2011 University of Florida Research and Extension and Florida A&M University Extension Combined Annual Report of Accomplishments and Results

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I. Report Overview

1. Executive Summary

UF/IFAS 1862 Extension and Research and FAMU/CESTA 1890 Extension AREERA Narrative Summary

Included in this document are the results of the 2011 Report of Accomplishment for the Florida UF/IFAS 1862 Extension and research programs and the FAMU/CESTA 1890 Extension program. Florida 1862 Extension and research have met the 25% requirements for the integrated and multistate programs and required documentation was submitted to OMB by April 1, 2012 as required.

In 2011, The Florida Cooperative Extension (UF and FAMU combined) had almost 5 million direct contacts with Florida constituents and 9.6 million web visits from clientele using the states "Solutions for your life" website (http://solutionsforyourlife.ufl.edu/about/sfyl.html) which contains articles and information developed by both UF and FAMU faculty and staff. Faculty completed 194,710 field consultations many of them one-on-one. Over 179,000 constitutes made visits to Extension offices in the 67 counties. There were 3.2 million clientele from across the state who attended Extension educational activities. There were over 400,000 phone calls made to obtain individual information and almost 900,000 contacted extension faculty by email for one-on-one assistance. Extension also developed 2379 peer-reviewed publication for EDIS providing additional information to solve problems affecting Florida's residents and beyond. UF and FAMU are providing successful educational programs in all five of the NIFA initiative areas.

UF/IFAS research is closely integrated with Extension to ensure that the mission of the experiment station, captured in their tagline of discovery, innovation and application is applied to the needs of the citizens of Florida. As part of this integration inservice trainings are developed and presented by state specialists to keep county faculty on the cutting edge of the latest results of research and developing technology. The website to see the trainings offered in 2011 can be found at http://pdec.ifas.ufl.edu/ist/list.pl.

UF/IFAS research was still ranked in 2011 as number 1 in the nation by the National Science Foundation in Ag R&D. IFAS Research is on- going in all of the NIFA initiatives including bio-energy, childhood obesity, food safety and security, climate change and global food security and hunger. Some impacts are beginning to be discovered in these areas and have been highlighted for use by NIFA. Research faculty have 42 new patents for 2011 with the majority in agricultural areas but with some related to bio-energy and safety and security.

In 2011 The Florida landgrant univesities had a total of 1671 peer reviewed articles published and there were 42 new patents completed during 2011.

Stakeholder Involvement

In 2011 UF Extension and research and FAMU Extension began a new 10 year long range plan. As part of their strategic plan, IFAS research has been listening to industry, the general public, advisory committees, focus groups, commodity groups, government and others in formal meetings in order to identify areas that require immediate scientific study and solutions.

Extension is also well into their strategic planning process. The have held listening sessions in all 67 counties. Focus groups were held across the state for additional input from underrepresented and underserved representatives as well as industry leaders and others interested in input in the strategic planning process. Both the Extension and research strategic plans have identified issues that have been shared as Florida landgrant works toward integration between UF and FAMU Extension and UF

research. Both research and extension are now analyzing results and developing new goals and directions based on these results. It is expected that the new strategic plan will be in place and implemented by Jan. 1, 2013. Information on the Florida Cooperative Extension long range plan for both UF and FAMU can be found at http://pdec.ifas.ufl.edu/lrp/.

Florida Cooperative Extension identified a wide range of key issues that affect people, the Florida economy and the environment. The issues heard most often included the following:

PEOPLE

- Healthy lifestyles
- Youth engagement
- Adult and youth leadership
- Volunteer development
- Family well-being

ECONOMY AND JOBS

- Energy production
- Small farms and alternative enterprises
- Bioenergy and bio-based products
- Youth lifeskillsand workforce development
- Food production,safety,and security
- Community development and growth management
- Sustainable agriculture and horticulture
- Farm labor
- Technology use

ENVIRONMENT

- Water quantity and quality
- Energy conservation and efficiency
- Natural resource management
- Sustainable landscape management
- Coastal and marine environment
- Climate variability
- Land use
- Pest/disease/invasive management
- Urban/rural interface

From the strategic planning process Extension for both FAMU and UF will be developing their vision and goal around the follow initiatives and super-issues:

Initiatives:

1. Increasing the Sustainability, Profitability, and Competitive Agricultural and Horticultural Enterprises
2. Enhancing and Protecting Water Quality, Quantity, and Supply
3. Enhancing and Protecting Florida's natural Resources and Environmental Quality
4. Producing and Conserving Traditional and Alternative Forms of Energy
5. Empowering Individuals and Families to Build Healthy Lives and Achieve Social and Economic Success
6. Supporting Urban and Rural Community Resources and Economic Development
7. Preparing Youth to be Responsible Citizens and Productive Members of the Workforce

Super-Issues:

1. Citizen Awareness and Appreciation of Food Systems and Environment
2. Sustainability and Conservation of Resources in Florida Communities
3. Financial management for Individuals and Enterprises
4. STEM Exploration for Youth
5. Development of Healthy Lifestyles for Floridians

Merit and Team Review

UF research continues to peer review each new research project following the guidelines recommended by the Florida land-grant university and approved by NIFA. Extension is presently reviewing the merit structure based on the results of the ongoing strategic plan. They will hold a summit shortly with over 300 faculty members to review the process and suggest any changes to be implemented for next year. These changes will be reflected in the 2013 AREERA Plan of Work. All programs were reviewed for 2011 as part of the strategic plan as changes are considered within this strategic plan.

Highlighted NIFA Initiatives

For the 2011, UF/IFAS and FAMU are highlighting the NIFA initiatives as they relate top both research and Extension in this summary. Both universities have successful programs and/or projects in some or most of the 5 NIFA initiative areas. Key item have been identified for NIFA's attention in each of the initiative areas below. These can be found in each of the planned program evaluation sections of the report :

1. Childhood Obesity
2. Energy
3. Climate Change
4. Food Safety and Security
5. Global Food Security and Hunger

External Factors: Present Economic Situation in Florida Land-grant Universities

Both Florida land-grant universities are being heavily impacted by the present situation with the Florida Economy. Over the past 5 years both universities have lost over 50% of state funding and have been impacted by legislative decisions that make it harder to meet our mission. Reoccurring cuts are impacting our ability to continue multistate activities because of travel constraints and the loss of IT support staff. New equipment is not in many of the budgets and so keeping communication technology on the cutting edge is difficult.

Adding to the economy difficulties is the severe drought that is affecting more than half of the state. The morale of faculty is being severely tested by the constant concerns about termination of faculty and staff positions and the changing and negative attitudes about university faculty beginning to appear in the public sector. Faculty are working longer hours with less support. The loss of support means they must learn many new skills that will eventually takes away energy needed to insure the quality of programs. All of these External factors are impacting Florida faculty and the success of the Florida land-grant mission. Although we continue to meet NIFA goals it cannot continue indefinitely. The faculty in Florida is dedicated to do the best possible job and they have shown this dedication over the past five years. There true impact on the state cannot be measured but they continue to impact the sustainability and profitability of agriculture, which is the number one economic indicator in the state at this time. They work to protect and improve the environment and finally they are trying to provide Florida's clientele with the tools they need to improve their quality of life in any and everyway that fits the mission of the landgrant university.

Requirements for AREERA Met

Both UF/IFAS 182 Extension and Research and FAMU 1892 program have completed all requirements of the 2011 AREERA report of accomplishment and we respectfully provide this information in the body of the following report. Materials in this report are provided by UF and FAMU faculty and staff from across the state. This report is submitted with the approval of the appropriate UF and FAMU dean's and directors.

Total Actual Amount of professional FTEs/SYs for this State

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	345.0	27.0	90.0	0.0
Actual	419.4	27.0	134.3	0.0

II. Merit Review Process

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

- Internal University Panel
- Expert Peer Review

2. Brief Explanation

This year all programs in Extension received a review by over 300 Extension faculty members from the Florida Extension Cooperative Service. As part of the new strategic planning the existing Extension programs were reviewed by stakeholders involved in the strategic planning process. All areas were reviewed and compared to information obtained in the state-wide listening sessions. Changes to the program areas are presently taking place as Florida prepares for the next decade. Priorities are being identified along with recommendations on better ways to evaluate and provide state wide impacts on program areas identify in the strategic planning process as crucial. Programs as in the past are being build around priorities identified both through the University of Florida 1862 program and the Florida A&M University priorities.

The University of Florida IFAS research peer review continues to make recommendations and suggestions for each project using the process suggested by NIFA. Information including results of the peer review process is retained in the department of origin for each review.

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
- Survey of the general public
- Survey of selected individuals from the general public

Brief explanation.

Extension: Because 2011 was the beginning of a formal strategic planning process stakeholders were reached in many ways to request their input. Media including newspapers, websites, radio announcements etc. were used to reach the general public to invite them to provide input. Advisory committees and other stakeholders provided names of participants across the state to be included in focus teams. Listening sessions were held which were advertised bothby word of mouth and using media.

The Extension webside Solutionsforyourlife which has thousands of hits each year provided an online opportunity for stakeholder participation through an online survey.

Research

The Extension participation in the strategic plan also provided stakeholder participation to identify needs for research. Research also began a strategic planning process in 2011. Department advisory committees provided input for research and Extension. Industry was asked for input. Government representatives were asked to provide a needs assessment. Faculty and staff of UF and FAMU were also asked to provide feedback on needs for both the extension and research strategic plans.

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

1. Method to identify individuals and groups

- Use Advisory Committees
- Use Internal Focus Groups
- Use External Focus Groups
- Open Listening Sessions
- Needs Assessments
- Use Surveys

Brief explanation.

Advisory committees,administrators, faculty and staff at UF and FAMU, commodity groups, government officials were all asked to identify individuals and groups to be included in the listening sessions. The Public Issues experts in PIE, an IFAS think tank group was also asked to identify potential individuals and groups that the land grant universities could include in the needs assessment and other parts of the strategic planning 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 specifically with non-traditional groups
- Survey specifically with non-traditional groups
- Survey of selected individuals from the general public

Brief explanation.

Online survey's
one-on-one discussion
group discussion
return postcards/letters
hard copy surveys
database to collect the information from all faculty reporting results
All information used to collect from stakeholders can be found at http://pdec.ifas.ufl.edu/lrp/

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.

We are analyzing the data, prioritizing and developing goals.Working with Extension and research faculty and stakeholders major needs are being identified within the goal areas. Logic models are being developed and an evaluation process set in place for each need area within each goal. Faculty will identify goal areas of interest from across the state and align themselves to these programs. they will have the ability to work together and through a commmon evaluation program provide real and useful information for reporting outcomes and impacts over the coming years.

Brief Explanation of what you learned from your Stakeholders

The following were identified as highest priorities for Extension and many were also areas that require additional scientific research and problem solving.

Initiatives:

1. Increasing the Sustainability, Profitability, and Competitive Agricultural and Horticultural Enterprises
2. Enhancing and Protecting Water Quality, Quantity, and Supply
3. Enhancing and Protecting Florida's natural Resources and Environmental Quality
4. Producing and Conserving Traditional and Alternative Forms of Energy
5. Empowering Individuals and Families to Build Healthy Lives and Achieve Social and Economic Success
6. Supporting Urban and Rural Community Resources and Economic Development
7. Preparing Youth to be Responsible Citizens and Productive Members of the Workforce

Super-Issues:

1. Citizen Awareness and Appreciation of Food Systems and Environment
2. Sustainability and Conservation of Resources in Florida Communities
3. Financial management for Individuals and Enterprises
4. STEM Exploration for Youth
5. Development of Healthy Lifestyles for Floridians

IV. Expenditure Summary

1. Total Actual Formula dollars Allocated (prepopulated from C-REEMS)			
Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
4545751	1810517	3913432	0

2. Totaled Actual dollars from Planned Programs Inputs				
	Extension		Research	
	Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
Actual Formula	4545751	1810517	3140268	0
Actual Matching	4545751	1810517	3140268	0
Actual All Other	0	0	0	0
Total Actual Expended	9091502	3621034	6280536	0

3. Amount of Above Actual Formula Dollars Expended which comes from Carryover funds from previous				
Carryover	3139265	0	0	0

V. Planned Program Table of Content

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
204	Plant Product Quality and Utility (Preharvest)	5%	5%	0%	
205	Plant Management Systems	5%	5%	0%	
211	Insects, Mites, and Other Arthropods Affecting Plants	5%	5%	0%	
212	Pathogens and Nematodes Affecting Plants	5%	5%	0%	
213	Weeds Affecting Plants	5%	5%	0%	
215	Biological Control of Pests Affecting Plants	5%	5%	0%	
216	Integrated Pest Management Systems	5%	5%	0%	
301	Reproductive Performance of Animals	5%	5%	0%	
302	Nutrient Utilization in Animals	5%	5%	0%	
306	Environmental Stress in Animals	5%	5%	0%	
307	Animal Management Systems	5%	5%	0%	
308	Improved Animal Products (Before Harvest)	5%	5%	0%	
311	Animal Diseases	5%	5%	0%	
312	External Parasites and Pests of Animals	5%	5%	0%	
313	Internal Parasites in Animals	5%	5%	0%	
315	Animal Welfare/Well-Being and Protection	5%	5%	0%	
402	Engineering Systems and Equipment	5%	5%	0%	
405	Drainage and Irrigation Systems and Facilities	5%	5%	0%	
503	Quality Maintenance in Storing and Marketing Food Products	5%	5%	0%	
603	Market Economics	5%	5%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Extension	Research

Year: 2011	1862	1890	1862	1890
Plan	80.0	11.0	0.0	0.0
Actual Paid Professional	117.1	11.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
1269212	737616	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
1269212	737616	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Conduct workshops and meetings
•Deliver services
•Develop products, curriculum, resources
•Provide training
•provide counseling
•Make assessments
•work with the media
•develop partnerships

2. Brief description of the target audience

- Producers
- Commodity Associations
- Owners/Operators
- Managers/Supervisors
- Workers/Laborers
- Allied Industry Representatives
- Small Farmers
- Government/Regulatory
- County government
- State government
- Federal government
- Tribal government

- International governing bodies
- Harvesting/Packing/Processing/Distribution
- Harvesters/Packers
- Processors
- Distributors/Transporters
- Retailers
- Importers/Exporters
- Youth and 4H(K-12)
- Youth Educators
- Extension Faculty

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	1711710	3346697	0	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	186	0	186

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Change in Knowledge Agricultural and Natural Resource Industry Profitability and the Sustainable Use of Environmental Resources
2	Change in Behavior Agricultural and Natural Resource Industry Profitability and the Sustainable Use of Environmental Resources
3	Change in Condition Agricultural and Natural Resource Industry Profitability and the Sustainable Use of Environmental Resources
4	Change in Knowledge Awareness of Agriculture's and Natural Resource's Importance to an Economy That Ranges From Local to Global
5	Change in Behavior Awareness of Agriculture's and Natural Resource's Importance to an Economy That Ranges From Local to Global
6	Change in Condition Awareness of Agriculture's and Natural Resource's Importance to an Economy That Ranges From Local to Global
7	Change in Knowledge Protecting Florida from Existing and Emerging Pests and Diseases
8	Change in Behavior Protecting Florida from Existing and Emerging Pests and Diseases
9	Change in Condition Protecting Florida from Existing and Emerging Pests and Diseases

Outcome #1

1. Outcome Measures

Change in Knowledge Agricultural and Natural Resource Industry Profitability and the Sustainable Use of Environmental Resources

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	33432

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Participants that possess knowledge of beef cattle reproduction, forages, pest management, herd nutrition, soil fertility, water quality issues, and/or horse management are better prepared to adopt recommended management practices that should increase production, reduce expenses, and/or improve environmental quality.

