

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## I. Report Overview

### 1. Executive Summary

The LSU Agricultural Center (LSU AgCenter) includes the Louisiana Agricultural Experiment Station (LAES) and the Louisiana Cooperative Extension Service (LCES). The mission of the LSU AgCenter is to enhance the quality of life for the people of Louisiana through research and extension programs that develop the best use of natural resources, conserve and protect the environment, enhance the development of existing and new agricultural and related enterprises, develop human and community resources, and fulfill the acts of authorization and mandates of state and federal legislative bodies.

The LSU AgCenter is one of 11 campuses in the LSU System. Headquartered in Baton Rouge, LA, the LSU AgCenter shares physical facilities with the LSU A&M campus, which is the state's flagship university. There are 11 research and extension departments on campus, 16 agricultural experiment stations located across the state and extension offices in all 64 parishes of Louisiana.

In FY2011, approximately 8.7% of the LSU AgCenter's overall budget was provided by federal funds; 53.1% by state funds and 38.2% provided by self-generated funds, grants, contracts and gifts. Limited resources at all levels are making it increasingly difficult to maintain vital LSU AgCenter programs. State budget cuts exceeding 29% since 2008 have significantly affected programs jointly funded with state and federal dollars. Reduced operating and travel budgets, coupled with a reduction of over 314 FTEs across the organization in the last 5 years greatly challenge the ability to maintain the traditional level of program diversity across both research and extension. Nearly 100 of the 314 FTE reductions were from retirements, resulting in the loss of faculty and staff with a wealth of knowledge and expertise in major program areas. To meet these challenges, every program and unit in the LSU AgCenter has been under critical review during the past year to assess impact and relevance to the LSU AgCenter's role, scope and mission and a new operational business plan has been developed. Programs in the business plan, measures are proposed to improve program efficiency and effectiveness. Some programs are being consolidated or realigned while others are being eliminated. Across program areas, we are increasing reliance on new technologies and tools such as social media and virtual delivery methods. Increased reliance on external funding and dependence on trained volunteers have allowed the continued delivery of many key programs that we consider to be the highest priority. Sustaining strong, high quality research and extension programs in core mission areas will continue to be our goal as we adjust to these new budget realities.

During this reporting period, the LSU AgCenter directed research and extension education programs in twelve (12) main program areas including the five (5) NIFA priority areas: Global Food Security and Hunger; Climate Change; Sustainable Energy; Childhood Obesity and Food Safety and seven (7) state-identified priority areas: Consumer Horticulture, Ornamentals and Turf; Family Development; Youth Development; Forestry and Forest Products; Community Development; Human Nutrition and Food (adults) and Family Resource Management. This report reflects the merging of previously-identified state planned program areas into the NIFA priority areas.

Throughout this report, there are indications of the significant impact budget reductions have had on the LSU AgCenter's program delivery emphasis. Much of the organization's effort in the past year has focused on responding to economic challenges.

Significant effort was made this year to more effectively communicate the impact of LSU AgCenter program efforts to key stakeholders and to engage them in charting a path for the future of the LSU AgCenter. Part of that effort to communicate LSU AgCenter efforts and impacts included the development of Parish Profiles and Experiment Station Profiles. The two-page documents are a snapshot of the parish or station which highlight major program impacts and identify emerging issues and LSU AgCenter efforts planned to address those issues. Communicating the public value of LSU AgCenter programs was also part of this process.

### **Research Project Summary**

Louisiana Agricultural Experiment Station scientists, located on the Louisiana State University and Agricultural and Mechanical College campus and at branch Research Stations located across the state, continue to serve stakeholders by conducting research relevant to Louisiana agriculture. Research results are disseminated to producers, consultants, agribusinesses, government agencies, and other stakeholders, both directly and through extension agents and faculty.

### **Extension Program Summary**

In spite of the reduction in the number of extension faculty and staff positions in the last 5 years, Louisiana Cooperative Extension Service (LCES) effectively maintained delivery of all main programs in each of Louisiana's 64 parishes. These programs were conducted by Extension faculty housed in parish, regional and campus offices. Programs are created in response to needs identified by stakeholders. Research-based information is disseminated to Extension clientele through time-honored delivery methods such as group meetings, one-on-one contacts and printed media, as well as through more recent delivery methods such as Web-based technology and social media. Significant among the changes in extension this year are the merger of the FCS program with the 4-H program resulting in the new Department of 4-H Youth and Family Development. The FCS programming thrust within the newly-merged department emphasizes childhood obesity, nutrition and health, while de-emphasizing family resource management and family development program efforts. These two programming areas will transition to youth-focused audiences in 4-H youth development.

Local financial salary support is being sought at the parish level to bring Louisiana more in line with the three partner funding support model and clearly help bridge the gap left by reductions in federal and state funding. This was initiated in 2004 and a goal of 20% local funding (salary support) has been set in order to bring the state up to the southern region average of salary and benefits support for agents and clerical staff housed in parish LCES offices provided by local governments. This is in addition to the office and other support provided by parish governments throughout the state. The value of salary and office support in Louisiana is over \$5.0 million dollars annually.

Over the past several years, increased emphasis has been placed on accountability and reporting and significant changes have been made in the extension reporting system. Additional training was conducted, more frequent reporting was required and more individuals were required to report into the system in order to achieve more complete documentation of overall program effort. **NOTE: Extension numbers contained within this report are a reflection of the effort reported by extension faculty and may show variance from previous years due to the change in the institution's data collection process.**

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

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	281.0	0.0	147.0	0.0
Actual	288.0	0.0	145.2	0.0

**II. Merit Review Process**

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

- Internal University Panel
- External Non-University Panel
- Combined External and Internal University External Non-University Panel

**2. Brief Explanation**

Historically, NIFA program reviews have been conducted on a rotational basis across departments and primary program areas. Additionally, stakeholders provide annual reviews of LSU AgCenter programs through the advisory leadership system. In light of the current budget situation and because NIFA no longer supports these program reviews, the most intense reviews during the reporting year have been conducted by an internal team of LSU AgCenter administrators and various stakeholder groups which have evaluated each and every program and position in the LSU AgCenter in an effort to identify the most effective programs and to formulate a plan for eliminating, reducing and/or combining less effective programs in order to maximize limited resources. Key factors considered in making specific programmatic decisions include the program's relevance to the LSU AgCenter mission, impact on the state, economic development potential, responsiveness to stakeholder needs, industry and clientele support and extramural funding opportunities. A detailed business plan outlining the findings and recommendations of this group has been developed and is providing guidance for significant program modifications throughout the organization.

**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 of traditional stakeholder groups
- Survey of traditional stakeholder individuals

**Brief explanation.**

Input is sought from both external and internal stakeholders. Extension programs are guided by input from overall parish (county) advisory leadership councils, subject matter specific advisory groups which meet on an as-needed basis and various grass roots meetings of stakeholders across the state. Several LSU AgCenter departments also have advisory committees which guide their efforts. Commodity groups and collaborating agencies provide valuable input into LSU AgCenter research and extension programs.

Internally, members elected to the LSU AgCenter's Faculty Council represent the interests of faculty in administrative and programmatic issues. Additionally, extension and research faculty convene at various times during the year in a format known as LSU AgCenter Exchange (ACE) Groups. ACE Groups primarily function to:

- Improve communication and networking among research and extension faculty with similar responsibilities in program areas
- Exchange information about new program direction and completed projects
- Identify priorities within each program area
- Identify gaps in research and extension programming and activities.

**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 External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

**Brief explanation.**

A concerted effort is made by the institution to identify, recruit and retain stakeholders who provide valuable input into the programming process. It is intended that these stakeholders represent the target population for each program area and that they have a vested interest in the success of the program. The stakeholders are often identified by LSU AgCenter faculty who have had an opportunity to communicate with them through various extension and research efforts or because someone knows of the prospective stakeholder's interest in a particular issue or targeted outcome. Commodity groups and partnering agencies and organizations also provide valuable input into this process.

**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 with invited selected individuals from the general public
- Survey of selected individuals from the general public

**Brief explanation.**

Input is primarily collected from stakeholders through the Advisory Leadership Council System. Advisory Council meetings were held in all 64 parishes (counties) during this reporting period. Reports of significant program accomplishments and impacts are given and typically a modified nominal group technique is used to identify and prioritize critical issues which call for subsequent LSU AgCenter programming. Additionally, input is collected from stakeholders through annual base program evaluations, focus group meetings, meetings with commodity groups and using various surveys. Grass roots meetings, other listening sessions and various forms of dialogue using social media tools are being used more frequently to collect stakeholder input.

**3. A statement of how the input will be considered**

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

**Brief explanation.**

Stakeholder input is used to establish program direction for both research and extension including the identification of short, medium and long term targeted outcomes and the inputs and outputs necessary to achieve those outcomes. As resources become scarcer, the use of stakeholder input is critical in identifying areas in which resources can be best leveraged and which programs have the greatest public value. The input was used extensively in the development of the LSU AgCenter Business Plan and significant organizational restructuring has occurred because of that input.

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

Our stakeholders have asked us to focus on the following issues:

- Multiplying agricultural productivity and sustaining natural resources
- Conserving and protecting the environment
- Enhancing and developing agricultural and value-added enterprises
- Expanding workforce development by developing leadership and community resources
- Providing positive youth development experiences for Louisiana youth
- Promoting healthy and productive families, youth and individuals, focusing specifically on childhood obesity

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IV. Expenditure Summary

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>
5078139	0	3874233	0

<b>2. Totaled Actual dollars from Planned Programs Inputs</b>				
<b>Extension</b>			<b>Research</b>	
	<b>Smith-Lever 3b &amp; 3c</b>	<b>1890 Extension</b>	<b>Hatch</b>	<b>Evans-Allen</b>
<b>Actual Formula</b>	5482049	0	4475460	0
<b>Actual Matching</b>	5482049	0	4475460	0
<b>Actual All Other</b>	20348141	0	47567005	0
<b>Total Actual Expended</b>	31312239	0	56517925	0

<b>3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous</b>				
<b>Carryover</b>	3801935	0	471354	0

**V. Planned Program Table of Content**

<b>S. No.</b>	<b>PROGRAM NAME</b>
1	Global Food Security and Hunger
2	Climate Change
3	Sustainable Energy
4	Childhood Obesity
5	Food Safety
6	Consumer Horticulture, Ornamentals & Turf
7	Forestry and Forest Products
8	Human Nutrition and Food (Adult)
9	Youth Development
10	Community Development
11	Family Development
12	Consumer Economics

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

**Program # 1**

**1. Name of the Planned Program**

Global Food Security and Hunger

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	5%		5%	
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		5%	
202	Plant Genetic Resources	0%		5%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		5%	
204	Plant Product Quality and Utility (Preharvest)	5%		5%	
205	Plant Management Systems	30%		10%	
211	Insects, Mites, and Other Arthropods Affecting Plants	5%		10%	
212	Pathogens and Nematodes Affecting Plants	5%		15%	
213	Weeds Affecting Plants	5%		5%	
216	Integrated Pest Management Systems	10%		10%	
302	Nutrient Utilization in Animals	5%		5%	
307	Animal Management Systems	15%		5%	
311	Animal Diseases	5%		5%	
601	Economics of Agricultural Production and Farm Management	5%		5%	
704	Nutrition and Hunger in the Population	5%		5%	
	<b>Total</b>	100%		100%	

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

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

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	50.0	0.0	98.0	0.0
Actual Paid Professional	43.2	0.0	89.7	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
822821	0	2849055	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
822821	0	2849055	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
3054129	0	35621225	0

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

**1. Brief description of the Activity**

Specific subject matter areas included in this initiative are:

- Animals and animal production systems
- Crops and crop production systems
- Commercial fruit and vegetable production systems
- Aquaculture production systems and coastal fisheries
- Food insecurity and hunger

Activities include extension outreach using group and individual methods and mass media, research studies; result demonstrations; and field days, all incorporating the latest technological advances and use of social media.

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

Livestock producers; row crop producers; crop consultants; commercial fruit and vegetable producers; agribusinesses; crawfish farmers; members of the coastal fishing sector; commercial and private pesticide applicators; consumers of food and fiber; and Louisiana families and individuals living in poverty.