What has been done
Participants attended a training on beef cattle that included recommended management practices.

Results
Pre and Post test evaluation of responding participants indicated that:
Overall, 86% (364) of program respondents (423) indicated an increase in knowledge. Local Impact: 88% (70) of participating Polk County respondents (79) indicated an increase in knowledge.
Overall, program respondents indicated an average 40% increase in knowledge of reproduction, pasture, grazing, herd nutrition, and herd health management at the conclusion of the program.
Participants indicated this increase in knowledge as follows:
38% increased knowledge in herd nutrition management.
41% increased knowledge in parasite and pest management.
39% increased knowledge in forage and pasture management.
40% increased knowledge in soil and plant nutrient management.
32% increased knowledge in marketing techniques.
48% increased knowledge of reproduction management.
42% increased knowledge of herd sire management.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
312	External Parasites and Pests of Animals
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment
405	Drainage and Irrigation Systems and Facilities
503	Quality Maintenance in Storing and Marketing Food Products
603	Market Economics

Outcome #2

1. Outcome Measures

Change in Behavior Agricultural and Natural Resource Industry Profitability and the Sustainable Use of Environmental Resources

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual

2011 15769

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Reduction of the need for fertlizer and water can increase the profitability for producers while helping to improve the environment.

What has been done

As a result of weekly sap testing of watermelon plants and monitoring soil moisture on four watermelon farms, representing 90% of the acreage grown in the county, the farmers have implemented BMPs.Weekly visits and consultations were conducted by a team of UF faculty including this Agent, a Multi-county Agent, County Agent in Lafayette County and BMP implementation team leader.

Results

In one farm alone, fertilizer applications have been reduced by at least fifty pounds of nitrogen per acre and water use for irrigation by 33% on 300 acres.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
312	External Parasites and Pests of Animals
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment
405	Drainage and Irrigation Systems and Facilities
503	Quality Maintenance in Storing and Marketing Food Products
603	Market Economics

Outcome #3

1. Outcome Measures

Change in Condition Agricultural and Natural Resource Industry Profitability and the Sustainable Use of Environmental Resources

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	6042

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
FAMU: Increasing crop production per acre while reducing the amount of water and fertlizer can add to profitability and sustainability.

What has been done
One farmer is currently supplying organic collard greens to two restaurant chains in Madison County. Farmers can now benefit from the findings of trials conducted on collard greens: Double row patterns can yield 1504 more bushel crates of fresh collards compare to single rows even when using the same land space. Irrigation has no impact on yield. Farmers can actually save money by not irrigating since: - The crop is a fast growing crop that can reach optimum maturity in 30 to 45 days and is grown during the months when it is much cooler and there is favorable rainfall. Mulched rows can yield 959 more bushel crates of fresh collards compared to unmulched rows.

Results
Farmers can save money by using no more than 175 lbs n/acre since fertilizer rates above 175 lb/acre have no positive effects on yield.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
312	External Parasites and Pests of Animals
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment
405	Drainage and Irrigation Systems and Facilities
503	Quality Maintenance in Storing and Marketing Food Products
603	Market Economics

Outcome #4

1. Outcome Measures

Change in Knowledge Awareness of Agriculture's and Natural Resource's Importance to an Economy That Ranges From Local to Global

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	303437

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

FAMU: Small Farms are a growing issue is Florida and often the producers are first time growers with limited knowledge of best management practices

What has been done

In 2011, 376 individuals, including small farm producers and those new to farming or interesting in expanding their knowledge relating to farm operations attend 7 extension programs that provided knowledge and skills in muscadine grape production, pesticide-use and safety education, proper tree planting techniques, and an affordable greenhouse structure demonstration. Another 325 received horticulture and small farms extension information via a grape harvest festival and state small farm conference.

Results

Outcomes:

39 participated in the Vineyard Management and Pesticide Safety program that provided growers, hobbyist, and grape enthusiast production and pruning practices for muscadine.

14 participants said that the Vineyard Management and Pesticide Safety program exceeded their program expectations, 7 others said the field day met their expectations, and 2 did not respond, n=23.

o16 participants said that they had greatly expanded their knowledge in â??Pesticide Licensing Requirementsâ??, 5 others reported some knowledge gain, 1 not at all and 1 did not responded to the question.

o16 participants said that they had greatly expanded their knowledge in â??Reading the Pesticide Labelâ??, 7 reported some knowledge gain.

o16 participants said that they had greatly expanded their knowledge in â??Vineyard Managementâ??, 5 reported some knowledge gain, 2 did not respond to the question.

o17 participants said that they had greatly expanded their knowledge in â??Proper grapevine pruning techniquesâ??, 4 reported some knowledge gain, 2 did not responded to the question.

o16 participants said that they had greatly expanded their knowledge in â??Hands on pruning demonstrationâ??, 2 reported some knowledge gain, 5 did not respond to the question.

o100% of respondents said that they â??plan to use the information presented to:

Further their hobby, 10

Expand on current vineyard, 9

As research and planning for future expansion, 5

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
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311	Animal Diseases
312	External Parasites and Pests of Animals
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment
405	Drainage and Irrigation Systems and Facilities
503	Quality Maintenance in Storing and Marketing Food Products
603	Market Economics

Outcome #5

1. Outcome Measures

Change in Behavior Awareness of Agriculture's and Natural Resource's Importance to an Economy That Ranges From Local to Global

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1014

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Since 2005, Citrus Greening has devistated commercial plantings in south Florida. A new system of water and nutrient management has been demonstrated to growers with the goal of improving the growth rate of young trees throught intensive management.

What has been done
Two demonstration sites at Immokalee and near Lake Alfred have been operating for the past five years with great suscess. The two sites were chosen to demonstrate the practices on the two soils where citrus is currently grown. Growers are very interested in the practices and we have had tours of the sites on nearly a monthly basis with a two field days (one at each site).

Results
Three growers have installed areas of the technology for evaluation and many more are planning new systems.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
312	External Parasites and Pests of Animals
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment
405	Drainage and Irrigation Systems and Facilities
503	Quality Maintenance in Storing and Marketing Food Products
603	Market Economics

Outcome #6

1. Outcome Measures

Change in Condition Awareness of Agriculture's and Natural Resource's Importance to an Economy That Ranges From Local to Global

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
After more than a year of drought with little prospect of relief, hay supplies are increasingly scarce and expensive. Producers with inadequate hay stockswill face either increased hay prices, decreased hay availability or production losses- likely all three.

What has been done
At current prices and production levels, the value of a ten percent loss of weaning weight could pay for sixteen hundred pounds of hay per cow. A cow's failure to wean a calf due to poor nutrition would result in the loss of $680 of income in 2012, enough to purchase 6.8 tons of hay. Seventy-five per cent of program participants surveyed said they were better able to estimate hay needs as a result of the training and sixty-nine per cent expected to ssave money as a result of class participation.

Additional programs were delivered to improve the efficiency of forage production and use and to improve livestock management and marketing practices. Through district wide interactive video conferences,producers with large cow herds (who represent a small per centage of operators)were able to access direct marketing information.

Results
A seemingly small number (three producers) of participants belied the program's impact by reaching the managers of over fifteen percent of the brood cows in the county.

4. Associated Knowledge Areas

KA Code	Knowledge Area
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
215	Biological Control of Pests Affecting Plants
216	Integrated Pest Management Systems
301	Reproductive Performance of Animals
302	Nutrient Utilization in Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)
311	Animal Diseases
312	External Parasites and Pests of Animals
313	Internal Parasites in Animals
315	Animal Welfare/Well-Being and Protection
402	Engineering Systems and Equipment

405	Drainage and Irrigation Systems and Facilities
503	Quality Maintenance in Storing and Marketing Food Products
603	Market Economics

Outcome #7

1. Outcome Measures

Change in Knowledge Protecting Florida from Existing and Emerging Pests and Diseases

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	6668

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
2011 Northwest District Pesticide Training:
Outcomes: In 2011, the northwest AG PIT held a district wide Continuing Education Training for Restricted Pesticide holders of private, public, and commercial licenses.

What has been done
The course was offered via interactive videoconference . 120 individuals participated at eleven county Extension offices. A total of 40 surveys were returned. Of the respondents, 23 of 40 attendees (58%) had never attended internet based, interactive Polycom video previously. 75% agreed that the polycom presentation was clear and understandable. Pre-program surveys showed that 72% (28 of 39) rated their knowledge of pesticides as good or better, while post program results showed that 100% (38 of 38) rated their knowledge of pesticides as good or better.

Did you learn something new about ...Yes
Applying the Correct Amount of Pesticides 31 (82%)
Florida's Pesticide Laws and Regulations36 (95%)
Understanding Pesticide Labels35 (92%)
Applying Pesticides Safely (personal and environmental safety)35 (92%)
Inspection & Spill Control32 (84%)
Personal Protective Equipment34 (89%)
Pesticide handling, mixing, loading, and application decisions 35 (92%)

Results
Impact: Of the respondents, 58% (23 of 40) attended the training in order to take and pass the FDACS private applicator exam. By having pesticide certification, applicators can increase their annual earning capability by $6,400. Based on 23 certifications for this particular training, this equals $147,200 increased income annually.

4. Associated Knowledge Areas

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

Outcome #8

1. Outcome Measures

Change in Behavior Protecting Florida from Existing and Emerging Pests and Diseases

Not Reporting on this Outcome Measure

Outcome #9

1. Outcome Measures

Change in Condition Protecting Florida from Existing and Emerging Pests and Diseases

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	821

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Pest are an issue on Peanuts, Cotton and soybeans in the panhandle of Florida.

What has been done
Producers were able to identify and control pests based on Extension recommended thresholds on 80% of peanut and cotton and soybean acreage (64,527 acres) in Santa Rosa, Okaloosa and Escambia Counties.

Results
Saving one pesticide application resulted is savings of $774,324 ($12 per acre) in pesticide cost.

4. Associated Knowledge Areas

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

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

In the area of global food security of the 400,000 people who were evaluated 376,402 made a change in knowledge, behavior or condition. Those who made behavioral changes in increasing global food security and decreasing humger numbered more than 20, 500. Those who made the most profound changes that impacted not only themselves but others included over 8,688 who obtained information from the Florida landgrant colleges.

Key Items of Evaluation

Two items:

1. Florida Sea Grant is a highly collaborative and highly relevant program for Florida's coastal governments, resource management agencies and the private sector. Its approximately $2 million in federal funding grows to $5 million by leveraging funds from private industry, state and county governments. Studies have shown Florida Sea Grant provides millions of dollars in local and regional tax savings, produces and maintains jobs, and supports the development of new small businesses. In cooperation with Florida Extension and the USDA, the Florida Sea Grant program supported the creation of over 560 jobs related to the clam farming industry, supports $25 million a year in income, and generates $19 million a year in sales from the private sector. Current Sea Grant funded research explores the culture of new clam species to diversify and strengthen the industry.

Florida's $3 million commercial sponge fishery has benefited from Sea Grant funded research that identified a more effective and harvest method. At least six small businesses in Florida are making venting tools based on the Sea Grant design; these tools are used by commercial and recreational fishermen in the Gulf of Mexico. An area that had historically been closed to sponge harvesting was reopened due to Sea Grant research that showed this harvesting method is sustainable. According to one Tarpon Springs business owner: "If it was not for Florida Sea Grant, there would be no commercial sponge industry in Florida."

A Florida Sea Grant study of economic benefits of artificial reefs in Southwest Florida shows that related activities generate more than $226.9 million in economic outputs and supported nearly 2,600 full- and part-time jobs. Fishermen and divers who use the artificial reef spend $253.3 million in the region each year. Sea Grant has led the science and outreach related to artificial reefs in Florida.

Implementation of the UF/Sea Grant "Regional Waterway Management System" in Southwest Florida waterways has cut red tape in the permitting process for canal dredging, saving taxpayers an estimated $3 million dollars since 2006. Ongoing work by legal specialists in a program called 'from red tape to green tape' aims to streamline the permitting process for homeowners who want to protect their waterfront property with "living shorelines." This type of shoreline uses plants and natural materials to prevent coastal erosion while promoting and preserving habitat for fish, invertebrates, birds and wildlife. These shorelines also increase soil available for vegetation, reduce velocity of stormwater runoff, and maintain water quality.

During the Gulf of Mexico oil spill, Florida Sea Grant and UF Extension responded quickly and effectively, providing on-the-ground outreach to coastal residents, businesses and communities. Extension staff helped fishermen and business owners file claims and provided support for volunteers. Sea Grant is working with the Gulf of Mexico Land Grant Universities to ensure the safety of seafood, and to work with families facing economic crisis because of the disaster.

Source: Karl Havens, Chris Verlinde

2. **UF And FAMU Florida Small Farms and Alternative Enterprises Conference**

Increase knowledge of small farmers in sustainability, best management practices, and alternative enterprises through a state wide small farms conference has become an important teaching tool for Florida Extension as a joint activity with both the University of Florida and Florida A& M University.