**3. How was eXtension used?**

The resources provided through eXtension were used to supplement and enhance learning experiences provided by LSU AgCenter faculty. The state cotton specialist is working with a team to refurbish the Cotton CoP site. The resources on recreational pond management have been used substantially and the state aquaculture specialist serves on the Fresh Water Aquaculture CoP and as the coordinator for the recreational pond section. Extension entomology faculty lead the All about Blueberries CoP and participated in the Invasive Species CoP.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	301941	85509	51575	13456

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

**Patent Applications Submitted**

Year: 2011

Actual: 1

**Patents listed**

Assay for Transmissible Spongiform Encephalopathies

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	87	171	258

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web page views

Year	Actual
2011	3634281

**Output #2**

**Output Measure**

- Number of Web page visits

Year	Actual
2011	2935449

**Output #3**

**Output Measure**

- Number of new pesticide certifications (private and commercial) issued

<b>Year</b>	<b>Actual</b>
2011	946

**Output #4**

**Output Measure**

- Number of pesticide applicator recertifications (private and commercial) renewed

<b>Year</b>	<b>Actual</b>
2011	5862

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

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

O. No.	OUTCOME NAME
1	Percentage of Louisiana's livestock producers who adopt best practices
2	Percentage of Louisiana's crop producers who adopt best practices
3	Percentage of Louisiana commercial fruit and vegetable producers who adopt best practices
4	Percentage of Louisiana aquaculture producers who adopt best practices.
5	Percentage of Louisiana individuals below poverty level who adopt 3 or more management practices regarding the use of limited resources to prepare and consume healthier foods.

## **Outcome #1**

### **1. Outcome Measures**

Percentage of Louisiana's livestock producers who adopt best practices

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

- 1862 Extension
- 1862 Research

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

Producers experienced severe drought and high temperatures during 2011. Limited pasture for grazing significantly increased the need for stored forages and supplemental feeds to keep livestock healthy and productive. Limited availability of stored forages such as hay along with high feed prices threatened the economic sustainability of many livestock producers in Louisiana. Assessing animal adaptability, designing effective production systems that include disease prevention and resistance, genetics, reproduction, physiology, nutrition and the environment are key concerns.

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

Programs addressed beef, dairy, equine, small ruminant, swine and poultry species emphasizing animal health, nutrition, genetics, reproductive physiology and comparative production management systems. Methods for extending the use and increasing the nutritive value of stored forages were examined. Extension agents and specialists generated adoption of recommended practices through programs such as Master Cattle Producer and Master Horseman, producer meetings, field days, demonstrations and educational publications using Web-based and social media technologies.

#### **Results**

Adding by-products from ethanol production to stored forages was proven to extend the use of stored forages during periods of drought, increase the nutritive value of stored forages and reduce the waste of stored forages during feeding.

Balancing swine and poultry rations based on individual amino acid content of feeds was proven to provide adequate protein intake to maintain animal health and performance, reduce total feed costs for livestock producers and reduce the impact of animal production on the environment.

Poultry integrators adopted this practice to reduce feed costs and reduce the impact of poultry production on the environment.

Research indicated the level of phosphorus in animal diets could be reduced without compromising animal health and reproductive performance.

Economical cattle, swine and poultry diets were developed that minimized nitrogen and phosphorus entry into the environment without decreasing productivity.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
302	Nutrient Utilization in Animals
307	Animal Management Systems
311	Animal Diseases
601	Economics of Agricultural Production and Farm Management

#### Outcome #2

##### 1. Outcome Measures

Percentage of Louisiana's crop producers who adopt best practices

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

Louisiana's cropping systems pose agronomic, economic, and environmental challenges. Variable soils, climatic conditions, and pest pressures affect crop yield and input costs, and commodity price instability is a concern. Major crops include corn, cotton, rice, grain sorghum, soybeans, sugarcane, and wheat. Research in variety development, plant nutrition, pest management, cultural practices, and farm management are necessary to sustain crop production as a viable economic industry.

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

LSU AgCenter programs addressed yield, cultural practices, and pest management through plant resistance and optimal pesticide use focusing on maximizing net economic return per acre. Plant breeding efforts focused on rice, sugarcane, and wheat. Producer meetings, field days, demonstrations and on-farm verification and educational publications using Web based information and social media technologies were used to promote adoption. Louisiana Master Farmer and Pesticide Certification Programs emphasized adoption of best practices and environmentally responsible use of pesticides.

### **Results**

Producers have realized increased yield and economic returns as a result of adopting practices such as efficient use of precision ag technologies, conservation tillage, improved management of crop residues and the use of newly released varieties of major crops, such as rice, sugarcane and wheat. The adoption of revised crop fertilization recommendations allowed growers to produce economically optimal yields and to maximize returns per acre. Collaborative extension and research efforts in the area of weed, insect, and disease management provided growers with environmentally-sound treatment options for targeted pests. New private and commercial applicators (N=946) were certified and 5862 individuals recertified in 123 Pesticide Certification Workshops conducted by extension agents and specialists who educated applicators on pesticide labels and the safe handling and application of pesticides.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
102	Soil, Plant, Water, Nutrient Relationships
201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management

## **Outcome #3**

### **1. Outcome Measures**

Percentage of Louisiana commercial fruit and vegetable producers who adopt best practices

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

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2011	0

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

**Issue (Who cares and Why)**

Vegetable and fruit production generates over \$300 million (value-added) for Louisiana's economy each year. The greatest needs were to: improve production efficiency and quality and enhance sustainability and increase profitability; address the high cost of labor and enhance profitable marketing of products; develop current information on cultivars for fresh market and processing venues; maintain the integrity of seed programs; address pest management concerns; and food safety.

**What has been done**

Growers participated in workshops, meetings and field days and used Web-based tools on production of commercial fruits and vegetables including blueberries, sweet potatoes, pecans and greenhouse tomatoes. Field faculty addressed emerging disease issues and threats to productivity. Sweet potato research included new approaches to sweet potato production, disease and pest management, economics, postharvest storage and processing and evaluation of sweet potato breeding lines. MarketMaker, a system that locates markets for agricultural products, was launched.

**Results**

Citrus production is stable due to educational efforts for introduced species such as the Asian citrus psyllid. Web and social media sites such as the eXtension project, "All about Blueberries," provide information transfer to a wider, more diverse audience. MarketMaker connected farmers with new markets to sell crops for higher market value than traditionally received. Virus-tested foundation sweet potato seed allowed producers to realize improved yields and profit with no increase in cost of production. More efficient means of producing and storing sweet potato improved the economics for both processing and fresh market producers. A new sweet potato variety has been identified as being highly suited for frozen products and a Louisiana based processor in its second year of operation, is interested in having growers produce this line for their needs. A sweet potato food safety crisis communication plan was developed for the Louisiana sweet potato industry.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships

201	Plant Genome, Genetics, and Genetic Mechanisms
202	Plant Genetic Resources
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
601	Economics of Agricultural Production and Farm Management

**Outcome #4**

**1. Outcome Measures**

Percentage of Louisiana aquaculture producers who adopt best practices.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2011	0

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

**Issue (Who cares and Why)**

Rising input costs, global competition and increased regulations have strained Louisiana's \$416 million aquaculture industry, impacting over 2,100 farms. Sustained aquaculture production and its benefits for rural economies will depend upon enhanced profitability, diversification and improved production efficiencies.

**What has been done**

Efforts have focused on refinement of crawfish management strategies, nutritional requirements for alligator and finfish production, technologies necessary for commercially viable marine baitfish culture, and techniques for improving spawning and production practices for various aquatic species. Findings have been extended to practitioners and scientists via publications, individual contacts, Web-based resources, and producer meetings conducted by Extension Sea Grant agents and fisheries specialists. Research priorities identified by producers are being

incorporated into future research.

**Results**

Overall average adoption of 10 of the 12 targeted recommended practices was over 50%. Adoption of more efficient harvesting and management practices continues to decrease expenses for many of Louisiana's 1,200-plus crawfish farms by up to 20% while further increasing production in the \$168 million industry. Lowering feed costs through improved formulations and feed conversion rates will provide direct benefits for the state's \$28 million alligator industry. Reproductive and other biological data are providing fundamental knowledge necessary to develop viable coastal baitfish aquaculture. New markets in aquaculture germplasm may eventually allow creation and sale of genetic improvements worldwide. Commercialization of alternative species will allow additional options for the state's producers. The \$416 million aquaculture industry in Louisiana will become more sustainable and profitable as a result of these efforts.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
302	Nutrient Utilization in Animals
307	Animal Management Systems
311	Animal Diseases
601	Economics of Agricultural Production and Farm Management

**Outcome #5**

**1. Outcome Measures**

Percentage of Louisiana individuals below poverty level who adopt 3 or more management practices regarding the use of limited resources to prepare and consume healthier foods.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2011	0

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

**Issue (Who cares and Why)**

Eighteen percent of Louisiana families with children and 23% of adults without children live in poverty. Poverty rates are higher among African Americans (44%) and children 18 and under (31%)--the highest in the U.S. Louisiana is 18th in U.S. for SNAP participation: 31% White, 60% Black, and 3% Hispanic. For school lunch programs, 68% are Free and Reduced-Price students. Only 25% of adults eat five servings of fruits and vegetables daily and only 39% are physically active. Louisiana ranks 48th in infant mortality rate in the U.S.

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

SNAP educators and agents enrolled 1,513 families and 17,897 youth in 61 parishes into the program. Also, 3,383 adults and 39,524 youth received food access and nutrition lessons contributing to a total of 131,390 contacts. Gardening lessons were received by 12,562 and schools led 18 Family Nutrition Nights. International Programs provided expertise to developing countries to enhance global food supply. Group and individual methods and mass media were used for outreach to clients. Various technology and Web-based methods were also used.

#### **Results**

Regarding client practices, surveys indicated 28% of the target audience more frequently planned their meals; 29% compared prices more often; 52% less often ran out of food at month's end; and 74% washed their hands before eating. Twenty per cent (20%) of clients also reported consumption of at least 2 fruits daily which was an increase from 12% last year while 32% reported consumption of at least 3 vegetables representing a 5% increase from the same time period. Sixty per cent were usually active 30 minutes/day for at least 4 days/week. School and community gardens at 200 low-income sites provided produce thus improving food access.

International efforts supported USAID/Ghana under USG-funded Monitoring, Evaluation and Technical Support Services (METSS) in the Feed the Future Initiative to collect baseline data regarding household food security, health, nutrition and maternal and child mortality.

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

<b>KA Code</b>	<b>Knowledge Area</b>
704	Nutrition and Hunger in the Population

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

##### **External factors which affected outcomes**

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

##### **Brief Explanation**

#### **V(I). Planned Program (Evaluation Studies)**

##### **Evaluation Results**

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}

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

**Program # 2**

**1. Name of the Planned Program**

Climate Change

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
101	Appraisal of Soil Resources	5%		15%	
112	Watershed Protection and Management	25%		0%	
132	Weather and Climate	5%		5%	
136	Conservation of Biological Diversity	0%		5%	
201	Plant Genome, Genetics, and Genetic Mechanisms	0%		15%	
202	Plant Genetic Resources	0%		5%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%		15%	
205	Plant Management Systems	35%		5%	
206	Basic Plant Biology	0%		15%	
403	Waste Disposal, Recycling, and Reuse	5%		10%	
404	Instrumentation and Control Systems	10%		10%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	15%		0%	
	<b>Total</b>	100%		100%	

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

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

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	23.0	0.0	9.0	0.0
Actual Paid Professional	40.2	0.0	6.3	0.0
Actual Volunteer	1.0	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
764198	0	99282	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
764198	0	99282	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2836532	0	101655	0

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

#### 1. Brief description of the Activity

Specific subject matter areas and programs included in this initiative are:

- Animal waste handling and utilization
- Water quality
- Environment and natural resources
- Sustainable housing
- Wetland plants
- Louisiana Master Farmer and Master Cattle Producer

Activities include extension outreach using group and individual methods and mass media, research experiments; result demonstrations; and field days, all incorporating the latest technological advances and use of social media.