The Florida Small Farms and Alternative Enterprises Conference has been held for

three years, 2009-2011. Attendance at the conference has ranged from 750-800 attendees and the exhibitor area has been filled by 80-90 participants each year. This has become one of the largest UF/IFAS and FAMU hosted events in our state. It has brought great visibility to the educational efforts of faculty and staff at the two Florida Land Grant Institutions in helping small and mid-sized farmers to become successful and prospective growers to make good decisions on getting started.

An evaluation plan was implemented to establish the effectiveness and quality of different activities conducted at the 2011 Florida Small Farms and Alternative Enterprises Conference. Participants in general reported high levels of confidence (4.4. in 0-5 scale) to perform activities related to skills that may have been affected by their participation in the conference. Most participants (60%) intend to develop better business skills as a result of attending the conference, and almost 40% also wish to investigate alternative markets. Most respondents (80%) would like to see the meeting organized every year. Furthermore, 85% of respondents have the intention to attend the conference again in the future.

Additionally, more than 50 participants provided feedback regarding the conference tours (34 and 22 for Horticulture and Livestock, respectively). In general, the responses were very positive for both tours. Respondents identify these experiences as valuable to enhance their knowledge on the startup and marketing considerations, and day to day operation of these types of enterprises. A very high number of respondents (93%) plan to use the information that they received in the tours. Finally, almost 95% of surveyed exhibitors were either atisfied? or very satisfied? in the sense that the exhibition met their needs. A 100% of exhibitors considered that they were successful in reaching their target audiences and provided high overall ratings for the conference (75% rated it as excellent?, 20% as good?, and 5% as satisfactory).

Impact:

The post program survey indicated that 19 respondents had attended the 2010 Conference. As a result of attending last year's event, practice changes for the area of business management and marketing were noted that participants had sought new markets, made record keeping changes, used FL MarketMaker as a marketing & research tool, made better financial decisions, developed business plans and implemented food safety plans and conducted self audits.

For production related changes, participant stated they had instituted better plant nutrition and irrigation practices, were marketing their tomatoes in plastic containers rather than cardboard to reduce product contamination, making better pesticides choices, fenced their property to reduce animal and human intrusion for food safety reasons, added hydroponic growing systems to reduce water consumption and extend the harvest season and developed rotational grazing to maximize forages.

Two attendees indicated that they had started a new enterprise, one being a poultry operation and the other a gathering link between farms and their community.

Other broader social, economic and environmental conditions that resulted from the participants attendance included becoming more politically active on behalf of small farms, agriculture in general and local food systems, developing a support system amongst the producers to share information, supplies etc., influencing food policies, reducing their risk by implementing food safety plans, stabilizing their cash flow by diversifying their operations resulting in better financial security and minimizing environmental contamination by implementing IPM strategies and reduce water pollution by better managing water, pesticides

V(A). Planned Program (Summary)

Program # 2

1. Name of the Planned Program

Maintain, Conserve and Enhance Florida's Natural Environment

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
102	Soil, Plant, Water, Nutrient Relationships	5%	5%	0%	
103	Management of Saline and Sodic Soils and Salinity	5%	5%	0%	
104	Protect Soil from Harmful Effects of Natural Elements	5%	5%	0%	
111	Conservation and Efficient Use of Water	5%	5%	0%	
112	Watershed Protection and Management	5%	5%	0%	
131	Alternative Uses of Land	5%	5%	0%	
132	Weather and Climate	5%	5%	0%	
133	Pollution Prevention and Mitigation	5%	5%	0%	
134	Outdoor Recreation	5%	5%	0%	
135	Aquatic and Terrestrial Wildlife	5%	5%	0%	
136	Conservation of Biological Diversity	5%	5%	0%	
141	Air Resource Protection and Management	5%	5%	0%	
216	Integrated Pest Management Systems	5%	5%	0%	
403	Waste Disposal, Recycling, and Reuse	5%	5%	0%	
605	Natural Resource and Environmental Economics	5%	5%	0%	
608	Community Resource Planning and Development	5%	5%	0%	
610	Domestic Policy Analysis	5%	5%	0%	
723	Hazards to Human Health and Safety	5%	5%	0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	5%	5%	0%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	5%	5%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	20.0	1.0	0.0	0.0
Actual Paid Professional	37.4	1.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
405367	67056	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
405367	67056	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Environmental Education 1. Conduct needs assessment

2. Develop collaborative meetings/working partnerships/advisory committees

3. Write grants

4. Develop inservice/training programs for different audiences using

- face to face field institutes

-distance learning (web-based, podcasts, video conferences, polycom, etc.)

5. Establish Extension EE webpage

6. Develop educational materials for EE

7. Assist in development of educational events in EE for youth, volunteers, public, etc. at state, district, and/or county level.

8. Support and assist in assessing impacts of EE programs (in Extension) at state and county level.

2. Brief description of the target audience

Extension faculty and staff
Formal/non-formal educators

Volunteers and Youth

Residents /visitors

Local governments

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	554550	1084245	0	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	90	0	90

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Change in Knowledge Water Resources
2	Change in Behavior Water Resources
3	Change in Condition Water Resources
4	Change in Knowledge Sustainable Use of Freshwater and Terrestrial Ecosystems
5	Change in Behavior Sustainable Use of Freshwater and Terrestrial Ecosystems
6	Change in Condition Sustainable Use of Freshwater and Terrestrial Ecosystems
7	Change in Knowledge Environmental Education
8	Change in Behavior Environmental Education
9	Change in Condition Environmental Education
10	Change in Knowledge Sustainable Use of Coastal and Marine Ecosystems
11	Change in Behavior Sustainable Use of Coastal and Marine Ecosystems
12	Change in Condition Sustainable Use of Coastal and Marine Ecosystems

Outcome #1

1. Outcome Measures

Change in Knowledge Water Resources

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1949

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Research based education on irrigation efficiency and specifically smart irrigation controllers continues to be a sought after topic.

What has been done
Highlights for 2011 include a request by the Florida Irrigation Society to draft a white paper in support of contractor licensing and the potential impact on irrigation efficiency. Subsequently the governor's office consulted my on the impact of proposed certification.

Results
While there is great interest in water conservation through the use of improved irrigation efficiency and in particular the use of smart irrigation controllers, the current economic conditions have resulted in a climate where end users are slow to adopt the technology. Interest this year has been at an all-time high with 20 invited extension presentations in and out of state and a total of 1,312 group learning participants. My website remains a valuable tool for extending research based extension information with a total of 15,634 page views. Most of these page views were used to access extension educational information. These metrics show that this extension program on irrigation efficiency and water conservation is still relevant and sought after.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
103	Management of Saline and Sodic Soils and Salinity
104	Protect Soil from Harmful Effects of Natural Elements

111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
131	Alternative Uses of Land
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
605	Natural Resource and Environmental Economics

Outcome #2

1. Outcome Measures

Change in Behavior Water Resources

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	958

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Water quantity is an issue through out Florida. Since June of this year there has been a an ongoing issue in Marion County as to whether a local family will be allowed to withdraw a significant amount of groundwater from a source very close to a natural spring. This water will be trucked from the location, bottled, and sold as spring water. This became a contentious issue in the area, and updates are still regularly showing up in local newspapers.

What has been done
Some of the Sustainable Floridian Volunteer program graduates and I have regular email conversations on various topics. Inevitably, the topics of groundwater removal came up. As we discussed the issue via email, I could tell that several of the volunteers were getting more and more interested.

Results
As a result of our conversations, several of them attended two of the county commission meetings on the issue. Two of the volunteers that attended the meeting told me that had it not been for the Sustainable Floridians Volunteer course they probably would have never attended a county

commissioners meeting. Itâ??s encouraging to know that one of my programs given participants the confidence and direction to become engaged in local politics.

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
103	Management of Saline and Sodic Soils and Salinity
104	Protect Soil from Harmful Effects of Natural Elements
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
131	Alternative Uses of Land
132	Weather and Climate
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
605	Natural Resource and Environmental Economics

Outcome #3

1. Outcome Measures

Change in Condition Water Resources

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	439

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Water contaminates are a serious issue in the Florida aquaduct. Reaching out to families in the home is one way to educate and begin the process of reducing contaminates that affect all Floridians.

What has been done

In 2011, conduct the Health Starts at Home program, in cooperation with Family & Consumer Science Agent Mary Sue Kennington. Participant's knowledge gain to be assessed by a pre and post assessment tool showing a 10% increase in knowledge of potential contaminants.

Results

Outcomes for Objective 1:
The 2011 Health Starts at Home program participants took pre and post surveys. This provided the following statistical information exceeding the 10% objective:
Participants exhibited knowledge of private well pollutants
PretestPost Test% Increase
18%36%18% increase

Impact for Objective 1:
Knowledge gained and confidence raised as a result of more informed decisions made for health.

Objective 2 - 50% of Ranchers and farmers (program attendees) living near bodies of water flowing off their properties will adopt BMP plans.

Outcomes for Objective 2:
Participants surveyed at the 2011 Spring Ranchers Forum showed 48% of ranchers and farmers had adopted BMPs. This objective was not quite reached, but showed significant increases over 2010.

Impact for Objective 2:
Agriculture industry that self-regulates will experience significantly lower intervention by regulatory agencies. This helps them reach this personal goal expressed by most farmers and ranchers. The potential cost to farmers to pay a private company to monitor pollutants would put farmers out of business.

Objective 3 - Orange County residents will become more knowledgeable and capable of insuring the safety of their own drinking water. Through the use of pre and post assessments residents will exhibit a 10% increased awareness of potential contaminants.

Outcomes for Objective 3:
Surveyed participant exhibited importance of findings the source of home drinking water pollution.
PretestPost Test% Increase
45%55%10% increase

4. Associated Knowledge Areas

KA Code	Knowledge Area
102	Soil, Plant, Water, Nutrient Relationships
103	Management of Saline and Sodic Soils and Salinity
104	Protect Soil from Harmful Effects of Natural Elements
111	Conservation and Efficient Use of Water
112	Watershed Protection and Management
131	Alternative Uses of Land

132	Weather and Climate
135	Aquatic and Terrestrial Wildlife
136	Conservation of Biological Diversity
605	Natural Resource and Environmental Economics

Outcome #4

1. Outcome Measures

Change in Knowledge Sustainable Use of Freshwater and Terrestrial Ecosystems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	12389

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Extension is using advanced technoloty to identify new knowledge on wetland-dependent species and their habitats. Information that has not been readily available for decision making.

What has been done
One Florida Extension faculty member's analysis of satellite telemetry data from satellite-tagged wood storks is revealing new information about how this wetland-dependent species uses the landscape and how to best conserve wetlands and other habitats in order to maintain healthy populations of wood storks, wading birds, and other wetland dependent species.

Results
By delivering talks to groups like the Sierra Club that illustrate the movements of satellite-tagged wood storks across the southeastern US and show the relationship between habitat use and landscape features, faculty have been able to raise awareness of the conservation issues involved in the sustainable use of freshwater and adjacent terrestrial ecosystems. At the end of these talks members of the public are always very appreciative and approach faculty to tell them how much they've learned from the talk.

4. Associated Knowledge Areas

KA Code	Knowledge Area

111 Conservation and Efficient Use of Water

135 Aquatic and Terrestrial Wildlife

Outcome #5

1. Outcome Measures

Change in Behavior Sustainable Use of Freshwater and Terrestrial Ecosystems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1217

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Florida is in the midst of a serious drought with reduced rainfall and falling levels in rivers and lakes across the state making it difficult to sustain the use of fresh water in the terrestrial ecosystems.

What has been done
Despite setting record rainfall amounts in October 2011, the South Florida Water Management District has a forecast of below-average rainfall for the 2011-2012 dry season. In response to the Water Management Districtâ??s continued drought forecast, the Natural Resource Extension Agent has developed water conservation education programs designed to empower citizens to comply with water restrictions while harvesting water for non-potable personal consumption through the use of rain barrels. 101 rain barrel workshop participants learned how to conserve water, construct and install their rain barrels. South Florida Water Management District was the major partnering agency supplying items such as rain gauges and educational materials.

Results
101 (55-gal.) rain barrels were constructed by rain barrel workshop participants at savings of $5,050 (101 x $50 - the estimated savings difference from supplied barrel and one purchased). Surveymonkey was also used to estimate the number of gallons of water rain barrel workshop participants expect to harvest and utilize per year. Respondents indicated that they intend to harvest a minimum of 450 gallons of water per year per barrel for use in their landscaping. It is estimated that 45,450 gallons (101 x 450 gal) of non-potable water is intended to be stored by participants for use in their landscape.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
135	Aquatic and Terrestrial Wildlife

Outcome #6

1. Outcome Measures

Change in Condition Sustainable Use of Freshwater and Terrestrial Ecosystems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	151

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Stewardship of the terrestrial ecosystems of Florida are an important aspect of Extension education.

What has been done
Based on work by Florida Extension Agents the Florida Master Naturalists are making a significant contribution to the stewardship of Broard County's natural resources.

Dr. John Pipoly, from the Extension Education Section of Broward County Parks and Recreation Division and Ms. Kristen Hoss, from Tanawh¡ Presents, LLC., forged an effective instructional team, including Assistant Instructor Robin Reccasina, Director of Education from the Sawgrass Nature Center, to complete the first cycle of UF-IFAS Florida Master Naturalist Program core courses. This first round of core courses produced 44 research-based interpretive products to assist Broward County, State of Florida and U. S. National parks. This included helping nature centers and natural areas to deliver interpreted materials for educational experiences to enhance the public's knowledge of proper stewardship of these jewels of our natural heritage. These products range from PowerPoint presentations, fact sheets, and scripts for volunteer tour guides, to web-based interactive keys to the plants of the Broward coastline and at guide to the invasive species of the Fern Forest Nature Center downloadable to iPhones. The 40 course products, concomitant with a donation of 10,082 volunteer hours, have made significant contributions to the

sustainability and public awareness of these critical natural resources.