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

Coastal managers, Louisiana wetlands stakeholders, commercial and recreational fishermen, participants in the Louisiana Master Farmer and Master Cattle Producer programs, other agricultural producers, livestock producers and Louisiana homeowners, builders and retrofitters.

#### 3. How was eXtension used?

The resources provided by the Home Energy eXtension site and the Flood CoP were used to supplement educational efforts in this area. Home Energy eXtension is an outreach mechanism for our sustainable housing program and one of our state specialists serves on the national leadership team. The specialist and the LaHouse staff have contributed many articles. Home Energy eXtension promotional materials have been distributed to all parish offices and at LaHouse. The specialist has also reviewed many articles and FAQs, and serves on the Ask an Expert function of the site. She has also conducted several Home Energy eXtension webinars.

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

#### 1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	112538	99899	49475	175

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

**Patent Applications Submitted**

Year: 2011

Actual: 1

**Patents listed**

Biomass Gasifier System with Low Energy and Maintenance Requirements

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	22	52	74

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web page views

Year	Actual
2011	2165475

**Output #2**

**Output Measure**

- Number of Web page visits

Year	Actual
2011	1761905

**Output #3**

**Output Measure**

- Number of LaHouse Resource Center visitors

<b>Year</b>	<b>Actual</b>
2011	3600

**Output #4**

**Output Measure**

- Number of building professionals who participated in sustainable housing educational activities (seminars, tours, technical assistance)

<b>Year</b>	<b>Actual</b>
2011	1750

**Output #5**

**Output Measure**

- Number of consumer contacts in LaHouse sustainable housing and landscaping educational activities

<b>Year</b>	<b>Actual</b>
2011	1670

**Output #6**

**Output Measure**

- Number of LaHouse Facebook followers (Likes)

<b>Year</b>	<b>Actual</b>
2011	180

**Output #7**

**Output Measure**

- Number of farmers certified through the Louisiana Master Farmer program

<b>Year</b>	<b>Actual</b>
2011	11

**Output #8**

**Output Measure**

- Number of LaHouse Website visitors

<b>Year</b>	<b>Actual</b>
2011	10300

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

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

O. No.	OUTCOME NAME
1	Percentage of clientele who adopt recommended practices for building, retrofitting and maintaining sustainable homes
2	Percentage of clientele who adopt recommended practices regarding livestock waste handling and utilization
3	Adoption of recommended practices by certified Louisiana Master Farmers that lead to reduced non-point source pollution in Louisiana waterways
4	Coordination of research and extension activities addressing environment and natural resource economics across the southeastern U.S.including sea level rise in Gulf of Mexico
5	Determine the effects of various wetland plants in reducing wetland loss
6	Determine ways to reduce the impact of animal waste on the environment through research discovery and development.

**Outcome #1**

**1. Outcome Measures**

Percentage of clientele who adopt recommended practices for building, retrofitting and maintaining sustainable homes

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2011	0

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

**Issue (Who cares and Why)**

High performance, sustainable housing addresses national, state and household needs for energy efficiency to reduce dependence on non-renewable resources; environmental protection; disaster mitigation; human health and safety; and, economic recovery.

**What has been done**

The Extension Sustainable Housing/building science program included demonstrations at the LaHouse Resource Center ([lsuagcenter.com/LaHouse](http://lsuagcenter.com/LaHouse)); virtual outreach via the Website and Facebook; 54 hands-on training classes for weatherization providers (WAP); 3 green building seminars w/ demo houses for contractors; 4 Healthy Home courses for health and housing pros, periodic Lead Certified (RRP) training for contractors, and consumer healthy home awareness outreach activities as well as a research study of subfloor insulation systems. LaHouse exhibits were visited by 3,467 and 556 building professionals.

**Results**

LaHouse consumer visitors adopt an average of 14 energy saving practices and building professionals adopt an average of 7 best building practices. Website had 10,218 visits, 41,932 page views. WAP classes trained 482 weatherization providers who are making energy saving improvements to thousands of low-income resident homes. 136 contractors learned regionally appropriate green building best practices. 207 contractors became Lead Certified Renovators who now protect children and workers from lead poisoning with lead safe work practices. 101 childcare providers, health and housing pros learned principles of healthy housing to improve environmental health of families and children. Research results identified moisture resistant subfloor insulation systems for raised homes in flood zones, a key problem/question since Hurricane Katrina.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures

#### Outcome #2

##### 1. Outcome Measures

Percentage of clientele who adopt recommended practices regarding livestock waste handling and utilization

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

More than 280,000 tons of animal and poultry waste are produced in Louisiana each year. Producers must handle this waste in an environmentally-friendly manner to minimize the potential negative effects waste can have on waterways. Animal waste improperly applied to or stored on land can result in runoff that can reduce surface and groundwater quality by introducing excessive levels of nutrients such as nitrogen and phosphorus, organic matter and pathogens into the environment.

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

Educational efforts and field trials have addressed the effectiveness of implementing environmental best management practices to minimize the effects of production animal agriculture on water quality. Research-based information has been utilized to conduct field studies that evaluated proper manure/litter application rates while reducing nutrient runoff. Producers have been educated about composting agricultural byproducts through individual contacts and group meetings.

###### **Results**

Using best management practices for soil and manure/litter analyses to develop, implement, and utilize nutrient management plans, livestock and poultry producers improved management of waste. Environmental stewardship, environmental best management practices, air quality, and nutrient abatement educational efforts were conducted for equine, beef, dairy, poultry, and other

animal agriculture producers. By following research-based extension recommendations, animal producers stored manure and litter according to recommendations, applied poultry litter and manure at recommended rates and times, and reestablished riparian zones.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
403	Waste Disposal, Recycling, and Reuse

#### Outcome #3

##### 1. Outcome Measures

Adoption of recommended practices by certified Louisiana Master Farmers that lead to reduced non-point source pollution in Louisiana waterways

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

Over 70 percent of LA's waterways are listed on EPA's 303d list as impaired and not suitable for fishing or swimming. Many of these impairments are thought to result from non-point pollution emanating from watershed land use practices such as agriculture, forestry, individual sewage treatment, home landscape, construction practices and other urban and suburban conditions.

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

LSU AgCenter continued its Master Farmer Program to educate landowners and encourage adoption of BMPs to mitigate runoff from various land use. Currently over 3,000 farmers are enrolled in this program. Other water quality efforts included programs to educate and encourage dairymen to empty lagoons on a 3-5 year rotation; research and extension outreach on lagoon design systems; and education of homeowners and municipalities about runoff control. Research continued on a variety of new BMPs that reduce impact of added agricultural chemicals on water quality.

###### **Results**

The LA Master Farmer Program includes 8 hours of classroom time for participants and visits to model farms with implemented required BMPs in order to gain Master Farmer certification from the La. Dept. of Ag and Forestry. This year 11 farmers were certified, and collectively since its inception 135 farmers have been certified by meeting prescribed criteria to protect soil, water, animals, plants, and air. These certified farmers control or own over 1 million acres in LA. Other applied research and educational programs on animal waste and homeowner issues resulted in the Tchefuncte and Bogue Chitto rivers and most of the Lake Pontchartrain segments along with the Tangipahoa River, an important economic and recreational waterway that runs through the middle one of our most populated areas and of the state's highest dairy production, being removed by EPA and DEQ from the 303d list and now open for fishing and swimming.

**4. Associated Knowledge Areas**

KA Code	Knowledge Area
112	Watershed Protection and Management
403	Waste Disposal, Recycling, and Reuse

**Outcome #4**

**1. Outcome Measures**

Coordination of research and extension activities addressing environment and natural resource economics across the southeastern U.S.including sea level rise in Gulf of Mexico

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2011	0

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

**Issue (Who cares and Why)**

The health and well-being of Louisiana's citizens depend on its resource-based economy. The state's natural capital assets must be efficiently managed for both current and future generations. Resource management includes wise use and careful analysis of resource allocation decisions made today and their potential impacts. While research and extension efforts related to natural resource conservation, use, and management have increased in recent years, efforts have been fragmented and widely dispersed in the field of natural resource economics.

**What has been done**

The Center for Natural Resource Economics & Policy (CNREP) is a team of 26 economists and policy professionals that coordinate the research and extension activities of natural resource management within the LSU AgCenter and 11 other institutions and resource management agencies in the southeastern US. The CNREP is helping Louisiana overcome resource management challenges by engaging and supporting research and extension faculty in socioeconomic initiatives related to energy, coastal and inland wetlands, fisheries, wildlife, land, and water resources.

**Results**

In 2011, the center completed a three-year project to develop a time- and risk-adjusted decision model for evaluating the costs and benefits of competing restoration methods for restoring land in coastal Louisiana. Maximizing the efficiency of restorations is of vital importance as Louisiana attempts to allocate limited federal funding towards a major crisis of coastal wetland loss. The state has lost more than 1800 square miles of coastal land in the past century alone. Much of the loss is due to the compounded effects of sea level rise and subsidence. This is a daunting problem given that most of coastal Louisiana is very low in elevation, only one to five feet above sea level. The economists of CNREP within the LSU AgCenter have developed this decision model in conjunction with resource managers from the Louisiana Office of Coastal Protection and Restoration and the US Army Corps of Engineers. Dissemination of decision model findings is enabling these state and federal programs to improve the efficiency through which billions in funding will be spent in the coming years to combat the effects of relative sea level rise on coastal communities.

**4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
112	Watershed Protection and Management
132	Weather and Climate

**Outcome #5**

**1. Outcome Measures**

Determine the effects of various wetland plants in reducing wetland loss

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Condition Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2011	0

### 3c. Qualitative Outcome or Impact Statement

#### Issue (Who cares and Why)

Louisiana has the highest soil erosion rate in the continental United States of almost 17 square miles of land area per year according to the USGS. This equates to an area the size of a football field lost every hour. This erosion is caused by a variety of factors including climate change, human activities, and natural processes. The high rate of land loss threatens Louisiana industries and natural resources that are essential to the entire nation including seafood, natural gas, petroleum, global imports and habitats for numerous wildlife and marine species. Erosion can be combated by vegetating the coastline. The need to develop and distribute certified coastal plant materials has been identified as a quality control measure.

#### What has been done

The LSU AgCenter Center developed the Coastal Plants Program (CPP), a multi-disciplinary and multi-institutional program of coastal plant research. The CPP mission is to develop genetically improved plant varieties and applied restoration techniques to combat wetland deterioration. The CCP also exchanges information through a cooperative research and extension program, which supports an expanded group of Louisiana wetland stakeholders. CPP scientists worked with the Louisiana Department of Agriculture and Forestry to develop and implement standards for the production of certified plant material.

#### Results

The CPP increased vegetative stock of 16 cultivars: 6 *Spartina alterniflora*, 4 *Uniola paniculata*, and 6 *Schoenoplectus californicus*. LSU AgCenter extension agents educated the public regarding restoration plant availability and cultivation. Smooth cordgrass vegetation has been successfully established in newly constructed marshland at the north-east tip of Marsh Island using seed distributed from an airplane. The benefit of aerial application is increased access to coastal sites that are remote or inaccessible by boat. Plant efficiency and operational cost reductions have been greatly improved with mechanical distribution of seed rather than manually planting seedlings. The CPP developed methodologies for large-scale seed production of *S. alterniflora* and technologies, such as seed coatings, to increase the success of aerial seed application. Seed coatings increased seed weight, which theoretically increases the chances that individual seeds anchor into marsh soil allowing large areas of endangered coastal marshes to be restored inexpensively with seeds rather than planting full-grown plants or seedlings. Plant varieties recently registered by the LSU AgCenter and the Louisiana Department of Agriculture and Forestry will result in better establishment and increased survivorship than wild plant types.

### 4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
112	Watershed Protection and Management
132	Weather and Climate
136	Conservation of Biological Diversity
201	Plant Genome, Genetics, and Genetic Mechanisms
205	Plant Management Systems

## **Outcome #6**

### **1. Outcome Measures**

Determine ways to reduce the impact of animal waste on the environment through research discovery and development.