Results

The 10,082 volunteer hours donated to the Broward County, State of Florida, National Parks and the Sawgrass Nature Center not only represent a contribution of $215, 351 dollars worth of effort (using statistics from the Independent Sector website), but saved an additional $250,000 in the time and materials for Parks naturalists, managers, and Sawgrass staff who would have had to put in countless hours of research, testing and fieldwork to produce these products. Students worked in teams, basing their work on peer-reviewed research journal articles and research-based publications available from the University of Florida-IFAS Electronic Data Information Source (www.edis.ifas.ufl.edu), followed by testing of concepts on patrons, and final production. In addition, for some projects, actual habitat restoration, installation of interpretive signs and trails, and other hands-on physical products were established in these areas.

The instructional team was greatly assisted by volunteer Esther Muram, many guest lecturers, and collaborators from the cities of Coral Springs, Oakland Park, and Plantation, along with local businesses such as the Fish Emporium, and Airboat Adventure Tours. Florida Master Naturalist training includes three, 40 contact hour modules in Upland Habitats, Coastal Systems and Freshwater Wetlands; all designed for both professionals and volunteers, who receive their national and state certification as part of the Program. Participants in the program have an opportunity to obtain certification while preparing to contribute to the sustainability and conservation of Broward's precious native vegetation and wildlife resources. Volunteers who assisted Broward County Parks with its nature centers and natural areas received specialized training after the course.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
135	Aquatic and Terrestrial Wildlife

Outcome #7

1. Outcome Measures

Change in Knowledge Environmental Education

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	7181

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The protection of native wildlife and habitats on larger private lands is problematic when the landowner has limited resources at their disposal.

What has been done
Sarasota natural resources Extension is collaborating with Sarasota County Environmental Services to assist a private landowner that came to one of the 2011 presentations of Backyard Landscape for Wildlife in hopes of achieving certification to protect the wildlife.

Results
Working with the county wildlife biologists, an inventory has been initiated of both fauna and flora to provide documentation for possible inclusion onto the FL Natural Areas Inventory. The inventory then will be used to prescribe land management improvements, and identify county resources that can assist the landowner to contribute to wildlife conservation efforts in Sarasota County.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #8

1. Outcome Measures

Change in Behavior Environmental Education

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3375

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Problems with animal waste can have serious ramifications for Florida's environment.

What has been done
An individual looking for ways to dispose of manure contacted the landfill about disposal. The landfill gave my information to her and she contacted me for a farm visit.

Results
Through information given while at the client's farm, it was decided that she will build compost bins in order to properly handle her manure, making a superior soil amendment aimed at enriching her sandy soils. Through this education and understanding, the farm owner will now not only be effectively handling her manure, but also helping to improve her pastures by adding the composted material. Additionally, a renewable resource will not be unnecessarily added to the landfill.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #9

1. Outcome Measures

Change in Condition Environmental Education

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1561

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Monroe County Extension has been providing county administration with guidance and support on environmental issues.

What has been done
Extension agent, Alicia Betancourt, undertook the development of a greenhouse gas emissions (GHG) audit and climate action plan for county operations. This provides baseline emissions data and strategies to reduce municipal emissions. The overarching goal is to incorporate triple-bottom-line benefits into all county operations and the delivery of all county services.

Results
The GHG audit immediately brought to light some billing discrepancies which saved over $37,000 per year and several hundred thousand more being back billed to the proper agency. The audit was successful in educating the administration on energy and fuel cost. The agent provided education on emission reductions and efficiency of particular buildings which led to improved tracking of usage in the EPA Portfolio Manager Program. Additionally, the Board of County Commissioners approved a resolution in 2010 establishing goals to reduce greenhouse gas (GHG) emissions from county operations by 20% by the year 2020 (relative to 2005 baseline). This will constitute a savings of nearly $600,000 per year for the taxpayers. Through this initiative, the county is providing more cost-effective services for its constituents while reducing its environmental impacts and building a stronger community. The leadership of the county's elected officials and department heads have been essential to the successes that the county has achieved to date. Equally important has been the willingness of staff at all levels to support energy-efficiency initiatives, waste-reduction efforts, and the use of green products.

4. Associated Knowledge Areas

KA Code	Knowledge Area
605	Natural Resource and Environmental Economics

Outcome #10

1. Outcome Measures

Change in Knowledge Sustainable Use of Coastal and Marine Ecosystems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	4018

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Florida is a coastal state but the recent economic situation has greatly impacted the ability for staying sustainable within the boating and marina industries.

What has been done
The Northeast Florida Regional Boating and Waterways Workshop was held on November 30 and December 1, 2011 in St. Augustine, FL.Fifty-six (56) participants attended the first day and thirty-two (32) attended the second day. There was also the The Southeast Florida Regional Boating and Waterways Workshop was held on March 14-15, 2011 in West Palm Beach, FL. Seventy-seven (77) participants attended the first day and twenty-nine (29) attended the second day.

Results
In the Northeast workshop Thirty (30) participants completed a post-event evaluation. Ninety percent (90%) either agreed or strongly agreed that the workshop increased their knowledge of economical and sustainable approaches to boating and waterway management in southeast Florida. Ninety-three percent (93%) either agreed or strongly agreed that the workshop was a good opportunity to network with other professionals in the region.

In the Southeast region workshop Seventy-seven (77) participants attended the first day and twenty-nine (29) attended the second day. Thirty-three (33) participants completed a post-event evaluation. Eighty-eight percent (88%) either agreed or strongly agreed that the workshop increased their knowledge of economical and sustainable approaches to boating and waterway management in southeast Florida. Ninety-seven percent (97%) either agreed or strongly agreed that the workshop was a good opportunity to network with other professionals in the region.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
135	Aquatic and Terrestrial Wildlife

Outcome #11

1. Outcome Measures

Change in Behavior Sustainable Use of Coastal and Marine Ecosystems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1216

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Concerns about product safety and increasing local food movements are compelling people to learn more about where their food comes from how it is produced; this is particularly true for seafood. Informed consumers who understand the importance of ecosystem health and sustainable harvesting practices, who appreciate the health benefits of seafood, and who understand how to evaluate the safety of the seafood they buy can contribute to the long-term health and sustainability of Florida's seafood industry.

What has been done
To meet these needs, the Florida Sea Grant Extension Agents from Collier, Miami-Dade and formerly Bay County have developed The Florida Seafood Sustainability and Safety Brown Bag Webinar Series to educate seafood consumers about the sustainability and safety associated with Florida's commercial seafood products, and helps them make more informed decisions about purchasing Florida seafood. The seven half-hour webinars were scheduled once a month during the noon lunch hour so audiences can attend the sessions without leaving their offices or homes. The webinars addressed the ecology, sustainability, economic importance, as well as purchasing and handling tips associated with specific commercial seafood products. 215 participants attended the 7 sessions, and another 184 individuals viewed the recordings of the sessions.

Results
For all 7 sessions, participants indicated knowledge gained of: 84% for biology and ecology; 82% for fisheries management, and 84% for species handling and purchasing. 98% of survey respondents said that they intend to share the information they learned during the webinar with others and 88% indicated that the webinar format was a convenient way for them to receive information. In a post-series follow up survey, 29.2% of respondents (n=24)* indicated they increased their consumption of Florida seafood since attending the series and 75%of respondents indicated they applied what they learned in their professional and/or personal lives. Webinar recordings of the webinars are available at: http://miami-dade.ifas.ufl.edu/environment/sea_grant_seafood.shtml.
*The post-program survey was sent out during the same week this report was written, which may explain the low response rate (11%)

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
135	Aquatic and Terrestrial Wildlife

Outcome #12

1. Outcome Measures

Change in Condition Sustainable Use of Coastal and Marine Ecosystems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	622

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Lobster and stone crab fishermen in the Upper Florida Keys have limited working waterfront to store their traps. For years they had used US1 right-of-way for storage, illegally.

What has been done
In 1987, UF Extension helped negotiate a lease agreement to legalize the existing arrangement. Since the inception of the lease even more working waterfront has been lost to other uses. In 2009 the FDOT proposed to cancel the lease and abolish the existing trap storage areas, putting 35 fishing firms in jeopardy.

Results
Extensive collaborations over a three-year period with the Organized Fishermen of Florida, MC Attorney's Office, and FDOT resulted in the continuation and expansion of the two Conch Key trap storage sites along US1 on FDOT right of way.

4. Associated Knowledge Areas

KA Code	Knowledge Area
111	Conservation and Efficient Use of Water
135	Aquatic and Terrestrial Wildlife

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Of those tested over 91% increased their knowledge in ways to maintain, conserve and enhance Florida's Natural environment. 71% made behavioral changes and 52.8% had impacts from changes that positively impacted their communities.

Key Items of Evaluation

In December 2011, the Florida Environmental Regulation Commission (ERC) adopted the Florida Department of Environmental Regulation (FDEP) version of the Numeric Nutrient Criteria (NNC) Rule as a substitute for the U.S. Environmental Protection Agency (EPA) rule. UF/IFAS economists estimated that implementation of EPA's NNC would initially cost Florida agricultural producers over $3 trillion, with recurring annual costs estimated at $974 million. In addition, the economists looked at the total economic impact to Florida as a result of land taken out of production necessary to implement the NNC rule. They estimated the direct costs between $902 million and $1.6 billion annually, indirect costs of $1.15 billion annually, and a loss of about 14,500 full- and part-time jobs statewide. [1]

This new rule for Florida will reduce these costs and was a collaborative effort led by FDEP and involving local and regional governments, as well as agriculture and other land-based industries. UF/IFAS faculty played key roles in the final wording of the adopted rule and one serves as a member of the ERC.

According to the ERC website (on March 26, 2012), "the Florida Environmental Regulation Commission is a non-salaried, seven-member board selected by the Governor, who represent agriculture, the development industry, local government, the environmental community, citizens, and members of the scientific and technical community. The Commission sets standards and rules that protect Floridians and the environment based on sound scientific and technical validity, economic impacts, and risks and benefits to the

public and Florida's natural resources. Most issues that go before the ERC relate to air pollution, water quality and waste management."

[1] Budell, R., T. Pride., H. Stone, J. Clements, A.W. Hodges, T.J. Stevens, R. Mohammad, T. Borisova, and D. Bottcher, "Economic Impacts and Compliance Costs of Proposed EPA Numeric Nutrient Criteria for Florida Agriculture," unpublished white paper, 2010.

V(A). Planned Program (Summary)

Program # 3

1. Name of the Planned Program

Develop Responsible and Productive Youth Through 4-H and Other Youth Programs

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
806	Youth Development	100%	100%	0%	
	Total	100%	100%	0%	

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	3.0	0.0	0.0
Actual Paid Professional	91.6	3.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
992825	201169	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
992825	201169	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Life skills developed in youth through subject matter experience

1.Youth participate in at least 6 hours of learning 4-H subject matter during the year through 4-H club projects, classroom, afterschool or camping experiences.

2. 4-H Youth participate in beyond Club/ Classroom Experiences such as residential camp, leadership trainings, workshops and experiences, day camps, and structured educational events / activities.

Additional educational methods include: camp counselor training, judging/exhibit workshops, training clinics, youth leadership council, demonstration/project portfolio workshops, recognition programs, community service projects, and county fair experiences.

Organizational strategies and learning environment for youth programs

4-H Clubs:

1. Training volunteers on elements that contribute to club charter, risk management, affirmative action compliance, quality programming, fiscal management, etc.

2. Quality management of chartering process

3. Training clubs to demonstrate excellent in recognition standards, marketing, and community service.

4-H In the Classroom

1. Classroom teachers and/or volunteers are trained and receive curriculum and training to teach students in subject matter area.

2. Students learn 4-H subject matter area during the school year.

3. 4-H marketing materials on subject matter areas & other delivery systems are created and distributed to teachers and students.

4-H Residential / Day Camping

1. Camp committees plan, implement, and evaluate quality camp experiences focused on subject matter and life skill development.

2. Teens will actively participate in and complete 24 hours of Camp Counselor training

3. Subject matter presentations will be delivered/experienced at residential and day camps.

Advisory Committees

1. Community networking for membership. Needs assessment. Handbook development, training in youth program organization.

2. Training of committee members throughout the year. Follow-up and support for members with focused responsibilities.

Expansion and Review Committee

1. Utilize personal and ethnic marketing strategies to reach underserved audiences.

2. Committee training for member which outlines the function of the committee.

3. Agent training to assist agents in developing this committee.

Volunteer Development

- Written position description will be completed.

-Workshops and activities will be completed related to child protection

-Orientation and training workshops and seminars will cover topics in youth development, organizational culture and strategies, recognition, youth project study areas, access & equity, youth program development, and partnerhsips

- Field and office consultations will be planned for volunteers with expanded roles.

-Project training workshops/seminars will be held.

-Volunteers will be sustained, supported, and recognized for their work.

2. Brief description of the target audience

Youth ages 5-18 enrolled in Florida 4-H programs

Adult and youth volunteers in the 4-H program

Florida families with youth enrolled in the 4-H program between the ages of 5 and 18

-Parents and grandparents of youth ages 5-18 in the 4-H program

-Teens (14-18) in the 4-H program

-Adults interested in engaging in positive youth development

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	894302	1748520

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	17	0	17

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. Outcome Measures

Change in Knowledge Life Skills Developed in Youth Through Subject Matter Experiences

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	132705

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Learning life science skills is important in preparing youth for the future. In Florida the need for more young people enter STEM careers has been identified. This includes agricultural areas. There is also a need for children to be actively involved in areas that increas their abilities to be successful in the completion of Florida Sunshine State Standards.

What has been done
Youth in one county participated in a 4-H embryology project.

Results
Post reflective surveys given to students that participated in the 4-H Embryology Project showed 96% of 240 youth increased their knowledge of the life sciences , and the growth and development of animals. Teacher evaluations showed 89% of students gained an appreciation of nature, learned responsibility and now understand life cycle concepts that are necessary for completion of Florida Sunshine State Standards.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #2

1. Outcome Measures

Change in Behavior Life Skills Developed in Youth Through Subject Matter Experiences

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	49399

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Military Youth Learn Life Skills through Residental Camping
Military children of reserve and guard armed service members do have have connection with other military children due to not being on a base.

What has been done
Holding residential camps for military youth only in the summer in all areas of Florida is one way we at Operation: Military Kids have provided an opportunity to meet. Through community sponsors such as the Florida American Legion, 4-H and others, over 697 military youth connected in 2011 with other military youth.