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

- 1862 Research

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

Change in Condition Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

Animal waste handling and utilization presents a challenge to producers. While manure can be a source of nutrients in agricultural operations, its delivery can be unreliable, a potential pollutant and often uneconomical for farmers. Some of Louisiana's waterways are reported as impaired because of agricultural runoff. Methane, nutrients and pathogens released from manure are among the leading causes of environmental contamination. Improved manure handling and application methods need to be developed.

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

Issues related to animal waste and soil remediation were addressed. Studies evaluated ways to optimize nutrient delivery in animal feeds. The economic value of manure nutrients and transportation viability were examined in support of cost-sharing programs. Enhanced treatment systems were evaluated as alternatives, or in addition to, single lagoons. Field studies evaluated proper waste application and soil remediation to reduce the rate of leaching while maintaining productivity of the land.

#### **Results**

Studies demonstrated that dairy cows can maintain high productivity without phosphorus supplements and that nitrogen loss to the environment from swine and poultry can be minimized using supplemental amino acids. Dairy cows fed a low-protein diet (13.5% CP) corrected for limiting amino acids had similar performance to cows fed a typical diet containing 16.5% CP. Furthermore, the low-protein diet cost \$0.28/cow/day less than a typical diet. In contrast, dairy cattle fed ryegrass haylage-based diets, 13.5% CP plus amino acids cost \$0.86/cow/day more than a diet containing 15.5% CP. Agricultural producers should also consider wastewater recycling. This can be improved by using floating plant islands to accelerate the nutrient recycle process. Preliminary data on nutrient uptake from plants cultivated in floating islands demonstrated that nutrient removals of 350 mg N/m<sup>2</sup>/growing day (GD), 290 mg K/m<sup>2</sup>/GD, and

47 mg P/m<sup>2</sup>/GD in the cool growing season and 850 mg N/m<sup>2</sup>/GD, 830 mg K/m<sup>2</sup>/GD, and 220 mg P/m<sup>2</sup>/GD in the warm growing season could be achieved.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
205	Plant Management Systems

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

##### External factors which affected outcomes

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

##### Brief Explanation

{No Data Entered}

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

{No Data Entered}

##### Key Items of Evaluation

{No Data Entered}

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

**Program # 3**

**1. Name of the Planned Program**

Sustainable Energy

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
402	Engineering Systems and Equipment	10%		20%	
403	Waste Disposal, Recycling, and Reuse	10%		10%	
404	Instrumentation and Control Systems	0%		5%	
511	New and Improved Non-Food Products and Processes	70%		55%	
512	Quality Maintenance in Storing and Marketing Non-Food Products	10%		10%	
	<b>Total</b>	100%		100%	

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

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	4.0	0.0	6.0	0.0
Actual Paid Professional	1.2	0.0	7.1	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
22840	0	108422	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
22840	0	108422	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
84778	0	2761544	0

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

**1. Brief description of the Activity**

Activity included research and extension efforts regarding biofuel development using Louisiana-produced crops and the production and use of biodiesel as an alternative fuel.

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

Agricultural producers in Louisiana and southeast United States; consumers; LSU AgCenter faculty

**3. How was eXtension used?**

Where available, the resources of eXtension were used to enhance educational experiences.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	9293	2383	2	0

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
Actual	2	11	13

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

**Output Target**

**Output #1**

**Output Measure**

- Number of ag producers providing biomass as feedstock for fuels

<b>Year</b>	<b>Actual</b>
2011	2

**Output #2**

**Output Measure**

- Number of workshops conducted

<b>Year</b>	<b>Actual</b>
2011	1

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

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

O. No.	OUTCOME NAME
1	Identification and further development of Louisiana crops and cropping systems capable of producing biomass
2	Producers to gain knowledge regarding the use of agricultural feedstocks to generate biofuels.
3	Clientele to gain knowledge regarding the wise use of energy resources

## **Outcome #1**

### **1. Outcome Measures**

Identification and further development of Louisiana crops and cropping systems capable of producing biomass

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

- 1862 Extension
- 1862 Research

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

Change in Knowledge Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

The federally mandated pursuit of energy independence calls for sustainable biomass feedstock systems. Louisiana's environment is ideally suited for the production of a diverse range of biomass feedstocks. A competitive advantage for Louisiana is that infrastructures for woody and crop feedstock industries currently exist. Results of a recent survey indicated state-wide interest in using biomass as an energy source that could have significant economic impact.

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

Biomass research addresses feedstock identification, sustainable production practices, geographic adaptation, integrated pest management and potential biofuel yield. Emphasis is being directed toward energy cane, sweet sorghum, woody biomass, switchgrass and algae. Partnerships between LSU AgCenter researchers and industries for biofuel development have been strengthened. The procurement of the AFRI-CAP funding for "A Regional Program for Production of Multiple Agricultural Feedstocks and Processing to Biofuels and Biobased Chemicals" has positioned Louisiana as a leader in the development of sustainable feedstock systems for biofuel production.

#### **Results**

Identification of sustainable production practices for sweet sorghum has been featured in state-wide studies on fertility, varieties and cultural practices. Partnership with a biorefinery has resulted in the discovery of sweet sorghum planting/harvesting scenarios for providing a sustainable supply of feedstock for biorefinery viability. Ratoon yields and juice quality have been compared to conventional cultural practices. High-fiber energy cane varieties are being used by the industry to demonstrate cellulosic ethanol production. This energy cane is the primary feedstock being researched in federally funded biofuel projects in Louisiana. In another project, a novel, multi-stage technique has been developed to harvest microalgae. Emphasis of switchgrass centers on

its use to occupy retired agricultural land, The relationship between switchgrass cultivation and soil nutrient cycling, carbon emissions and carbon life cycle issues are the primary research questions under investigation at research centers on retired agricultural lands.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
404	Instrumentation and Control Systems
511	New and Improved Non-Food Products and Processes

#### Outcome #2

##### 1. Outcome Measures

Producers to gain knowledge regarding the use of agricultural feedstocks to generate biofuels.

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

The technical hurdles that impair biofuel production in Louisiana include identifying feedstocks for year round delivery, developing tools for producers and processors to determine the value of these crops, developing processing technologies for biofuel production and identifying supplemental high value products to improve the economics of biofuel production. Formation of a regional multidisciplinary consortium of agricultural scientists, biotechnologists, engineers, economists and educators has facilitated the conversion of these regionally appropriate crops into a portfolio of bio-based fuels and chemicals.

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

The Louisiana Institute for Biofuels and Bioprocessing (LIBB) was approved by Louisiana Board of Regents and was created to foster collaboration on the conversion of agricultural feedstock into biofuels and chemicals. To date most of the laboratory and pilot scale research on biofuels and biochemicals has been conducted by the Audubon Sugar Institute (ASI) and the W.A. Callegari Environmental Center. ASI has conducted research on pretreatment options for multiple crop

feedstocks. Callegari has developed and conducted workshops to convert waste cooking oil into biodiesel.

### Results

The joint efforts of LIBB resulted in the procurement of NIFA AFRI-CAP funding for "A Regional Program for Production of Multiple Agricultural Feedstocks and Processing to Biofuels and Biobased Chemicals". The LIBB consortium focuses resources and all necessary expertise in one regional location that provides outreach through a well-developed extension network. Agricultural economists will analyze and model the scenarios for the Southeastern region of the United States. Groundwork has begun for evaluation of energy cane and sweet sorghum and improvement in their production through utilization of low-input, sustainable production systems to ensure an uninterrupted supply of carbohydrates and fiber for biofuel production facilities. Modifications to existing pilot biorefinery facilities have begun. These modifications combine multiple crops and cutting edge processing technologies to demonstrate the conversion of monomeric sugars to butanol, gasoline, and isoprene. The W.A. Callegari Environmental Center continues to offer multiple training sessions per year on the conversion of waste cooking oil to biodiesel production for use by small businesses and farmers.

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes

### Outcome #3

#### 1. Outcome Measures

Clientele to gain knowledge regarding the wise use of energy resources

Not Reporting on this Outcome Measure

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

#### External factors which affected outcomes

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

#### Brief Explanation

{No Data Entered}

### V(I). Planned Program (Evaluation Studies)

#### Evaluation Results

{No Data Entered}

**Key Items of Evaluation**

{No Data Entered}

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

**Program # 4**

**1. Name of the Planned Program**

Childhood Obesity

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

**1. Program Knowledge Areas and Percentage**

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
702	Requirements and Function of Nutrients and Other Food Components	0%		85%	
703	Nutrition Education and Behavior	50%		10%	
724	Healthy Lifestyle	50%		5%	
	<b>Total</b>	100%		100%	

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

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

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	60.0	0.0	1.0	0.0
Actual Paid Professional	24.8	0.0	0.5	0.0
Actual Volunteer	20.0	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
471652	0	68715	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
471652	0	68715	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1750666	0	183477	0

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

**1. Brief description of the Activity**

Nutrition education programs targeting youth and their caregivers were conducted across Louisiana. The Smart Bodies Program (a nutrition and physical activity program) was implemented in Louisiana through the 4-H program and with elementary school students. Smart Bodies is an innovative program of nutrition and physical activities that is integrated into core curriculum academics to promote child wellness. Smart Bodies consists of three components: Body Walk, the OrganWise Guys (OWG), and Take 10! Body Walk students explore the brain, mouth, stomach, small intestines, heart, lungs, muscles, bones, and skin while stopping at learning stations to participate in interactive activities focused on the effects that the food has on each organ. The OWG are fun characters that help children understand physiology and healthy behaviors through books, games, dolls and informational videos. The Take 10! classroom program is a grade-specific educational tool that encourages short bouts of physical activity integrated with academic lessons. Parent newsletters are monthly themed and include tips for incorporating physical activity into family life and kid-friendly, low-cost recipes emphasizing fruits and vegetables.

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

The target audience includes public and private elementary schools in Louisiana and their students in grades K-5 with emphasis on limited income youth. Participating schools' administrators, faculty, and parents are served indirectly through the program by receiving monthly newsletters, Body Walk activity books, and the OrganWise Guys and Take 10! curricula. Parents have the opportunity to volunteer and participate in the Body Walk when it visits their child's school.

**3. How was eXtension used?**

Resources offered through eXtension were used to enhance educational efforts.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	84645	1900	341689	1645

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	0	6	6

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web page views

<b>Year</b>	<b>Actual</b>
2011	78023

**Output #2**

**Output Measure**

- Number of Web page visits

<b>Year</b>	<b>Actual</b>
2011	64612

**Output #3**

**Output Measure**

- Number of youth reached  
Not reporting on this Output for this Annual Report

**Output #4**

**Output Measure**

- Number of elementary schools reached

<b>Year</b>	<b>Actual</b>
2011	121

**Output #5**

**Output Measure**

- Percentage of caregivers at participating schools who attend a series of Smart Choices lessons and/or receive newsletters  
Not reporting on this Output for this Annual Report

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

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

O. No.	OUTCOME NAME
1	Louisiana youth and parents learn about and adopt healthy lifestyle habits which will lead to reduced chronic disease and health-related issues in later life.

## **Outcome #1**

### **1. Outcome Measures**

Louisiana youth and parents learn about and adopt healthy lifestyle habits which will lead to reduced chronic disease and health-related issues in later life.

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

- 1862 Extension
- 1862 Research

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

In Louisiana 35.6% of children ages 10-17 are considered overweight or obese according to BMI standards. The state ranks 46th out of 50 for overall prevalence of obesity. Increased obesity leads to increased rates of other chronic diseases such as diabetes, heart disease, and respiratory diseases, thus, increased future health costs. Louisiana also has one of the highest poverty rates with 26% of children and 25% of adults living in poverty.

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

Extension agents and specialists were trained on the benefits of healthy cooking and eating. The benefits of breastfeeding infants to long term health were also emphasized. School garden-based nutrition education programs were also conducted. Research emphasized food preferences among students; omega-3 fat and the cost of nutrient dense foods. Smart Bodies, a nutrition education and physical activity program for children, was made available in schools. SNAP-ED Family Nutrition Nights were conducted for parents and students in most parishes in Louisiana.

#### **Results**

The Smart Bodies Program engaged with 2,347 volunteers to reach 121 schools in 42 parishes across the state. 2,174 teachers and 39,887 K-5th youth participated in school-hosted events. Additionally, 7 public events reached 9,260 students and nearly 1,500 teachers. Pre/post student evaluations indicated that after participation in the Smart Bodies program, students increased knowledge related to nutrition and the health benefits of consuming nutritious foods (such as fruits/vegetables, low-fat milk, whole grains, and water), physical activity and physiology/anatomy.

The Smart Choices nutrition education program was delivered to 17,897 youth and 5,615 adults resulting in increased consumption of fruits, vegetables, whole grains, increased physical activity and decreased consumption of high fat foods. SNAP-ED Family Nutrition Nights were conducted

in 30 parishes.

Children's self-confidence to choose and consume fruits/vegetables was increased after a school based tasting program. Moderate amounts of omega-3 fatty acids during pregnancy resulted in leaner infants at birth. This finding has significance as childhood obesity likely begins very early in life.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
724	Healthy Lifestyle

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

##### External factors which affected outcomes

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

##### Brief Explanation

{No Data Entered}

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

{No Data Entered}

##### Key Items of Evaluation

{No Data Entered}

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

**Program # 5**

**1. Name of the Planned Program**

Food Safety

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
504	Home and Commercial Food Service	45%		0%	
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	10%		10%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	5%		60%	
723	Hazards to Human Health and Safety	20%		15%	
724	Healthy Lifestyle	20%		15%	
	<b>Total</b>	100%		100%	

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

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	2.0	0.0	2.0	0.0
Actual Paid Professional	4.3	0.0	3.3	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
81273	0	40447	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
81273	0	40447	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
301669	0	921017	0

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

**1. Brief description of the Activity**

Activity involved appropriate extension and research including result demonstrations, workshops, classes, certification programs, studies and effective use of a variety of media sources to address food safety-related issues. Much of this past year's effort in this area focused on food safety concerns resulting from the Gulf Oil Spill.

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

Consumers, commercial seafood processors, children and food handlers including restaurateurs and food vendors.

**3. How was eXtension used?**

Resources provided by eXtension were used to enhance learning experiences.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	30880	544	33384	278

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

**Patent Applications Submitted**

Year: 2011  
Actual: 1

**Patents listed**

Lutein Extraction from Ozone-Treated Plant Sources

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	8	6	14

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

**Output Target**

**Output #1**

**Output Measure**

- Number of food safety workshops conducted  
Not reporting on this Output for this Annual Report

**Output #2**

**Output Measure**

- Number of individuals certified through food safety programs

<b>Year</b>	<b>Actual</b>
2011	193

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

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

O. No.	OUTCOME NAME
1	Increase awareness, knowledge and/or skills regarding safe food handling and preparation by clientele in both the commercial and non-commercial sector.
2	Identify ways to minimize food safety threats related to Louisiana-produced food products through research.

## **Outcome #1**

### **1. Outcome Measures**

Increase awareness, knowledge and/or skills regarding safe food handling and preparation by clientele in both the commercial and non-commercial sector.

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

- 1862 Extension

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

Change in Knowledge Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

Changes in food production and distribution have increased the scope of foodborne illness outbreaks resulting in national and multi-national occurrences. Food safety misinformation may result in illness or adverse financial consequences. Certain commercial processors and food handlers are required to have certified food safety training. Processors need updating and new food processors need assistance. The U.S. Sweet Potato Industry currently does not have a crisis communication response.

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

Faculty responded to media and consumer information requests on foodborne illness outbreaks and seafood safety post BP oil spill. Faculty conducted certified training in Sanitation Control Protocol (SCP), Seafood HACCP, Meat and Poultry HACCP, Vacuum Packaging HACCP, Better Process Control School (BPCS - canned and acidified foods) and food handling (ServSafe). Faculty assisted in developing a sweet potato crisis communication plan and prepared publications on Good Agricultural Practices in the industry.

#### **Results**

Louisiana consumers (30,000) learned recommended food safety practices and an estimated 100,000 consumers gained food safety knowledge. Post-oil spill seafood education targeted seafood processors and consumers ranging from local to international exposure. The state seafood defense plan was developed and strengthened. Faculty assisted processors to correct deficiencies and be in regulatory compliance. Processors learned about new regulations and safety concerns pertinent for their facilities, especially the FDA Seafood Hazards Guide released in April, 2011.

Entrepreneurs were helped to establish businesses. As processors added new markets, at least two of these entrepreneurs established a presence in regional grocery chains.

Food safety certification training participants: HACCP-60; SCP-25; BPCS-60; ServSafe-48. The sweet potato crisis communication plans in cooperating states will help to ensure the sustainability of \$400 million industry.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
504	Home and Commercial Food Service
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
724	Healthy Lifestyle

#### Outcome #2

##### 1. Outcome Measures

Identify ways to minimize food safety threats related to Louisiana-produced food products through research.

##### 2. Associated Institution Types

- 1862 Research

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

Fresh seafood can be contaminated at any point from rearing or harvesting to processing, transport or due to cross-contamination by consumer-mishandling at home. Most consumer cooking methods for seafood are based on quality and not on scientific information to ensure destruction of foodborne pathogens. The rapid detection of these pathogens is necessary for monitoring this pathogen in the environment and in seafood as a pro-active measure to reduce infections.

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

Current floating and color cooking methods used by consumers were evaluated to determine if they were adequate to ensure the elimination of foodborne pathogens in shrimp and blue crab. Additionally, the seafood processing methods of flash freezing or brine freezing of shrimp were evaluated to determine their effectiveness in controlling foodborne pathogens. A rapid, user-friendly and compact screening dipstick device utilizing *Vibrio vulnificus* anti H monoclonal

antibodies was also developed.

### Results

The flash freezing method led to development of heat resistance in *Listeria monocytogenes*. Brine freezing of shrimp was determined to be a better method for microbial reduction. Results suggest that boiling shrimp until they float will significantly reduce foodborne pathogens but color change will not and color variation can occur. Results of the heat treatment experiments for Louisiana blue crabs were: boil four crabs for 10 minutes and cool five additional minutes for an internal temperature of at least 85° C and a total cooking time of 15 minutes; steam four crabs for 15 minutes and cool five additional minutes to reach an internal temperature of at least 85° C with a total cooking time of 20 minutes. These results will be presented to consumers as easy, concise instructions for safe preparation of Louisiana shrimp and blue crabs. The dipstick device successfully identified *Vibrio vulnificus* and did not produce visible signal for all other *Vibrio* strains tested within 5 minutes.

## 4. Associated Knowledge Areas

KA Code	Knowledge Area
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety
724	Healthy Lifestyle

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

### External factors which affected outcomes

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

### Brief Explanation

{No Data Entered}

## V(I). Planned Program (Evaluation Studies)

### Evaluation Results

{No Data Entered}

### Key Items of Evaluation

{No Data Entered}

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

**Program # 6**

**1. Name of the Planned Program**

Consumer Horticulture, Ornamentals & Turf

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
202	Plant Genetic Resources	0%		20%	
204	Plant Product Quality and Utility (Preharvest)	15%		10%	
205	Plant Management Systems	75%		50%	
213	Weeds Affecting Plants	10%		20%	
	<b>Total</b>	100%		100%	

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

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	15.0	0.0	5.0	0.0
Actual Paid Professional	29.4	0.0	4.4	0.0
Actual Volunteer	28.0	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
560158	0	66974	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
560158	0	66974	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
2079181	0	193529	0

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

1. Brief description of the Activity

Appropriate research experiments, result demonstrations, individual consultations, group meetings; mass media (radio, television and newspaper), publication development; extensive use of Web technology including social media; use of Louisiana Master Gardener volunteers to extend extension's outreach and an expansion of the School and Community Gardens initiatives.

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

Horticulture professionals, home gardeners, nursery industry producers, Louisiana Master Gardener volunteers, K-12 schools with gardens and related agribusiness clientele

**3. How was eXtension used?**

Resources of eXtension were used to enhance learning experiences. 564 horticulture questions were answered through an eXtension portal and Louisiana horticultural articles were regularly posted on eXtension's newsfeed.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	243627	40695	5348	2725

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	3	7	10

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web page views

<b>Year</b>	<b>Actual</b>
2011	1907538

**Output #2**

**Output Measure**

- Number of Web page visits

<b>Year</b>	<b>Actual</b>
2011	1604533

**Output #3**

**Output Measure**

- Number of new Louisiana Master Gardeners certified

<b>Year</b>	<b>Actual</b>
2011	385

**Output #4**

**Output Measure**

- Number of hours contributed by Louisiana Master Gardener volunteers

<b>Year</b>	<b>Actual</b>
2011	57665

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

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

O. No.	OUTCOME NAME
1	Percentage of clientele adopting recommended practices
2	Louisiana Master Gardener (LMG) volunteers supplement the delivery of consumer horticulture program to clients.

## **Outcome #1**

### **1. Outcome Measures**

Percentage of clientele adopting recommended practices

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

- 1862 Extension
- 1862 Research

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

Turf and ornamental professionals desire information on production improvements; improved and cost-effective maintenance options; pest management; and best management practices. Home gardeners need information on species and cultivar selection; cultural practices; and weed management. Louisiana retail garden centers want to expand ornamental plant promotion programs with higher performing plant material.

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

Year two of the Louisiana Super Plants promotion program was completed. The Field of Excellence Turfgrass Program continued. Nursery and turfgrass studies addressed plant establishment, production and maintenance best management practices. Consumer preference studies for poinsettias and bedding plants were conducted. Horticulture clientele were provided additional information about the services provided by the Plant Diagnostic Clinic and the Soil Testing and Plant Analysis Lab.

#### **Results**

Extension's "Get It Growing" consumer horticulture effort produced 364 radio stories, 104 newspaper columns and 52 television stories. Sustainable landscape news articles were distributed weekly. Plant disease samples increased 32% from horticulture clientele in 2011. Soil lab sample submissions from horticulture clientele increased 36%. Soil-less media sample submissions increased 47%. Consumer-preferred poinsettia varieties were "1188" (from Ecke), "Orion Red", "Ice Punch" and "Red Glitter". Eight Louisiana Super Plants were promoted with sales increases varying from 40-1900%. Ornamental email updates resulted in 31,200 contacts. Social media for the LSU AgCenter related horticulture pages resulted in 1,400 weekly visits.

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

KA Code	Knowledge Area
202	Plant Genetic Resources
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
213	Weeds Affecting Plants

**Outcome #2**

**1. Outcome Measures**

Louisiana Master Gardener (LMG) volunteers supplement the delivery of consumer horticulture program to clients.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2011	0

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

**Issue (Who cares and Why)**

Reduced personnel resources coupled with increased interest in consumer horticulture, home gardening and home grounds has exacerbated the need for highly-trained volunteers to assist in the delivery of quality educational horticulture programs. The Louisiana Master Gardener (LMG) program meets this increased demand.

**What has been done**

There are 23 LMG programs in the state which encompass 44 parishes and represent 96% of Louisiana's population centers. In FY2011, 385 new volunteers were trained, bringing the total number of active LMG volunteers to 1728. Volunteer opportunities designed to meet parish needs were identified and activities approved by LMG parish coordinators.