Results
Thank you letters from the youth show the impact of the camp on the youth. Evaluations from parents indicate that 93% of parents surveyed indicated their child's self-confidence skill improved as well as 92% felt their child's social skills improved as a result of the camp experience.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #3

1. Outcome Measures

Change in Condition Life Skills Developed in Youth Through Subject Matter Experiences

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	24921

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In one Northeast Florida county f the nine schools, all but one is Title One with 69% qualified for r/f lunches and 60% are minorities. Many of these children do not have enough food or do not understand healthy nutrition and therefore many suffer from poor eating habits.

What has been done
The major grant sponsor for the JMG program requested that Extension develop a program and that the program emphasize vegetable gardening to encourage healthy eating habits.

Results
Four of our schools have had vegetable gardens for more than a year, and are becoming proficient in growing vegetables. Part of the learning process is the necessity of careful planting and timely watering. In one of our established gardens, we harvested 15 pounds of sweet potatoes. Eight pounds of the sweet potatoes went to the Thanksgiving boxes prepared for families who would not be able to afford a meal. Even though our students are economically disadvantaged, it is a key goal of our program to demonstrate to the students that they can and should contribute to their community. The other seven pounds of sweet potatoes were cooked and served as baked sweet potato fries. Potatoes, provided by Hastings Research Station, were planted at 6 of the JMG schools. Potatoes were planted in 6 title one schools in Duval County in raised beds and was used as a lesson series in 17 classes. There were 361 students: 128 white, 103 black, 86 Hispanics, and 33 Asians involved in the project. The kids planted them, maintained, and harvested them. The teachers cooked them for the kids and they were enthusiastic about eating them, especially since they were different colors and shapes from the standard. Of course they were surprised to find they still all taste like potatoes. The potatoes at Windy Hill Elementary School were donated to the school's twice monthly food baskets for the families that are struggling at that school. At one of the participating schools, students who have

not completed their work are not allowed to come to our class. Every week, fewer students have to leave to finish their work; the students are motivated to get their work done so they don't miss anything.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #4

1. Outcome Measures

Change in Knowledge Organizational Strategies and Learning Environments for Youth Programs

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	8162

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Students need programs that provide them with experiences they might not other wise have.

What has been done
During 2011 summer day camps, the Agent held a Local Legislature Day Camp to give unique experiences to youth within county and state government. On the first day of the camp, youth visited with city and county elected officials. On day two of the camp, youth attended 4-H Legislature in Tallahassee where they were able to see how their peers pass and amend bills in the House and Senate. Youth had the opportunity to visit with the Mayor of Live Oak and the Suwannee County Commissioners. Youth asked questions to these officials from a podium, learned how their local government works, and led the pledge of allegiance at the commission meeting.

Results
Local Legislature Day Camp participants increased their knowledge of county government by 50% based on student evaluations. Comments after the event from the local officials were positive and many expressed their enjoyment in working with 4-H youth and learning more about

the Suwannee County 4-H program. This event helped youth be active in their local government because they were able to understand the process of government and were introduced in a comfortable, none threatening environment.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #5

1. Outcome Measures

Change in Behavior Organizational Strategies and Learning Environments for Youth Programs

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	6597

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
In 2007 Sumter County 4-H'ers participated in a statewide evaluation of the skills, opportunities and learning environments provided to Sumter County youth through the 4-H Youth Development program. This survey asked youth to evaluate the skills acquired, the youth learning opportunities, engagement and environments along with volunteer support provided for youth.

What has been done
Again in 2010 the Statewide 4-H Youth Outcomes evaluation survey was administered and is an attempt at a formal evaluation for the Organizational Systems Program. Results were returned and analyzed for the 2011 report. Below are highlights* from the survey which are indicators of Essential Elements (Kress 2005)to a Quality Youth Development Program. These Essential Elements are not specific only to 4-H but are well known indicators across the scientific field of Positive Youth development including the Search Institute, Boys and Girls Club, and many others:
*Full survey results are provided in the Sumter County 4-H Program Impact Highlights.

Results
+79% of youth felt that in 4-H they belonged to a special group, +65% say 4-H is their primary activity outside of school, +75% say 4-H involves youth in decisions which affect them, +43% of

youth say they are participating at events beyond the county level, +85% of youth say in 4-H they are expected to show responsibility for their actions, +89% say that 4-H provides a safe place for learning and growing, +84% of youth say they feel that 4-H volunteers "help me succeed", +72% say they "can say no to risks and dangers", +70% think through consequences of decisions before acting, +70% say they are improving their communication skills through 4-H.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #6

1. Outcome Measures

Change in Condition Organizational Strategies and Learning Environments for Youth Programs

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	4830

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Poverty is a serious problem in many Florida counties

What has been done
Each Holiday season in one Florida County 4-H Council leads a 4-H food drive community service project. In 2011 Alachua County 4-H partnered with the Strike Out Hunger food drive. Strike Out Hunger is a county-wide initiative to reduce poverty in the County and is also championed by one of the long-time County Commissioners. This partnership served 3 purposes: Alachua County 4-H giving back to the community, reducing poverty, and creating new partnerships in Alachua County.

Results
Through this newly established collaboration, Alachua County 4-H donated 1,008 pounds of non-perishable food items. The Strike Out Hunger initiative collected nearly 38,000 pounds, where over 1,700 residents of the County were benefited. County 4-H partnered Sigma Alpha Sorority,

Collegiate 4-H, Department of Agricultural Education and Communication Graduate Student Association and the County Master Gardeners.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #7

1. Outcome Measures

Change in Knowledge Volunteer Development and Systems to Support Youth

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	4260

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
A primary goal for any 4-H program is to recruit and train as many adult volunteers to lead 4-H programs that is attainable with available resources.

What has been done
This is accomplished by employing multiple methods of marketing to showcase a diverse and sought after program.

Results
Through the use of various types of publicity, including newspaper articles, county cable channel, internet and brochures/flyers, the Flagler County 4-H program has attracted 10 new adults who will join the 45 volunteers currently providing leadership to 11 4-H clubs. The increase in adult leadership is the result of the formation of new clubs and adults desire to provide additional expertise to existing clubs which leads to greater diversity in the 4-H projects that are now available to Flagler County youth. These efforts have enabled 3104 youth to participate in 4-H programs, which represent 24% of the county youth who are eligible for 4-H programs.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #8

1. Outcome Measures

Change in Behavior Volunteer Development and Systems to Support Youth

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3510

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There are many kinds of volunteers. Often they occur through partnerships.

What has been done
The 4-H Navy partnership has been very successful in Duval county. Both bases have a team mentality when it comes to training. This team approach means that each base hosts training on a rotating basis to showcase local programs and cut down on travel from one base to the other.

Results
This past September, the 4-H agent in Duval County was notified that on NS Mayport was selected, due to the stellar 4-H program they offer, to be filmed as a "how to do it"? for other Navy bases around the globe. In addition to this recognition, the agent was given two new bases to support, NS Key West and NS GTMO in Cuba. Talks are currently in the works to offer training locally at the two new bases.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #9

1. Outcome Measures

Change in Condition Volunteer Development and Systems to Support Youth

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1193

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Volunteers are crucial to the continued growth of 4-H clubs within a county.

What has been done
Used a OJJDP grant to develop a 4-H Tech Wizards program.

Results
Development of 4-H Tech Wizards program has increased the number of volunteers in Walton County by 50%, or 18 new volunteers. These volunteers serve as group mentors to under performing youth and youth with increased chance of leaving school before graduation. The volunteers are impressed with the youth's interest in science and feel they are doing a "good thing" serving as mentors in this program.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

Outcome #10

1. Outcome Measures

Change in condition from involvement in youth life skills

2. Associated Institution Types

- 1890 Extension

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)
FAMU: AgDiscovery is an outreach program to help middle and high school students learn about careers in plant and animal science, and wildlife management. Getting students involved in more STEM careers in Florida has become an emphasis within the state.

What has been done
AgDiscovery program at Florida A&M University (FAMU) targets diverse population of students (14-17 years of age) from across the states, which have displayed interest in animal science and related.

Twenty (20) students are selected each program (generally in June), and are provided hands-on experience through wet labs, workshops and site visits for two weeks. At the end of program, the students are evaluated and the student evaluate and the program.

Results
Results from analysis showed 95 percent of the students agreed that the program has met their learning expectations, and that the program has helped them to decide whether to pursue a career in animal science/veterinary medicine. The program also received direct (via letter) positive feedback from one past student participant regarding the impact of the program on his career choice.

FAMU Animal Science (Veterinary Technology & Pre-Veterinary track) program current has one (5) past AgDiscovery student enrolled in its program. This will increase the number of veterinary professionals within the state through direct involvement in this AgDiscovery program concept.

4. Associated Knowledge Areas

KA Code	Knowledge Area
806	Youth Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Of 4-H and other youth evaluated in Extension programs 89% reported increased knowledge in youth development. More than 82% made behavioral changes in their lives and 70% of youth and volunteers reported that changes they made impacted their communities and others in positive ways.

Key Items of Evaluation

Over Six Hundred Participants Make 4-H Day at the Capitol a HUGE Success

4-H teaches youth skills they need to be better Florida citizens now and in the future as productive adults. More than 600 Florida 4H youth and adults from as far south as Collier County and as far northwest as Escambia County arrived in Tallahassee last week. 4-H day at the Capitol, an annual state event, took place February 28th. Participants were adorned in "4-H green" shirts with the bold words on them "I Am the Revolution of Responsibility". "I Am the Revolution of Responsibility" addresses the misconception that youth are not informed of what's going on in their communities and promotes the findings that youth are making a real impact every day. Throughout the day participants met with lawmakers and other elected officials including Governor Rick Scott. During one of the rallies in the Capitol Courtyard, Commissioner Adam Putnam, who is also a 4-H alum, joined Lieutenant Governor Jennifer Carroll to recognize the youth leadership opportunities

4-H brings to our state. 4-Hers learned how government works first hand. This kind of action learning is extremely important in increased retention of knowledge.

V(A). Planned Program (Summary)

Program # 4

1. Name of the Planned Program

Create and Maintain Resource Effective Landscapes: The Smart Way to Grow

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%	0%	0%	
102	Soil, Plant, Water, Nutrient Relationships	5%	0%	0%	
112	Watershed Protection and Management	5%	0%	0%	
133	Pollution Prevention and Mitigation	5%	0%	0%	
201	Plant Genome, Genetics, and Genetic Mechanisms	5%	0%	0%	
204	Plant Product Quality and Utility (Preharvest)	5%	0%	0%	
205	Plant Management Systems	5%	0%	0%	
206	Basic Plant Biology	5%	0%	0%	
211	Insects, Mites, and Other Arthropods Affecting Plants	5%	0%	0%	
212	Pathogens and Nematodes Affecting Plants	5%	0%	0%	
213	Weeds Affecting Plants	5%	0%	0%	
216	Integrated Pest Management Systems	5%	0%	0%	
405	Drainage and Irrigation Systems and Facilities	5%	0%	0%	
602	Business Management, Finance, and Taxation	5%	0%	0%	
603	Market Economics	5%	0%	0%	
604	Marketing and Distribution Practices	5%	0%	0%	
608	Community Resource Planning and Development	5%	0%	0%	
610	Domestic Policy Analysis	5%	0%	0%	
723	Hazards to Human Health and Safety	5%	0%	0%	
802	Human Development and Family Well-Being	5%	0%	0%	
	Total	100%	0%	0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	40.0	0.0	0.0	0.0
Actual Paid Professional	83.0	0.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
899612	0	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
899612	0	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Conduct workshops and meetings •Deliver services •Develop products, curriculum, resources •Provide training •provide counseling •Make assessments •work with the media •develop partnerships

2. Brief description of the target audience

Business and Industry

Florida Residents

Government and Regulatory Agencies

UFIFAS Faculty & Staff

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	903509	1766521	0	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	28	0	28

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Change in Knowledge Commercial Horticulture/Urban Forestry Services
2	Change in Behavior Commercial Horticulture/Urban Forestry Services
3	Change in Condition Commercial Horticulture/Urban Forestry Services
4	Change in Knowledge Residential Landscapes including Florida Yards and Neighborhoods (FFL/FYN)
5	Change in Behavior Residential Landscapes including Florida Yards and Neighborhoods (FFL/FYN)
6	Change in Condition Residential Landscapes including Florida Yards and Neighborhoods (FFL/FYN)
7	Change in Knowledge in efficient and effective water use
8	Change in behavior in efficient and effective use of water
9	Change in condition related to the efficient and effective use of water
10	Change in Knowledge related to sustainability and economic benefits for creating and maintaining effective landscapes
11	Change in behavior related to sustainability and economic benefits in creating and maintaining effective landscapes
12	Change in knowledge related to the Florida Friendly Landscaping and Master Gardner Program
13	Change in behavior related to the Florida Friendly Landscaping and Master Gardner Programs
14	Changes in the impact of individuals and communities related to Florida Friendly Landscaping and Master Gardener Programs
15	Changes in Knowledge related to effective pest management
16	Changes in behavior related to effective pest management
17	Impacts on individuals and communites through changes in condition in areas related to effective pest management

18	Change in conditions related to sustanable horticulture and calculating economic impacts.

Outcome #1

1. **Outcome Measures**

Change in Knowledge Commercial Horticulture/Urban Forestry Services

Not Reporting on this Outcome Measure

Outcome #2

1. **Outcome Measures**

Change in Behavior Commercial Horticulture/Urban Forestry Services

Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

Change in Condition Commercial Horticulture/Urban Forestry Services

Not Reporting on this Outcome Measure

Outcome #4

1. **Outcome Measures**

Change in Knowledge Residential Landscapes including Florida Yards and Neighborhoods (FFL/FYN)

Not Reporting on this Outcome Measure

Outcome #5

1. **Outcome Measures**

Change in Behavior Residential Landscapes including Florida Yards and Neighborhoods (FFL/FYN)

Not Reporting on this Outcome Measure

Outcome #6

1. Outcome Measures

Change in Condition Residential Landscapes including Florida Yards and Neighborhoods (FFL/FYN)

Not Reporting on this Outcome Measure

Outcome #7

1. Outcome Measures

Change in Knowledge in efficient and effective water use

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	12537

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Salt water intrusion can be a major issue in a coatal state like Florida.