**Results**

The increased need for consumer horticulture information and improved public access to the LSU AgCenter has proven that highly-trained LMG volunteers delivering research-based information are recognized in their community as a primary resource for unbiased information. In FY2011, 1728 active Louisiana master gardeners donated a total of 57,665 hours to extension educational projects and made over 1.6 million contacts. This effort reflects the equivalent of 28 FTEs and resulted in increased human capacity of 16.2% in this program area. The economic value of this service to the state is over \$1.4M.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
205	Plant Management Systems
213	Weeds Affecting Plants

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

##### External factors which affected outcomes

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

##### Brief Explanation

{No Data Entered}

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

{No Data Entered}

##### Key Items of Evaluation

{No Data Entered}

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

**Program # 7**

**1. Name of the Planned Program**

Forestry and Forest Products

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	10%		10%	
112	Watershed Protection and Management	10%		5%	
123	Management and Sustainability of Forest Resources	60%		35%	
135	Aquatic and Terrestrial Wildlife	5%		20%	
402	Engineering Systems and Equipment	5%		0%	
403	Waste Disposal, Recycling, and Reuse	5%		10%	
511	New and Improved Non-Food Products and Processes	0%		10%	
604	Marketing and Distribution Practices	5%		10%	
	<b>Total</b>	100%		100%	

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

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	6.0	0.0	9.0	0.0
Actual Paid Professional	6.5	0.0	14.5	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
123718	0	610155	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
123718	0	610155	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
459214	0	5017320	0

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

**1. Brief description of the Activity**

Activity included extension and research efforts such as workshops, result demonstrations, individual consultations, and studies

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

Forest landowners, managers, loggers, and arborists.

**3. How was eXtension used?**

Resources provided by eXtension were used to enhance learning.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	94331	5210	20699	7

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

<b>2011</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Actual</b>	5	28	33

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web page views

<b>Year</b>	<b>Actual</b>
2011	212860

**Output #2**

**Output Measure**

- Number of Web page visits

<b>Year</b>	<b>Actual</b>
2011	177967

**Output #3**

**Output Measure**

- Number of Master Tree Farmers and Master Loggers certified  
Not reporting on this Output for this Annual Report

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

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

O. No.	OUTCOME NAME
1	Percentage of clientele adopting recommended practices

## **Outcome #1**

### **1. Outcome Measures**

Percentage of clientele adopting recommended practices

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

- 1862 Extension
- 1862 Research

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

Forest management effects on water and soil quality, restoration of degraded coastal forests, long-term forest productivity, and suppression of invasive plants and wildlife remain critical concerns of Louisiana's \$3 billion forest products industry. Several mills have closed as a result of depressed housing markets. Improvements in volume and efficiency of forest products manufacturing, recycling, marketing, and worker safety are needed. Emerging biofuel markets may impact forest management regimes.

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

Extension programs have focused on tax issues, forest management, GPS systems, feral hog and deer management, and mineral leasing. Research focused on wetland forest hydrology changes, forest carbon storage and nutrient cycling, creating new wood products from decommissioned preservative-treated wood, development of short-rotation forest plantations and agroforests for biofuel production, and worksite safety among loggers and arborists.

#### **Results**

Seventy-seven per cent of participants in extension forestry workshops adopted recommended practices, resulting in a net value of \$3,134 per person. Average workshop attendance was 108 individuals. Louisiana's coastal forests benefitted from improved regeneration strategies. Forest management statewide benefitted from data on management effects on soil and water quality, long-term tree growth, invasive species control, and reestablishment of indigenous vegetation. New composite wood products were developed, and new research was initiated to produce metal-free wood preservatives as a more ecologically benign alternative to conventional preservatives. Information valuable for forest-based biofuel production and policy-making was gained from multi-state research that characterized biomass yields, soil, water, and wildlife habitat quality of forests managed for biofuels production and landowner and policymaker opinions of

economic, ecological, and policy matters associated with forest-based biofuels.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
123	Management and Sustainability of Forest Resources
135	Aquatic and Terrestrial Wildlife
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes
604	Marketing and Distribution Practices

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

##### External factors which affected outcomes

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

##### Brief Explanation

{No Data Entered}

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

{No Data Entered}

##### Key Items of Evaluation

{No Data Entered}

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

**Program # 8**

**1. Name of the Planned Program**

Human Nutrition and Food (Adult)

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

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
501	New and Improved Food Processing Technologies	0%		40%	
502	New and Improved Food Products	0%		30%	
503	Quality Maintenance in Storing and Marketing Food Products	0%		10%	
702	Requirements and Function of Nutrients and Other Food Components	0%		15%	
703	Nutrition Education and Behavior	100%		5%	
	<b>Total</b>	100%		100%	

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

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	0.0	0.0	13.0	0.0
Actual Paid Professional	2.6	0.0	12.9	0.0
Actual Volunteer	2.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
48916	0	398470	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
48916	0	398470	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
181566	0	2289511	0

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

**1. Brief description of the Activity**

Extension programs were conducted to impact the adult obesity epidemic in Louisiana. Research studies identified and/or developed familiar foods that were reformulated to deliver higher fiber and anti-inflammatory ingredients to help control obesity and the decrease the negative side effects of obesity while minimizing changes in food choices.

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

General adult population and specifically adult consumers who want to limit consumption of inflammatory foods.

**3. How was eXtension used?**

Resources provided through eXtension were used to enhance learning.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	252711	152313	19802	1770

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	5	36	41

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web page views

<b>Year</b>	<b>Actual</b>
2011	628147

**Output #2**

**Output Measure**

- Number of Web page visits

<b>Year</b>	<b>Actual</b>
2011	504357

**Output #3**

**Output Measure**

- Number of individuals completing Smart Portions classes

<b>Year</b>	<b>Actual</b>
2011	400

**Output #4**

**Output Measure**

- Number of individuals completing Diabetes NEWS classes

<b>Year</b>	<b>Actual</b>
2011	650

**Output #5**

**Output Measure**

- Number of families completing Smart Choices classes

<b>Year</b>	<b>Actual</b>
2011	1922

**Output #6**

**Output Measure**

- Number of Master Nutrition volunteers certified

<b>Year</b>	<b>Actual</b>
2011	22

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

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

O. No.	OUTCOME NAME
1	Participants are knowledgeable about and adopt healthy weight management practices
2	Identify and/or develop familiar foods which are reformulated to deliver high fiber and anti-inflammatory ingredients to help control obesity and the negative side effects of obesity while minimizing changes in food choices.

## **Outcome #1**

### **1. Outcome Measures**

Participants are knowledgeable about and adopt healthy weight management practices

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

- 1862 Extension

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

Change in Action Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

Louisiana residents suffer from chronic diseases such as heart disease, stroke, cancer and diabetes at rates higher than the national average, while fruit and vegetable intake and participation in physical activity is below the national average. Approximately 7% of adults have been diagnosed with diabetes and 1 in 4 adults is obese. Louisiana has the fourth highest cardiovascular death rate in the nation, accounting for almost 40 percent of all deaths in the state. Maintaining a healthy lifestyle by eating well and being physically active can significantly impact these startling statistics.

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

Smart Portions, a series of sessions that address nutrition, physical activity and eating habits for a healthy lifestyle was taught across Louisiana. Diabetes NEWS (Nutrition Education Works) classes were conducted for Louisiana adults with diabetes or who had a family member with diabetes to educate them about managing the disease. Smart Choices, a Community Nutrition Education Program teaching the principles of eating based on the Dietary Guidelines for Americans, money management and food safety, was taught in 60 parishes. The Master Nutrition Volunteer program, a program that certifies individuals to teach nutrition classes to the public, was conducted in Rapides and Grant parishes.

#### **Results**

Four hundred adults participated in Smart Portions classes and learned the principles of a healthy lifestyle to prevent overweight and obesity. Diabetes NEWS classes enrolled 650 Louisiana adults with diabetes or who had a family member with diabetes and learned about managing the disease. The Community Nutrition Program Smart Choices enrolled 1922 families for a series of classes. Twenty-two new Master Nutrition Volunteers were certified. There were significant improvements in dietary intake of 6 ounce equivalents of grains from 31% at baseline to 42% at the end of the series; in fruit intake of 2 cups from 12% to 19%; vegetable intake of 3 cups from

12% to 18%; and dairy intake of at least 2 cups from 15.5% to 23%. A positive dietary change was observed in 96.6% of clients at project completion. There was also an increase in physical activity to 30-60 minutes a day from baseline to graduation from 22.7% to 24%. A positive change in physical activity was observed in up to 17.9% of participants. The Master Nutrition Volunteer program certified 12 volunteers who are required to contribute 30 hours of service at a total value of over \$7,500.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
501	New and Improved Food Processing Technologies
502	New and Improved Food Products
503	Quality Maintenance in Storing and Marketing Food Products
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior

#### Outcome #2

##### 1. Outcome Measures

Identify and/or develop familiar foods which are reformulated to deliver high fiber and anti-inflammatory ingredients to help control obesity and the negative side effects of obesity while minimizing changes in food choices.

##### 2. Associated Institution Types

- 1862 Research

##### 3a. Outcome Type:

Change in Condition Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

Obesity in the U.S. has dramatically increased over the past 20 years. In 2010 Louisiana ranked among 12 states that had an adult obesity prevalence of 30% or greater. The health risks associated with obesity, such as cardiovascular disease and diabetes with their associated medical costs and threats to quality of life, underline the need to identify multiple approaches, including dietary approaches, to decrease this obesity trend.

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

Dietary-resistant starches, such as those found in some cornstarch products, demonstrate several health benefits, including stimulation of the production of messengers in the gut that may then

result in health related changes in other parts of the body. The benefit of dietary resistant starch on body fat was examined in a rodent model.

### **Results**

The body fat reducing benefit of dietary resistant starch (rat model) was attenuated when the starch was consumed with a high fat diet compared to a low fat diet. This finding points to the importance of overall diet composition as a factor affecting the body fat lowering benefit of resistant starch. This finding needs to be considered in future animal and human studies focused on the health benefits of dietary resistant starches.

## **4. Associated Knowledge Areas**

<b>KA Code</b>	<b>Knowledge Area</b>
702	Requirements and Function of Nutrients and Other Food Components

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

#### **External factors which affected outcomes**

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

#### **Brief Explanation**

{No Data Entered}

### **V(I). Planned Program (Evaluation Studies)**

#### **Evaluation Results**

{No Data Entered}

#### **Key Items of Evaluation**

{No Data Entered}

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

**Program # 9**

**1. Name of the Planned Program**

Youth 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
610	Domestic Policy Analysis	0%		60%	
806	Youth Development	100%		40%	
	<b>Total</b>	100%		100%	

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

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

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	95.0	0.0	0.0	0.0
Actual Paid Professional	105.2	0.0	0.3	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
2001380	0	9857	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
2001380	0	9857	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
7428675	0	57529	0

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

**1. Brief description of the Activity**

Age appropriate educational experiences were provided for Louisiana youth in four focus areas: Citizenship; Healthy Living; Science, Engineering and Technology (SET) and leadership. **Note: Much of the nutrition-related activity in the Healthy Living initiative is reported under the Childhood Obesity**

**federal initiative area.**

The ability to deliver 4-H youth development programs was enhanced by an estimated number of 173,130 hours of volunteer time contributed to the Louisiana 4-H program. This contribution equates to 83 FTEs and represents over \$3M in donated time.

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

Louisiana youth ages 9-19 as well as youth and adult volunteers.

**3. How was eXtension used?**

eXtension's Moodle platform was used for the following courses. The number of students enrolled in each course and the number of course views are also provided.

- Louisiana 4-H Going Camping - 120 students enrolled, 3,741 views
- Louisiana 4-H OMK Risk Management Training - 48 students enrolled , 1,365 views
- Louisiana 4-H Risk Management Training - 64 students enrolled, 1,606 views
- Louisiana 4-H Volunteer Orientation - 113 students enrolled, 2,026 views
- Louisiana 4-H Youth Development and Volunteerism - 23 students enrolled, 1,460 views
- Louisiana 4-H Youth Energy Program - 682 students enrolled - 14,177 views
- LSU AgCenter AgMagic - 40 students, 386 views

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	335744	102179	1046322	76195

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	24	1	25

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

**Output Target**

**Output #1**

**Output Measure**

- Youth reached  
Not reporting on this Output for this Annual Report

**Output #2**

**Output Measure**

- Number of Web page views

<b>Year</b>	<b>Actual</b>
2011	2194180

**Output #3**

**Output Measure**

- Number of Web page visits

<b>Year</b>	<b>Actual</b>
2011	1793042

**Output #4**

**Output Measure**

- Number of youth participating in service projects

<b>Year</b>	<b>Actual</b>
2011	30000

**Output #5**

**Output Measure**

- Number of hours of service performed by youth

<b>Year</b>	<b>Actual</b>
2011	12620

**Output #6**

**Output Measure**

- Number of teens serving on state leadership boards

<b>Year</b>	<b>Actual</b>
2011	130

**Output #7**

**Output Measure**

- Number of current NIFA 4-H Programs of Distinction designations

<b>Year</b>	<b>Actual</b>
2011	5

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

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

O. No.	OUTCOME NAME
1	Percentage of youth who develop and strengthen skills that will lead them to be contributing citizens within their communities.
2	Percentage of youth who increase scientific literacy as well as become aware of career choice opportunities through hands-on scientific learning and discovery.
3	Youth develop and adopt skills which promote healthy living.
4	Adults and youth gain knowledge and skills associated with personal, organizational and community leadership.