What has been done
The agent in Okaloosawas invited to speak at the Northwest Florida Chapter of the Florida Irrigation Society meeting by the president of the chapter. This group consists of contractors and suppliers for the irrigation trades. The attendees have an impact on the education and licensing of sprinkler contractors and water conservation in the Northwest Florida area.

Results
As a result of this invitation, the agent spokde and provided a 10 page handout that I developed on saltwater intrusion and how to diagnose this problem in coastal landscapes.

4. Associated Knowledge Areas

KA Code	Knowledge Area

112 Watershed Protection and Management

405 Drainage and Irrigation Systems and Facilities

Outcome #8

1. Outcome Measures

Change in behavior in efficient and effective use of water

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2370

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Florida receives an average 52-56 inches of rainfall a year. One inch of rainfall over a 1000sq.ft. area, yields in excess of 600 gallons of water. Most of that water flows off of roofs onto lawns and driveways, picking up fertilizers, pesticides and other pollutants that eventually find their way to Floridaâ??s lakes, rivers and streams, contributing to non-point source pollution. Rain barrels are a convenient and efficient way to collect some of that water.Rainbarrel Workshops held not only save water and cut water costs to homeowners, but also generate revenue for local businesses.

What has been done
In Columbia County a total of 89 people attended 5 rain barrels or rain garden building workshops.

Results
19 people completed a follow up on-line survey 2-3 months following their workshop.
42% of those responding to the survey had installed a rain barrel
37% said that they planned to install a rain barrel
21% said they would not be installing a rain barrel
79% of the respondents are now composting to help conserve soil moisture

Impact: The agent has designed and installed two rain gardens to be used as training tools and visuals for videos and multi-media presentation. A total of 18 people have been taught the principles and uses of a rain garden while installing these educational gardens. If 81% of the 89 workshop participants do, in fact, install a rain barrel, 72 more rain barrels will be in use by the

end of the year.
If each person uses 20 barrels of water each year, a water savings of approximately 72,000 gallons of water will be conserved each year. Added to the previous years' barrels, an estimated 220,000 gallons of harvested rainwater is being used by workshop attendees each year. This amount of water is not being drawn from underground water supplies, thus conserving our natural water resources.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
405	Drainage and Irrigation Systems and Facilities

Outcome #9

1. Outcome Measures

Change in condition related to the efficient and effective use of water

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	249

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
It is estimated that half of the water used in Florida is for irrigation, therefore efficient irrigation water management is necessary to conserve water. A University of Florida study found that baseline moderately sized home sites were using 74 percent of domestic water for outdoor use. According to another University of Florida study, when landscape irrigation is managed based on UF recommendations a 30% water savings can be achieved per homeowner. This can potentially save each homeowner an estimated 13,000 gallons of water per year. The simple act of setting irrigation clocks to manual and watering on an as needed basis can save tremendous amounts of ground and surface water.

What has been done
2968 attendees participated in â??Florida Gardensâ?? educational seminars in 2011. 297

participants completed the online follow up survey conducted at 2011 year end.

Results
Surveyed attendees (n=297) adopted FFL practices which resulted in the following landscape maintenance changes; 43% (n=297) water more conservatively by decreasing their water use. 16% apply Â¾ inch of water to their lawn when needed, and 30% set their irrigation clocks to manual. It is estimated that as a result of attending the Florida Gardens and Speaker Series, residents have saved 1,158,300 gallons of water in 2011.

4. Associated Knowledge Areas

KA Code	Knowledge Area
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
405	Drainage and Irrigation Systems and Facilities

Outcome #10

1. Outcome Measures

Change in Knowledge related to sustainability and economic benefits for creating and maintaining effective landscapes

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	15678

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Green Industries Best Management Practices is a science-based educational and certification program for landscape professionals. According to state law, it is mandatory that landscape professionals throughout the state be certified by January 2014, by attending a 6 hour course taught primarily by Extension agents.

What has been done
Horticulture faculty from four counties Hernando, Pasco, Sumter, and Citrus, formed a team in order to team teach this program. We collectively refer to this area as the nature coast, even

though Sumter county is not technically on the coast. This area has several preserves such as the Chassahowitzka, large wetlands like the Green Swamp and many springs including magnitude one Weeki Wachee springs.

Results

In 2011 the four counties mentioned above, taught more than 36% of all Florida landscape professionals in the Green Industry Best Management practices, which is surprising to this agent since the required certification is still two years away. This agent believes there is a change in attitude in the landscaping industry to "do the right thing"?, and protect our unique water bodies. The witness here is the high number of early adopters? to the Green Industries Best Management Practices certification program on the nature coast.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
610	Domestic Policy Analysis

Outcome #11

1. Outcome Measures

Change in behavior related to sustainability and economic benefits in creating and maintaining effective landscapes

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3296

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Understanding what plants grow best in Florida gardens at different times of the year and the BMPS that save the most on water and fertlizer can increase the beauty of local communiites while improving the environment.

What has been done

2968 attendees participated in Florida Gardens educational seminars in 2011 in Sumter County.

Results
297 participants completed the online follow up survey conducted at 2011 year end. 37% (n=297) of surveyed participants used fertilizers appropriately by choosing slow release fertilizers, 19% minimized storm water runoff and 27% decreased or eliminated winter fertilization. 65% (n=297) 70% selected recommended Florida friendly plants, winter hardy plants and 46% selected plants based on site requirements.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
604	Marketing and Distribution Practices
610	Domestic Policy Analysis

Outcome #12

1. Outcome Measures

Change in knowledge related to the Florida Friendly Landscaping and Master Gardner Program

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	86347

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Information on the planting and care of tropical fruit crops will be extended through electronic media (electronic publications and audio/video). Three websites are involved in this effort: SolutionsForYourLife, EDIS, and FruitScapes.

What has been done
Over 190,000 publications through the University of Florida's Extension Publication websites (i.e., EDIS, Solutionsforyourlife) were accessed or downloaded in subjects ranging from RAB-LW to

Las ciruelas en Florida to growing Tahiti lime in the Florida home landscape to preparing tropical fruit trees for hurricanes.

Results

. Of those hits, 13.7% were for the Spanish language versions. The FruitScapes website has enhanced the visibility and improved the access of Florida's urban clientele to cultural information on growing tropical and subtropical fruit crops in the home landscape. Last year (2010) FruitScapes was accessed 37,870 times, this year 59,405 times (a 36% increase).

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
405	Drainage and Irrigation Systems and Facilities
608	Community Resource Planning and Development
723	Hazards to Human Health and Safety
802	Human Development and Family Well-Being

Outcome #13

1. Outcome Measures

Change in behavior related to the Florida Friendly Landscaping and Master Gardner Programs

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	41595

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Master Gardners are crucial to meeting all the demands and questions in counties related to home gardening.

What has been done
In Manatee County Eighty-one new Master Gardeners have been trained since 2008. Of those, 69 completed all the requirements for first-year Master Gardeners (75 hours of volunteer service and 10 hours of continued training). A post-training evaluation indicated an average increase in knowledge of 47%. From 2007 to 2011, there has been an average increase in Master Gardener volunteer educational contacts of 36%. This drastic increase in contacts is partially due to a better managed system of record keeping and data collection. It is also due to increased visibility of Master Gardeners and the Extension office through press releases, the Internet, and word-of-mouth.

Results
Between 2007 and 2011, Hillsborough County Master Gardener volunteers donated more than 35,200 hours of volunteer service --the equivalent of $619,964 of in-kind contributions to the county and the state.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation
204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
405	Drainage and Irrigation Systems and Facilities
608	Community Resource Planning and Development
723	Hazards to Human Health and Safety
802	Human Development and Family Well-Being

Outcome #14

1. Outcome Measures

Changes in the impact of individuals and communities related to Florida Friendly Landscaping and Master Gardener Programs

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	9549

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Following a Victory Garden session on growing tomatoes, the City of Pensacola Community and Redevelopment representative asked the Escambia County Extension Horticulture Program for assistance with the development of the Hollice T. Williams Community Garden.

What has been done
The initial plan was to have garden in native soil with an irrigation system that covered the entire landscape area. After many consultations, the city decided to follow Extension recommendations to install lined raised beds, purchase clean compost, and add individual water systems for each bed. There are currently twenty eight planted beds in the park area and the project has a waiting list for participation.

Results
The city was only able to fund clean compost for half of the beds and those gardens are weed and pest free during summer months. They also recognized the value of a knowledgeable coordinator and have a horticulturally-trained staff member assisting residents with gardening issues based on recommendations by Extension.

4. Associated Knowledge Areas

KA Code	Knowledge Area
101	Appraisal of Soil Resources
102	Soil, Plant, Water, Nutrient Relationships
112	Watershed Protection and Management
133	Pollution Prevention and Mitigation

204	Plant Product Quality and Utility (Preharvest)
205	Plant Management Systems
206	Basic Plant Biology
211	Insects, Mites, and Other Arthropods Affecting Plants
212	Pathogens and Nematodes Affecting Plants
213	Weeds Affecting Plants
216	Integrated Pest Management Systems
405	Drainage and Irrigation Systems and Facilities
608	Community Resource Planning and Development
723	Hazards to Human Health and Safety
802	Human Development and Family Well-Being

Outcome #15

1. Outcome Measures

Changes in Knowledge related to effective pest management

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	17404

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

What has been done

Results

4. Associated Knowledge Areas

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

723 Hazards to Human Health and Safety

Outcome #16

1. Outcome Measures

Changes in behavior related to effective pest management

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3978

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Effective pest management was something that was discussed with not only farmers but also homeowners. For generations the ability to just grab a broad spectrum insecticide and spray to kill everything was the model that was used in both farming and landscaping to control pests. The biggest flaw in this model is that only roughly 5% of insects in the field are determined to be 'bad' insects, while 95% are beneficial insects. When we use a board spectrum insecticide we kill off that 95% of beneficials that spend a great deal of their time eating and controlling harmful insects and thus allow an 'explosion' in population of the harmful insects. In other words, we do MUCH more harm than good.

What has been done
Therefore, out of necessity really, we have moved from that model to a model known as IPM or Insect Pest Management where scouting in a primary resource so that we only spray when it is absolutely necessary, and then we use insecticides that are directed at those insects that are causing damage. An example of this would be to use a 'systemic' insecticide that only kills insects that feed on the tissue of those plants that have been treated. Since beneficial insects do not feed on the tissues of these plants they are not injured in any way and we find that control is much more efficient across the board while not doing anything to harm the population of those insects that are there to, in fact, help us.

Results
90% of farmers who were exposed to this concept this past growing season were anxious to take up the concept and comments I received included that they were able to reduce their pesticide usage by more than 75% while increasing the control of their harmful insects by more than 80%.

4. Associated Knowledge Areas

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

Outcome #17

1. Outcome Measures

Impacts on individuals and communites through changes in condition in areas related to effective pest management

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3026

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Integrated Pest Management Update participants will indicate that they will implement at least one new biorational pest management technique as a result of the workshop. Evaluation will be by Survey Monkey survey 3 months after program.

What has been done
ï?§96% will take into account abiotic factors when determining causes for plant problems (n = 24)
ï?§67% will use fewer pesticides (n=21)
ï?§50% will use at least 50 pounds less pesticides per year (n=8), so if extrapolated across 67 participants (50% of 67 or 33), total pounds of pesticide reduction due to workshop annually is 50 X 33 pounds or 1650 pounds.
ï?§88% will use at least 427.29 gallons less pesticides per year (n=8), so if extrapolated across 67 participants (88% of 67 or 59), total gallons of pesticide reduction due to workshop annually is 59 X 27.29 gallons or 1600 gallons.
ï?§Reduced pesticide usage average dollar value is $690.63. When extrapolated across those indicating they would use less pesticides (66% of 67 or 44) total dollar value savings due to workshop is 44 X $690.63 or $30,387. (n=8)
ï?§54% put together a diagnostic tool kit (n=24). Of those who put kits together, 100% found them useful.
ï?§39% started using the UF Distance Diagnostic and Identification System (DDIS) for accurate

pest identification. (n=23)
ï?§50% started using the UF publications, Key to Common Landscape Palm Diseases to identify and diagnose palm problems (n=9). Of these, 82% were able to diagnose palm problems. Those using the key averaged $454.17 each in fewer pesticides used as a result.
ï?§21% use the UF Symptoms of Palm Diseases and Disorders website to identify and diagnose palm problems as a result of the workshop (n=24). Each that used the website saved an average of $58.33 on pesticide costs.
ï?§12.5% indicate they have gained new customers by offering biorational type pesticides (n=8). Of the 12.5%, each increased income an average of $400.

Results
Total CEUs awarded in Palm Beach County by Extension and value: 604 X $3,200 = $1.9328 million*

* Based on a value of $3,200 per CEU presented in EPAF, Economic Impact Analysis of Extension Education Programs, September 1, by Alan Hodges, PhD at EPAF annual meeting.

4. Associated Knowledge Areas

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

Outcome #18

1. Outcome Measures

Change in conditions related to sustanable horticulture and calculating economic impacts.

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

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)

With tourism down in Florida, Sustaining agriculture plays even a more important role in helping improve the economic situation in the state.

What has been done

Shawn Steed conducted in-service training, along with an ag economist and public policy expert, to teach other UF/IFAS and FAMU faculty the theory and practice behind calculating these economic impacts. The session was held in August 2011 at an annual meeting of Extension faculty statewide and very well attended (over 100 participants).

Results

One multi-county environmental horticulture Extension agent calculated a total return of approximately $371,379 to those who have taken advantage of the agent?s programmatic activities this year. Some of the results included in the above total are $50,000 to a plant producer/landscaper the agent has been working with for the past two years in developing a profitable business. Another example is approximately $24,000 of benefits to participants of the mite seminar. The agent conducted a survey and determined that participant's that attended the meeting gained an average of approximately $500 worth of value to their operation.

The Integrated Pest Management Update Seminar participants returned approximately $6044 in either cost savings or additional business revenue by attending the program. This equates to about $377.75 per participant. Those same participants (100%) also learned abiotic factors that mimic injury from insects, are more likely to distinguish between nutrient deficiencies and disease processes (81%), and use UF/IFAS tools (88%) that can be of advantageous use to their operation.

By far the largest return was approximately $281,600 in economic benefits to those that obtained 88 CEU's from the free, industry sponsored CEU webpage and other programs that distributed CEU's to clients or for other agents. A CEU in the state of Florida is worth approximately $3200 to the recipient, based upon the increase in salary that is given to those with valid pesticide licenses.

Another grower was able to use information that the agent shared at a production meeting about a hard to root woody plant. The producer asked that I consult with him in greenhouse design and all aspects of production with the propagation of this plant (Vib. obovatum). As a result the grower was able to pot up one gallon plants from his own cuttings and achieved a 97% propagation success in rooting. This yielded about $1,125 in salable inventory.

In terms of economic impact to the Hillsborough County environmental horticulture industry, this extension agent was able to create the potential equivalent of 19.05 average production jobs (19,493 per job) in the industry, the equivalent of $29,710.32 in indirect business taxes paid to local, state, and federal governments (0.08 x output), and the equivalent of $438,227 (1.18 x output) in value added output or net economic activity generated as a result of the increased output at the producer level.

4. Associated Knowledge Areas

KA Code	Knowledge Area
602	Business Management, Finance, and Taxation
603	Market Economics
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
- Public Policy changes
- Government Regulations
- Competing Public priorities
- Competing Programmatic Challenges

Brief Explanation

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Of those who attended Extension programs or activities in the area of creating and maintaining effective landscapes 89.8% increased their knowledge whole 73.4% reported a change in behavior. More than 595 reported changes in behavior that had a wider environmental of financial impact on their communities.

Key Items of Evaluation

Two items:

1. The FFL program is directed by Dr. Esen Momol and recently was a major contributor to the improvement in water quality of Roberts Bay, Sarasota.

Nutrient loading from both point and nonpoint sources led the Florida Department of Environmental Protection (FDEP) to add Roberts Bay to Florida's 1998 Clean Water Act (CWA) section 303(d) list of impaired waters for exceeding the historical minimum chlorophyll-avalue threshold. Project partners implemented numerous nonpoint source pollution management strategies, including installing nutrient-separating baffle boxes and promoting the IFAS "Florida-Friendly Landscaping" (FFL) education program. Chlorophyll-alevels dropped as a result, prompting Florida DEP to remove Roberts Bay from the state's impaired waters list (for nutrient impairment) in 2010. A newsarticle on the issue can be found at
http://water.epa.gov/polwaste/nps/success319/fl_roberts.cfm

2. Working in partnership with state agencies, professional organizations and

industry, UF/IFAS provides training for thousands of Florida's workers each year to improve their skills, knowledge and job opportunities. Programs such as the Green Industry Best Management Practices (9,838 participants in 2008-10) and Pest Management University (720 participants in 2008-10) certify employees of local businesses and government in sustainable landscape practices, including safe and effective pesticide use, which help protect Florida's water supply. Through the Florida Pesticide Certification and Licensing program, UF/IFAS has worked with FDACs to train nearly 7000 new licensed pesticide applicators over the past five years, and more than 8000 have renewed their license by taking continuing education courses. The average wage for a licensed pesticide applicator is 32 percent higher than for a regular landscaping worker -- an annual salary difference of $7160. Companies that participate in these programs benefit by having a well-trained workforce, higher profits, and reduced liability.

Through the ServSafe® program, UF/IFAS is actively training Florida's food service industry and expanding workers' earnings potential while also protecting its citizens. The FDA estimates the total economic cost of foodborne illness is between $10 billion and $83 billion nationwide. The Florida Department of Health reports that the most common contributing factors to foodborne illness outbreaks include unsanitary food handling and the improper cooking or serving. Most employers now require food safety certification. Florida Extension trained 1,413 workers in 2008-10. Those who complete this food manager certification program can increase their income dramatically - the average annual salary of a food service manager is $54,000 in 2011 and $33,000 for a first-line supervisor/manager compared to just $19,000 for a food preparation worker or food server. Food service managers and first-line supervisors are on Enterprise Florida's Targeted Industry list and, according to recent statistics released by Florida Agency for Workforce Innovation, the food service industry is projected to be sixth highest in gaining new jobs between 2010 and 2018.

The Program for Resource Efficient Communities (PREC) educates Florida's building professionals on water and energy efficiency, green building, wind mitigation, and sustainable landscaping. Nearly 4000 participated in PREC programs between 2008 and 2010. In this tight economy, many contractors, engineers, architects and building inspectors are now participating in green certification programs, with PREC's "Florida Green" the leading home certification program in the state. A recent study shows projects staffed with workers who completed Green Advantage®, a credential program for construction personnel, were perceived to promote healthier buildings for both on-site workers and occupants, lower building costs, and a more collaborative work environment.

V(A). Planned Program (Summary)

Program # 5

1. Name of the Planned Program

Promote Individual, family, and community well-being and economic security

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
603	Market Economics	5%	5%	0%	
604	Marketing and Distribution Practices	5%	5%	0%	
701	Nutrient Composition of Food	5%	5%	0%	
703	Nutrition Education and Behavior	20%	20%	0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	10%	10%	0%	
723	Hazards to Human Health and Safety	5%	5%	0%	
724	Healthy Lifestyle	10%	10%	0%	
801	Individual and Family Resource Management	10%	10%	0%	
802	Human Development and Family Well-Being	10%	10%	0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	5%	5%	0%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	5%	5%	0%	
805	Community Institutions, Health, and Social Services	5%	5%	0%	
806	Youth Development	5%	5%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	40.0	3.0	0.0	0.0
Actual Paid Professional	43.7	3.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
473651	201169	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
473651	201169	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Conduct workshops and meetings •Deliver services •Develop products, curriculum, resources •Provide training •provide counseling •Make assessments •work with the media •develop partnerships

2. Brief description of the target audience

Childcare, after-school, and elder care providers;
Individual and family service personnel;
Parents, couples, and individuals;
UF/IFAS county and state faculty.
Children and adolescents, families with children, adults of all ages including those with special needs.
At-risk persons including older adults and persons who are obese, have a family or personal history, or are in a high-risk ethnic group.
Persons with type 2 diabetes
Food service operators: food handlers (adults; youth); consumers; volunteers, and county faculty
· Consumers

- Homeowners

- Prospective homeowners

- Renters

- Temporary/seasonal residents

- Households with child(ren) age 6 years and younger

- Seniors

- Persons with disabilities

· Housing professionals

- Developers

- Building/construction professionals

- Housing sales professionals

- Residential property management professionals

- Non-government organizations

- UF/IFAS faculty and staff

Extension county faculty

Community organizations

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	736669	1440318	0	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	118	0	118

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. Outcome Measures

Change in Knowledge Personal and Family Well-Being

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3723

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The Casual Gardening/Ag in the Classroom program in Volusia County continues to be relevant. It has been presented as a train-the-trainer session for Orange and Seminole Counties Master Nutrition Volunteer program. The series will be part of their continuing curriculum in training volunteer nutrition educators.

What has been done
Nine (9) Casual Gardening workshops were conducted with various community groups in Volusia County. A total of one hundred seventy-two (n = 172) participants were taught about the importance of agriculture to the state of Florida economy, the benefits of buying locally grown foods, nutritional and health benefits, and how to select and use the product. One hundred eleven (n = 111) were tested through pre and post tests to measure knowledge gained in agriculture facts and nutrition/health benefits.

Results
Results showed that 65.1% (n=72) of participants increased knowledge gained relating to the understanding of Florida agriculture and showed knowledge gained in Florida Ag facts. Results also indicated that the audience increased knowledge by 51.7% (n=57). At the end of the program each individual was awarded with a brochure, recipe card and food product including the agricultural commodity to take home. This program resulted in raising consumer awareness of Florida agriculture and a change in attitude in successfully growing and using these commodities at home.

4. Associated Knowledge Areas

KA Code	Knowledge Area

701	Nutrient Composition of Food
703	Nutrition Education and Behavior
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #2

1. Outcome Measures

Change in Behavior Personal and Family Well-Being

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3550

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Participants in parenting classes in Escambia County learned skills in order to manage their daily stress as parents and learned effective skills to administer developmentally appropriate techniques to parent effectively.

What has been done
Grandparents raising grandchildren learned new methods to parent effectively which lowered their daily stress. Daily stress of single parenting in military families, was significantly impacted by the program which taught techniques to deal with parent-child separation anxiety.

Results
74% of total participants reported significant changes in parent skills and daily stress.

Fifty-five percent of parents who attended classes developed one or more child management techniques. Forty percent of child care/family service providers who attended classes gain knowledge needed to improve quality of care.

A total of 321 parents were reached during the year. Follow-up evaluations from 41 parents indicated that 91% had used one or more of the parenting practices.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #3

1. Outcome Measures

Change in Condition Personal and Family Well-Being

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1966

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Home ownership is "the" American dream. In South Florida the real estate market is especially challenging for first-time home buyers.In addition other barriers,such as lack of savings or down payment,credit blemishes, low credit scores,and lack of knowledge,may discourage potential buyers.

What has been done
Miami-Dade County Extension FCS program worked with the Miami-Dade Affordable Housing Foundation Inc.,who sponsors 8-hour First-time Homebuyer workshops to educate,counsel,and guide consumers through the homebuying process.Two hundred ninety-six consumers took part in the 2011 program,and of these 185 participants completed the program and graduated.

Results
Thirteen families closed on loans and purchased homes totaling $1,403,991 in mortgages.
In the Universal Truth Community Center's First-time Homebuyer program,290 consumers consumers completed the program and graduated. One hundred thirty-one of the program participants developed a spending plan and followed it during the home buying process.

Money management is the key to homeownership and the prevention of foreclosure.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management
802	Human Development and Family Well-Being
803	Sociological and Technological Change Affecting Individuals, Families, and Communities

Outcome #4

1. Outcome Measures

Change in Knowledge Personal Financial Education

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	7734

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The Extension agent and Extension Advisory Committee recognized that the Monroe County School District does not offer a specific class in finance, nor do the sunshine state standards mandate that students learn about money and finance. With new laws governing credit card companies going into effect, it will now be harder for young adults under the age of 21 to establish credit or obtain credit cards in their own name. In an unstable economy with unemployment rates at an all-time high, personal financial management education is more essential now than ever. In 2004, American teens spent $169 billion. The Jump$tart Coalition for Personal Financial Literacy survey found 12th graders personal finance knowledge level at 52.3%. The lack of financial skills puts young people at risk of bad financial management habits.

What has been done
County Extension Agent Alicia Betancourt worked with school administration to provide financial management lessons to Monroe County high schools. Trainings included "train the trainer" with teachers and volunteers, in class instruction, and development of material to use as curriculum

supplemental to the NEFE (National Endowment to Financial Education) material provided for free. As of February 2010, two high schools had taken advantage of the program, and a total of 51 sessions in 8 different classes were conducted with the agent and 16 volunteers. Lessons were presented on budgeting basics, the importance of savings, needs versus wants, and establishing and maintaining good credit.

Results
Overall, 1,172 contact hours for youth (200 non-duplicative) in grades 11 through 12 were reached so far in 2010. Ninety-six percent of students surveyed agreed that the program information increased their knowledge of why it is important to have a budget and to save money starting early. Eighty-nine percent responded that they felt the program was beneficial to them. Financial management programming will continue through the spring 2011 semester.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #5

1. Outcome Measures

Change in Behavior Personal Financial Education

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	3698

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The financial education committee of Real Sense developed a research project to determine if limited-income participants in workshops were retaining key skills needed for financial health and converting knowledge to behaviors. At the request of the committee representative from Bank of America, Ulrich Research Services, Inc. donated the resources to compile and analyze the results of the day-of-class and six-month follow-up surveys.

What has been done

The results indicated significant positive change in all seven of the indicators.
Have a checking account increased from 45% to 71%.
Paid overdraft fees in the previous 6 months dropped from 36% to 19%.
Have a savings account increased from 60% to 72%.
Have a written budget increased from 31% to 52%.
Checked credit report within the previous 12 months increased from 33% to 48%.
Paid all bills on time during the previous 6 months increased from 14% to 36%.
36% reported that their total debt had decreased in the past 6 months, compared to 17% in the day-of-class survey.
Participants also significantly improved confidence in their ability to manage their personal finances from an average of 6.5 in the day-of-class survey to an average of 7.6 (on a 10-point scale) in the follow-up survey.

Results

Positive changes in these key behavioral indicators lead to greater financial stability for limited-income consumers. A written budget is the most important financial behavior of good money managers. Budgeting leads to the ability to pay bills on time which helps individuals and families avoid late fees and disconnects. Individuals who have checking and savings accounts are more likely to avoid predatory or higher-priced financial products. Ordering and reviewing credit reports periodically increases the likelihood that errors will be detected that might adversely affect credit standing needed for homeownership and transportation loans, as well as getting and maintaining a job, apartment, and financial accounts.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #6

1. Outcome Measures

Change in Condition Personal Financial Education

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2168

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
This agent is a strong partner in the United Way of Tampa Bay's Prosperity Campaign. The goal of the campaign is to enable Tampa Bay residents to achieve financial self-sufficiency. Outreach efforts include financial education, free tax preparation, financial mentoring, and affordable summer care for working parents. Prosperity Campaign Partners include the IRS, Children's Board of Hillsborough County, National Disability Institute, and financial institutions.

What has been done
Hillsborough County Extension contributions include providing financial education classes, training financial mentors, and tax return preparation.

Results
This tax season, thanks to the work of the Prosperity Campaign, 9,374 residents received free tax filing preparation services. A consumer pays an average cost of $150 to use the services of a commercial tax preparer. So the campaign saved low-income Hillsborough County residents approximately $1,406,100.00. In addition, 1,853 of the residents received an Earned Income Tax Credit refund for a cumulative total of $10,836,372.00. This means that the Prosperity Campaign partnership helped to ensure that millions of dollars stayed in the Tampa Bay Area and thanks to financial education efforts, residents have a better understanding of how to use those dollars to increase their financial stability.

4. Associated Knowledge Areas

KA Code	Knowledge Area
801	Individual and Family Resource Management

Outcome #7

1. Outcome Measures

Change in Knowledge Health, Nutrition, and Food Safety

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Change in Behavior Health, Nutrition, and Food Safety

2. Associated Institution Types

- 1890 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)
FAMU: The EFNEP program can make a big difference in eating habits of low income families

What has been done
Under the EFNEP Program using Organ Wise Guys and Eat Right For Life Curricula 5612 individuals received a minimum of six hours training. 64% of the individuals acknowledged they knew more after receiving the training.