## **Outcome #1**

### **1. Outcome Measures**

Percentage of youth who develop and strengthen skills that will lead them to be contributing citizens within their communities.

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

- 1862 Extension

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

Change in Knowledge Outcome Measure

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

<b>Year</b>	<b>Actual</b>
2011	0

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

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

With national volunteer rates climbing to 26.8%, only 20% of Louisiana citizens volunteer resulting in a rank of 47th in the nation. While youth are serving to make a difference, there remains an unclear yet blatant sense among most that what is done matters little to the civic life and health of communities. Americans express despair over the drift away from core civic values such as family, community and personal responsibility toward emphasize "winning at all costs," greed and selfishness.

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

Over 112,000 youth and adults address community needs through service projects and character programs. Nearly 30,000 youth participate in service projects based on local needs. The Reading to the Heart Program (RTH) reached 134 youth with literacy lessons and over 5000 with literacy events. Over 8,600 volunteers have engaged in one of the four volunteer development online courses.

#### **Results**

Service projects helped 95,141 individuals. Youth served 12,620 hours for a value of \$269,563. In service-learning projects, 92% of youth had a better understanding of community problems and 95% set a good example for others to follow. Of 540 youth engaged in service projects, 94% took the initiative to help others; 93% were responsible for accomplishing the project goals and 91% gathered with others to share in leadership activities. Eighty-eight per cent of youth guardians participating in the RTH Program said the program had a positive influence on their children's self-confidence toward reading skills while 87% of community literacy partners indicated the program increased a child's reading and writing skills.

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

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

**Outcome #2**

**1. Outcome Measures**

Percentage of youth who increase scientific literacy as well as become aware of career choice opportunities through hands-on scientific learning and discovery.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2011	0

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

**Issue (Who cares and Why)**

America faces a crisis in its ability to keep up with the increasing demand for professionals in science, engineering and technology (SET). However, youth in Louisiana are unprepared to enter careers in SET. In Louisiana, the percentages of 4th graders with below basic test scores were: Math-28%; Science-43%; and Reading-48%. The percentages of 8th graders with below basic test scores were: Math-38%; Science-53% and Reading-36%. Less than half (44%) of youth had computers in their home.

**What has been done**

The Louisiana 4-H Seeds of Service School Garden Project (SOSGP) engaged 1400 students in hands-on programs linking classroom lessons to real-world science and math. Summer Camp (N=4000) and Youth Wetlands Week (YWW) (N=80,000) reached youth with environmental programs. 4-H University (N=800) and Louisiana Outdoor Science & Technology (LOST) Camp (N=180) reached youth with science programs. Over 680 teachers attended Youth Energy Program (YEP) trainings and plan to reach 47,028 youth.

**Results**

In the SOSGP Program, when examining the impact of the gardening project, participants were asked to respond to items about perceived competence in growing a garden. The SOSGP had a positive effect on perception of gardening competence,  $t(299) = 5.52, p < .001$ , when comparing pre-test (N=300; M=2.23) and post-test means (N=300; M=2.42). Post-only evaluations conducted at 4-H University (n=116; 77%) and LOST Camp (n=207; 87%) revealed that youth felt that they learned new things about science through participation in the program. 70% of 4-H University participants (n=105) felt they developed important science skills and 91% of LOST

Camp youth (n=207) agreed science was of great importance to a country's development. YEP Teachers reported a greater understanding of how they could incorporate energy into the classroom (M=4.7) and increased their knowledge of the experiential learning model (M=4.6).

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

#### Outcome #3

##### 1. Outcome Measures

Youth develop and adopt skills which promote healthy living.

##### 2. Associated Institution Types

- 1862 Extension

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

According to KIDS COUNT, Louisiana has ranked 49th in the nation on childhood health and well-being since 2002. A Pennington Biomedical Research Center study reported more than 47% of Louisiana children, ages of 2 -19, are overweight or obese. Louisiana received a D on the Report Card on Physical Activity and Health for Children and Youth.

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

NOTE: Most of the 4-H effort on the childhood obesity issue has been reported in the CHILDHOOD OBESITY section of this report. The Wal-Mart Healthy Living Program reached over 3,000 individuals. Over 150 4-H members participated in a State Food and Fitness Camp taught by the 4-H Food and Fitness Board. The Confronting Childhood Obesity program took place in 2 parishes. Summer Camp Nutrition Track reached over 1500 youth.

###### **Results**

In the Confronting Childhood Obesity program, 60% of youth felt that they needed to decrease the amount of fast foods consumed that are high in fats. According to the pre and post data 30% of youth believed being overweight causes health problems, and that large portions of food are the reason why people are overweight. Summer Camp Food Track results revealed campers had a statistically significant ( $t(241)= 6.918; p<.001$ ) increase in knowledge from the beginning of the

camp week until the end with scores increasing 15.6 points overall from pretest (M=44.5%) to posttest (M=60.1%).

**4. Associated Knowledge Areas**

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

**Outcome #4**

**1. Outcome Measures**

Adults and youth gain knowledge and skills associated with personal, organizational and community leadership.

**2. Associated Institution Types**

- 1862 Extension

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2011	0

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

**Issue (Who cares and Why)**

Leadership skills are in high demand in the 21st century workplace. In a youth leadership program, the focus is on acquiring and practicing skills today for leading community change efforts later, or just leading one's own family.

**What has been done**

Louisiana 4-H uses leadership development programming that is intentional and youth-centered. Youth get opportunities to set goals, solve problems, communicate, make decisions, plan and organize programs, develop skill in leading others, and have a voice in their group and community. Youth serve in leadership roles such as camp counselor, project leader, advisory member, and club officer. Over 130 teens serve on 6 State Leadership Boards providing opportunities to develop leadership skills.

**Results**

In 2010, the 4-H program launched a 4 year longitudinal study of youth leadership skill development. Targeting 4-H members enrolled in the 9th grade, baseline data provided a picture of leadership roles within 14 clubs in school and community programs, of which 4-H was one. Initial findings show that the 9th graders attribute more than half their leadership experiences to 4-H. The 928 youth surveyed reported 2841 total leadership experiences in the past year with 1472 (52%) of those experiences practiced within 4-H. A study of camp counselors found weak, but

statistically significant, correlations between the belief in their ability to promote belonging among campers and feeling prepared for the role ( $R=3.01$ ;  $p<.01$ ). This belief was also correlated with receiving pre-service training ( $R=.319$ ;  $p<.01$ ). State 4-H Leadership Board youth reported that 98-100% were able to think independently; 97-99% mastered leadership skills and 97-98% improved their ability to communicate with others.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

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

##### External factors which affected outcomes

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

##### Brief Explanation

{No Data Entered}

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

{No Data Entered}

##### Key Items of Evaluation

{No Data Entered}

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

**Program # 10**

**1. Name of the Planned Program**

Community Development

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

**1. Program Knowledge Areas and Percentage**

<b>KA Code</b>	<b>Knowledge Area</b>	<b>%1862 Extension</b>	<b>%1890 Extension</b>	<b>%1862 Research</b>	<b>%1890 Research</b>
610	Domestic Policy Analysis	0%		15%	
721	Insects and Other Pests Affecting Humans	0%		40%	
722	Zoonotic Diseases and Parasites Affecting Humans	0%		20%	
802	Human Development and Family Well-Being	5%		5%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	80%		10%	
903	Communication, Education, and Information Delivery	15%		10%	
	<b>Total</b>	100%		100%	

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

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

<b>Year: 2011</b>	<b>Extension</b>		<b>Research</b>	
	<b>1862</b>	<b>1890</b>	<b>1862</b>	<b>1890</b>
Plan	5.0	0.0	4.0	0.0
Actual Paid Professional	7.2	0.0	5.1	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
136471	0	146697	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
136471	0	146697	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
506549	0	163127	0

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

**1. Brief description of the Activity**

LSU AgCenter activities were designed to reduce persistent poverty through entrepreneurship, agribusiness development, leadership and broadband educational programs. The Louisiana Center for Rural Initiatives was established and the Connect My LA (CML) rural broadband initiative was launched in 18 rural parishes. Additional external funding was sought to support this initiative. Additionally, significant effort was expended in addressing the historic Mississippi River flood event of 2010. Through a partnership with NIFA in a special needs Smith Lever Grant, LSU AgCenter faculty assisted communities, homeowners, families and farmers prepare for and recover from flood effects.

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

General public, elected officials, small business owners & governmental agencies, primarily in the Delta region of the state or northeast Louisiana.

**3. How was eXtension used?**

Resources of eXtension were used to enhance learning.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	95277	8284	39179	31

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

<b>2011</b>	<b>Extension</b>	<b>Research</b>	<b>Total</b>
<b>Actual</b>	2	4	6

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web page views

<b>Year</b>	<b>Actual</b>
2011	282765

**Output #2**

**Output Measure**

- Number of Web page visits

<b>Year</b>	<b>Actual</b>
2011	219983

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

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

O. No.	OUTCOME NAME
1	Percentage of clientele who increase knowledge of sustainable economic development strategies
2	Entrepreneurs and community leaders gain knowledge of sustainable economic development strategies in relationship to operating an e-business and leadership.

**Outcome #1**

**1. Outcome Measures**

Percentage of clientele who increase knowledge of sustainable economic development strategies

Not Reporting on this Outcome Measure

**Outcome #2**

**1. Outcome Measures**

Entrepreneurs and community leaders gain knowledge of sustainable economic development strategies in relationship to operating an e-business and leadership.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Knowledge Outcome Measure

**3b. Quantitative Outcome**

Year	Actual
2011	0

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

**Issue (Who cares and Why)**

Rural Louisiana suffers from a lack of healthcare, access to education and broadband Internet connectivity, and overall has been marked by persistent poverty for decades. One out of four people in rural Louisiana lives below the federal poverty level and roughly seventy five percent of our rural parishes have been defined as persistent poverty parishes. These conditions have also made it difficult for coastal, rural parishes to be resilient in the face of natural disasters.

**What has been done**

LSU AgCenter faculty have developed programs to address persistent poverty conditions in rural Louisiana through the Louisiana Center for Rural Initiatives (LCRI). Core educational programs include broadband Internet education, entrepreneurship, leadership, agricultural enterprise development and disaster preparedness.

**Results**

LCRI faculty collaborated with the LA Division of Administration, Office of Information Technology to provide broadband Internet education reaching 300 people in its first six months across 18 rural parishes primarily in the Louisiana Delta region. These communities are now better educated

about the regional and local economic development opportunities of broadband and have improved strategic planning through the Stronger Economies Together (SET) program. The SET project has been implemented statewide and has played a key role in assisting economic development districts with much needed strategic planning.

LA & MS-AL Sea Grant in cooperation with LCRI faculty developed a new financial disaster resiliency handbook to assist local governments become financially prepared for future hurricanes to maintain and rebuild public infrastructure. This program educated 30 community leaders in two parishes in its first year. The program identified probabilities and costs of future hurricane emergency operations and cleanup. Further, the program identified reserves needed to cover these costs as well as healthy parish financial ratios to be resilient to future hurricanes.

#### 4. Associated Knowledge Areas

KA Code	Knowledge Area
803	Sociological and Technological Change Affecting Individuals, Families, and Communities
903	Communication, Education, and Information Delivery

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

##### External factors which affected outcomes

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

##### Brief Explanation

{No Data Entered}

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

{No Data Entered}

##### Key Items of Evaluation

{No Data Entered}

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

**Program # 11**

**1. Name of the Planned Program**

Family 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
601	Economics of Agricultural Production and Farm Management	0%		30%	
610	Domestic Policy Analysis	0%		30%	
611	Foreign Policy and Programs	0%		20%	
802	Human Development and Family Well-Being	100%		20%	
	<b>Total</b>	100%		100%	

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

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	12.0	0.0	1.0	0.0
Actual Paid Professional	16.3	0.0	1.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
310438	0	61257	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
310438	0	61257	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
1152275	0	182281	0

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

**1. Brief description of the Activity**

Appropriate extension and research activities focused on training childcare providers, improving parenting skills and helping families cope with crises. Methods included workshops, classes, and effective use of social media and mass media. This program is being de-emphasized as limited resources have been redirected to nutrition and childhood obesity in FCS.

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

Target audiences included the general public including low income families, the elderly, youth, early childhood educators, parents/guardians/caregivers/, employers, business owners and the incarcerated. Additional audiences included community leaders including educators, elected officials, LSU AgCenter faculty and partners, gatekeepers, local government, media representatives, policymakers, and master volunteers.

**3. How was eXtension used?**

Resources of eXtension were used to enhance learning opportunities.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	40310	15066	5432	11

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	15	2	17

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web site page views

<b>Year</b>	<b>Actual</b>
2011	315030

**Output #2**

**Output Measure**

- Number of Web page visits

<b>Year</b>	<b>Actual</b>
2011	266244

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

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

O. No.	OUTCOME NAME
1	Percent change in knowledge regarding positive parenting practices by program participants
2	Percentage of early childhood educators who learn the importance of and implement developmentally appropriate experiences.
3	Percentage of families that learn and/or use skills to improve family resiliency in response to long-term stress

**Outcome #1**

**1. Outcome Measures**

Percent change in knowledge regarding positive parenting practices by program participants

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2011	0

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

**Issue (Who cares and Why)**

Research indicates effective parenting practices are correlated with children's school achievement and later success in life. Brain research indicates the first three years of life are the most critical to human development. Early literacy and the creation of learning and nurturing environments even before birth make significant differences to the brain's development. Understanding child development and nurturing parenting behaviors are primary skills to be taught to improve parenting skills.

**What has been done**

Significant outreach programs have focused on reaching parents to teach them best practices during infancy. Educational programs are based on research results about brain growth and development. Child nurturance and understanding child development were the primary skills addressed. Agents collaborated with state agencies and other organizations to work with parents using research and evidence-based parenting curricula.

**Results**

In 13 parishes over 1200 families with a newborn participated in a family literacy program called "Little Bookshelf." Each participating family received a library of appropriate children's books and literacy information. Evaluation revealed that 76% of parents of infants reported reading books with their baby every day while 24% of those same parents reported reading books to their baby once a week.

The "Parents Preparing for Success" program is a welfare-to-work program which targets expectant mothers and families with infants under 1 year of age who are receiving public assistance. Nearly 50% (N=230) of parents in 52 parishes learned to recognize normal and abnormal behaviors such as crying in infants. They also learned ways to create a nurturing

environment and foster a sense of security for infants which often leads to reduced delinquency rates in children and youth. Eighty-five per cent of parents plan to implement best practices in child guidance such as redirection, ignoring behavior, etc. rather than spanking their child.

#### 4. Associated Knowledge Areas

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

#### Outcome #2

##### 1. Outcome Measures

Percentage of early childhood educators who learn the importance of and implement developmentally appropriate experiences.

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Action Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

There is a strong connection between high quality early childhood programs and later success in school. There are an estimated 20,000 childcare providers in the state and over 215,900 children involved in or in need of childcare. Louisiana's childcare regulations fall short in meeting standards for high quality childcare as evidenced by research.

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

Classes and training for early childhood staff to obtain their Child Development Associate Credential or clock training hours were developed. Topics varied based on needs of the children as identified by the providers and within the guidelines recommended by the National Association for the Education of Young Children and the Council for Professional Recognition CDA National Credentialing Program.

###### **Results**

Over 300 trainings were conducted by 13 agents for childcare providers between 7/1/10 and 8/31/11. Training certificates were awarded to over 7000 participants. Evaluation of select portion of program indicated child care providers showed statistically significant knowledge gain after four sessions in the Right from Birth training series. Participants used the information they learned,

implementing recommended care practices with greater frequency. These recommended practices are beneficial to children.

Observational research conducted prior to and following the training series, found average positive child caregiver responsive behaviors increased and average negative child caregiver non-responsive behaviors decreased by providers after attending the trainings. Also, the increase in positive responsive behaviors and the decrease in negative non-responsive behaviors were maintained by the participants six weeks after the conclusion of the training series.

#### 4. Associated Knowledge Areas

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

#### Outcome #3

##### 1. Outcome Measures

Percentage of families that learn and/or use skills to improve family resiliency in response to long-term stress

##### 2. Associated Institution Types

- 1862 Extension
- 1862 Research

##### 3a. Outcome Type:

Change in Knowledge Outcome Measure

##### 3b. Quantitative Outcome

Year	Actual
2011	0

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

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

Louisiana continues to suffer from a severe budget crisis and remnants of an oil spill. Coastal communities have not completely recovered from the hurricanes and oil spill of the last 6 years. A family's ability to recover from a crisis is influenced by additional life stressors including low income and family perceptions. Family goals, problem-solving skills, and support networks impact a family's ability to adapt to long-term stress and crisis. Divorces, substance abuse, depression, etc. are triggered by such crises.

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

Extension and research faculty continue to study adaptive strategies used successfully by families after disasters. LSU AgCenter faculty hosted the Groves Council on Families, a prestigious organization of family and child studies scholars from across the nation, at their annual meeting in New Orleans. This allowed scholars and practitioners to view the status of New

Orleans' recovery from hurricanes and to take advantage of the presence of experts from the Exxon Valdez tragedy who were in the coastal area assisting families and other professionals in their recovery efforts. LSU AgCenter faculty presented their programs and research findings during this meeting.

#### **Results**

Data from natural disasters and the oil spill disaster continue to trickle in and repeatedly indicate that the full effects of the disasters are not limited to those areas immediately adjacent to the disaster but have far-reaching impacts across the state and region. Conference evaluations from the Groves Conference on Families recorded strategies submitted by scholars regarding their plans to use the information gleaned from Groves Conference. Planned strategies included using some of the relief and recovery information currently housed on the LSU AgCenter's website in their respective programs.

FCS participated in a multi-state effort resulting from a \$200,000 special needs grant from NIFA awarded in 2010 to address recovery issues facing fishing industry families. The FCS Oil Spill Leadership (OSL) team launched a "Managing in Tough Times" outreach program in September 2010 which continued into 2011. "Triumph over Tragedy" program training was completed by a core group of FCS faculty who in turn worked to train-the-trainer statewide. The final train-the-trainer sessions will be accomplished in 2012.

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

<b>KA Code</b>	<b>Knowledge Area</b>
802	Human Development and Family Well-Being

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

##### **External factors which affected outcomes**

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

##### **Brief Explanation**

{No Data Entered}

#### **V(I). Planned Program (Evaluation Studies)**

##### **Evaluation Results**

{No Data Entered}

##### **Key Items of Evaluation**

{No Data Entered}

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

Consumer Economics

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

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
607	Consumer Economics	0%		100%	
801	Individual and Family Resource Management	100%		0%	
	<b>Total</b>	100%		100%	

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

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	9.0	0.0	1.0	0.0
Actual Paid Professional	7.3	0.0	0.4	0.0
Actual Volunteer	1.0	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
138184	0	16129	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
138184	0	16129	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
512907	0	74790	0

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

Extension outreach using group and individual methods and mass media as appropriate. Web-based technology, individual consultations and collaboration building and sustainability efforts were also

utilized. Educational outreach efforts were conducted on home-buyer education, financial management, saving, investing, and taxes.

**NOTE: This program is being de-emphasized as resources have been shifted to the childhood obesity nutrition and health program in FCS.**

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

The general public including home buyers, homeowners, educators, low income, the elderly, youth, families, employees, employers, business owners, financial professionals, disaster/oil spill impacted individuals, business groups and the incarcerated were targeted with this program. Community leaders targeted include: educators, elected officials, LSU AgCenter faculty and partners, gatekeepers, local government, media representatives, policymakers, and master volunteers.

**3. How was eXtension used?**

Resources provided by eXtension were used to enhance learning.

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

**1. Standard output measures**

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
<b>Actual</b>	54580	1381	45576	1230

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

**Patent Applications Submitted**

Year: 2011

Actual: 0

**Patents listed**

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

**Number of Peer Reviewed Publications**

2011	Extension	Research	Total
<b>Actual</b>	17	5	22

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

**Output Target**

**Output #1**

**Output Measure**

- Number of Web page visits

<b>Year</b>	<b>Actual</b>
2011	139109

**Output #2**

**Output Measure**

- Number of Web page views

<b>Year</b>	<b>Actual</b>
2011	171231

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

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

O. No.	OUTCOME NAME
1	Percentage of participants who gain greater financial independence and literacy by learning and practicing improved management of financial resources.

**Outcome #1**

**1. Outcome Measures**

Percentage of participants who gain greater financial independence and literacy by learning and practicing improved management of financial resources.

**2. Associated Institution Types**

- 1862 Extension
- 1862 Research

**3a. Outcome Type:**

Change in Action Outcome Measure

**3b. Quantitative Outcome**

<b>Year</b>	<b>Actual</b>
2011	0

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

**Issue (Who cares and Why)**

Disasters, slow economic growth, business loss, and economic crisis have impacted Louisiana families and there is a lack of research-based financial management education available. Many mortgages are in some degree of distress with foreclosure rates increasing 36%. Louisiana students scored 45.3% on a national survey indicating a deficit in knowledge regarding personal finance. Twenty-five percent (25%) of eligible LA Earned Income Credit recipients fail to file, losing about \$2,400 per filer and millions of dollars for the state economy. High rates of recidivism among newly released offenders create great tax burden.

**What has been done**

A series of 12-hr homebuyer education classes reached over 220 potential home buyers, many of whom had been displaced by natural or economic disasters. The foreclosure prevention task force was expanded, trained & mobilized. Homeowner ed/counseling sessions were conducted. Workshops reached 250+ educators who taught Financial Management to 24,000+ students/clients. Collaborative EIC outreach programs were expanded, increasing the number of filers and dollars returned. A series of financial management classes ranging in length from 8-100 hours were delivered to offenders. Eight Managing in Tough Times documents were developed in two languages and posted online. Outreach and media programs were expanded.

**Results**

28% of homebuyer education program graduates became homeowners within 6 months of graduation. Most qualified for \$5,000 - \$10,000+ in down payment assistance. 90% checked their personal credit reports and changed their saving and spending habits. 40+ educators/counselors are assisting homeowners who are attempting to avoid foreclosure. Over 1200 homeowners adopted retention strategies contributing to foreclosure rates now being below national levels. Nearly 100% of educators adopted practices to improve their ability to build financial capacity of

their students/clients. Collaborative outreach efforts over 5 years increased EIC recipients tenfold to over 550,000. Benefits average \$2540/recipient. Total state benefits increased fivefold to over \$1.4 billion. Over 600 offenders have adopted skills for success in society and the recidivism rate has been reduced. 93% of newly released offenders learned how to develop a budget and volunteers have been trained and are assisting in delivering a series of classes to released offenders. Families adopted financial recovery strategies to stay afloat. Educators nationwide used relevant LSU AgCenter MTTnet resources to implement community-based educational programs across the nation.

#### 4. Associated Knowledge Areas

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

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

##### External factors which affected outcomes

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

##### Brief Explanation

Economy and phasing out of the Family Resource Management program caused resources, both human and financial, to be shifted to other higher-priority program areas.

#### V(I). Planned Program (Evaluation Studies)

##### Evaluation Results

{No Data Entered}

##### Key Items of Evaluation

{No Data Entered}