Results
51% of 4108 individuals are making healthy food choices after participating in Farm Fest,Summer Youth Institute and Ag It Up Day Activities.

After experiencing growing gardens, shopping workshops, food preservation demonstrations Low in come families reported lowing their food cost on average by $50 a month. The average cost for participation in the FAMU EFNEP was $22.30 per individual.

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
703	Nutrition Education and Behavior
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins
723	Hazards to Human Health and Safety
724	Healthy Lifestyle

Outcome #9

1. Outcome Measures

Change in Condition Health, Nutrition, and Food Safety

Not Reporting on this Outcome Measure

Outcome #10

1. Outcome Measures

Change in Knowledge Sustainable Housing and Home Environment

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2563

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Foreclosures are at an all time high. A knowledge of finances tied to housing can reduce the number of first time buyers who default. First time homebuyers are defined as those individuals/families that have never owned or have not owned a home in the past three years.

What has been done
Courses offered by Extension can prepare these first time buyers. In volusia county participants must qualify for a mortgage and meet the income requirements set by the State of Florida Bond Program/ the County of Volusia Down Payment Assistance Affordable Housing Program. Typical working families are able to meet a mortgage payment but are unable to secure the down payment and closing costs associated with a home purchase. These funding assistance programs enable families to become homeowners. Homeowners who receive education or counseling are nearly two (2) times more likely to mitigate a serious delinquency or foreclosure action. Home ownership contributes to the sustainability of a community by:
â?¢More knowledgeable buyers translates into more secure homeowners and fewer defaults
â?¢Tax revenues
â?¢Purchases of local goods and services

â?¢Commitment to community

These first-time homeowners report more confidence in making informed, knowledgeable decisions when shopping for their dream home,and being better able to ask questions concerning the home purchase, and securing the best loan product and interest rate.

Results

People who attended the housing educations classes in 2011 reported more confidence in their ability to maintain and care for their homes. Thirty-seven (37) limited income families/individuals attended the Homeowners Maintenance class in 2011. Seventy-one percent (71%) (n= 26) reported knowledge gained concerning shopping for homeowners insurance policies, while 82% (n=30) reported increased knowledge about lawn care and landscape management. In addition, 93% (n=34) learning something new about household budgets and emergency funds.

4. Associated Knowledge Areas

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

Outcome #11

1. Outcome Measures

Change in Behavior Sustainable Housing and Home Environment

Not Reporting on this Outcome Measure

Outcome #12

1. Outcome Measures

Change in Condition Sustainable Housing and Home Environment

Not Reporting on this Outcome Measure

Outcome #13

1. Outcome Measures

Change in Knowledge Sustainable Organizations and Communities

Not Reporting on this Outcome Measure

Outcome #14

1. **Outcome Measures**

Change in Behavior Sustainable Organizations and Communities

Not Reporting on this Outcome Measure

Outcome #15

1. **Outcome Measures**

Change in Condition Sustainable Organizations and Communities

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Of those evaluated in programs designed to promote individual and family well-being in areas especially related to personal financial education, health, nutrition and food safety and sustainable housing and home environment 79.7% reported an increase in knowledge. Seventy-six percent reported they had changed to better behaviors in these areas and 46.5% said their changes impacted their families and their communities trhough the personal changes they had made.

Key Items of Evaluation

Diabetes: A Costly Issue

According to the Centers for Disease Control and Prevention, approximately 26 million Americans over age 20 have diabetes and 79 million adults have prediabetes. People with prediabetes are at increased risk of developing type 2 diabetes, heart disease, and stroke. Diabetes is the seventh-leading cause of death in the US. Having diabetes doubles an individual's risk of death, and can cause serious health problems like blindness, heart disease, and kidney disease as well as lower limb amputations. People can delay or prevent these health problems by keeping their blood glucose levels in good control. Pre-diabetes and diabetes cost the U.S. $218 billion in 2007. In Marion County, this amounts to over $230 million in annual diabetes-related health care costs.

Take Charge of Your Diabetes (TCYD) is a nine-session educational program developed by University of Florida IFAS Extension faculty, and conducted in collaboration with health professionals in local communities. The primary goal of TCYD is to provide information and motivation to help persons with type 2 diabetes modify their lifestyles to better control their blood glucose levels and reduce risk for health complications.

Since 2002, Nancy Gal of Marion County Extension has provided 13 TCYD programs, with 225 total participants. In the first half of 2011, 16 people participated in the program, learning how to manage their diabetes by addressing medical issues, nutrition, self-care, and exercise.

Each TCYD program is evaluated using participant self-reports and medical measurements of body weight, blood pressure, and hemoglobin A1c levels, which indicate average blood glucose levels for the past 2 to 3 months. Data are collected at baseline, end of the program, and at follow-up three months after the program has been completed

Based on the cost of TCYD ($45) relative to the available hospital-based program in Marion County ($1,100), participants saved themselves or their insurance companies **$16,880** in 2011.

Based on research on the value of diabetes education, it is estimated that TCYD participants saved between 5.7% (private insurance) and 14.0% (Medicare) on health care costs relative to those not taking classes. This sums to **over $17,400** in savings in 2011.

Nurse volunteers who conduct health assessments for the TCYD program contributed the equivalent of over **$520**

V(A). Planned Program (Summary)

Program # 6

1. Name of the Planned Program

Maintain, Enhance and Establish Sustainable Communities

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
608	Community Resource Planning and Development	20%	20%	0%	
610	Domestic Policy Analysis	20%	20%	0%	
723	Hazards to Human Health and Safety	10%	10%	0%	
724	Healthy Lifestyle	5%	5%	0%	
802	Human Development and Family Well-Being	10%	10%	0%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	10%	10%	0%	
805	Community Institutions, Health, and Social Services	5%	5%	0%	
806	Youth Development	5%	5%	0%	
902	Administration of Projects and Programs	5%	5%	0%	
903	Communication, Education, and Information Delivery	10%	10%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	5.0	2.0	0.0	0.0
Actual Paid Professional	12.6	2.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
136568	134113	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
136568	134113	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

• Conduct workshops and meetings •Deliver services •Develop products, curriculum, resources •Provide training •provide counseling •Make assessments •work with the media •develop partnerships

2. Brief description of the target audience

Planners/Zoning officials
General public
Citizen committees

Elected officials

Regional Planning Councils

Local government

Technical users such as developers/builders/landowners/engineers

Florida Association of Counties

Extension faculty

League of Cities

State Legislators

Post-secondary Students

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	147516	288420	0	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	0	2

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. Outcome Measures

Change in Knowledge Growth Management and Land Use Policy

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	295

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Increasing the use of green standards in building is important to reducing the carbon footprint and improving the environment.

What has been done
The November-December 2011 issue of Metalmag, a national publication read by architects, building owners and contractors, includes a feature article on the recently constructed Escambia County Central Office Complex.

Results
The article, entitled "Gold Standard"? discusses how the building was designed and constructed using local and recycled materials. Forty-three percent of the total building costs came from materials with recycled content and 34 percent came from local materials. The "green building"? uses 22 percent less energy and 38 percent less water than a normal building. These figures helped the building receive LEED Gold status by the Washington, D.C. based U.S. Green Building Council, the first government building in the area to reach this status. http://mydigimag.rrd.com/publication/?i=89195

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
902	Administration of Projects and Programs

Outcome #2

1. Outcome Measures

Change in Behavior Growth Management and Land Use Policy

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Change in Condition Growth Management and Land Use Policy

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	50

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Architects can have a strong influence not just on building style but on green buildings that reduce the carbon footprint and help to protect the environment.

What has been done
Escambia County Extension offers CEUs to help architects to maintain their professional licenses and also to provide training in the most up to date research-based, unbiased information in the area of Florida-friendly strategies.

Results
There are only 15 registered Landscape Architects in Escambia, Santa Rosa, Okaloosa, and Walton counties, but their impact on the way northwest Florida is developed in the next few decades could be magnified greatly. These professionals are required to update their CEUs every 2 years and are often forced to travel great distances or utilize lower-quality online programs to receive their CEUs. The LAs who participate in my CEU classes repeatedly return for the programs and have all expressed their appreciation for local, in-person classes to help them retain their credentials. One LA is working on a very high-profile job in downtown

Pensacola, the Community Maritime Park, and is implementing Florida-friendly strategies within the project. Maintaining the professional licenses of these individuals is of utmost importance to their livelihoods.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #4

1. Outcome Measures

Change in Knowledge Civic Engagement, Leadership, and Community Development

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2902

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Increasing visitors from foreign counties to Florida can have an impact on the economy. By inviting government officials from other countries to visit and learn more about Florida it is possible to open these new bridges between countries.

What has been done
The Gulf Coast Citizen Diplomacy Council is a non-partisan, non-profit 501(c)(3) organization whose mission is to create and encourage collaboration between like-minded community stakeholders who value sharing the Central Gulf Coast with the rest of the world. This local organization brings in international visitors on a monthly basis to learn about the Gulf Coast. Escambia County Extension has hosted three delegations who wanted to learn about agriculture, horticulture, food safety and how we deliver informal educational programs to citizens.

Results
The following delegations visited our office and demonstration garden, and took field trips out in the community to view various aspects of agriculture and participated in presentations about the practical, "how to" education offered to adults and youth in the areas of agriculture, consumer and nutrition education, water resources, 4-H and the relationship with the University of Florida/Land

Grant Mission.
â?¢Kazakstan (4 delegates): Food Security & Sustainable Agriculture,? introduced visitors to IFAS Extension concept and led tour of demonstration garden. Agriculture agent led them on tours to Ag Inspection Stations, a farm, and beekeeping operation.
â?¢Botsawna, Lesotho, Mozambique, Sudan, Swaziland (5 delegates): African Women Entrepreneurship Program, discussed small business development, agriculture, food safety, and environmental issues. Led tour of windstorm building and demonstration garden.

4. Associated Knowledge Areas

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

Outcome #5

1. Outcome Measures

Change in Behavior Civic Engagement, Leadership, and Community Development

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1591

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
*My Safe Florida Home (MSFH)
In a hurricane state it is important to have homes and buildings in communities that have been inspected for wind mitigation.

What has been done
As part of a certification process to become a wind mitigation inspector for the Department of Financial Services ?My Safe Florida Home? (MSFH) program, participants were trained and tested on the materials developed and presented by Program for Resource Efficient Communities. The mission of MSFH was to help Floridians learn how to harden their homes to better protect themselves and their families from windstorm damage. A score of 90% or better on

the test was one of the requirements to be an inspector with ?My Safe Florida Home?. Due to budget constraints, the? My Safe Florida Home? program expired on June 30, 2009. A list of inactive inspectors associated with the program has been provided at http://www.mysafefloridahome.com/, along with the dates which they were active, to allow insurance companies to verify that the Uniform Mitigation Verification Inspection Forms (Form 1802) submitted by homeowners participating in the program were completed by qualified, certified inspectors.

Results

The Program for Resource Efficient Communities provided the training and testing for 3 years:
2009 / 10 classes / 258 participants / 2 retests / 12 participants
2008 / 18 classes / 732 participant / 8 retests / 117 participants
2007 / 54 classes/ 2188 participants

4. Associated Knowledge Areas

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

Outcome #6

1. Outcome Measures

Change in Condition Civic Engagement, Leadership, and Community Development

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1401

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)

Nonprofit development program leads to different types of success.
In recent years, nonprofit organizations have suffered the effects of an uncertain economy. Government funding for nonprofits continues to decline. Nonprofits help Florida communities

through economic contributions and by developing volunteers and leaders. Yet, many of them lack the skills and resources needed for efficient operation. Obtaining nonprofit status is often the first hurdle for a community group. In recent years, the time and expense of becoming a nonprofit 501c(3) has drastically increased, more that 30% of applicants get denied.

What has been done

The Extension agent worked with local agencies, community leaders, and individuals to establish training for new and established nonprofit groups. The training included both group and individual consultations focused on three major content areas; locating and writing grants, forming and maintaining effective boards, and obtaining nonprofit status.

Results

During the period of Jan 07 through Oct 2010, the community development agent conducted 66 programs and activities to train nonprofit groups, with 544 individuals participating. The total memberships of these groups are 103 members serving an average of 4,650 clients each year. They provide services such as; financial assistance to low-income seniors, support services for home bound elderly, school supply support for children, and wellness services through congregations. The training to obtain nonprofit status was designed to educate groups on the many options of formation. Surprisingly, more than half of the groups who received this training decided not to pursue a 501c(3) and chose to either forgo the designation or found a comparable organization to work under. Follow-up contacts in 2011 revealed that these groups remained effective in their mission without the nonprofit status. Program surveys found that 94% reported gained knowledge. Although some groups chose not to obtain nonprofit status they were still functional groups six months later, utilizing volunteers and making impacts in the community. The impacts generated by community groups contribute to crime reduction and improved quality of life. The economic value of their volunteers hours is a positive contribution to a sustainable community. The value of volunteer hours in Monroe County, according to the Nonprofit Almanac 2008, is over $22 million dollars.

4. Associated Knowledge Areas

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

Outcome #7

1. Outcome Measures

Change in Knowledge Economic Development

Not Reporting on this Outcome Measure

Outcome #8

1. Outcome Measures

Change in Behavior Economic Development

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1292

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Florida Extension is actively working to find knew ways to increase county revenue through an agricultural venue as the economy continues to be weak.

What has been done
The concept of the Wildwood Growers Market was developed by this agent and presented to the Wildwood City Council during the summer of 2009. The presentation included the idea that a community market that featured local growers, artisans and food products would not only benefit the community as a whole, it would provide economic benefits to entrepreneurs who sold at the market and those who had businesses in downtown Wildwood.

Results
The market was approved and a market board formed to help develop the rules and enforce them. Two years later, this market continues each Saturday with a range of 15 to 35 vendors each week. Over two years time, six local vegetable producers have become vendors when they had product available, as well as a local beef and pork producer and several nurseries. A recent survey provided estimates of sales during an average week at the market to be $3728 to $5720. At that conservative rate the two years of the market provided $387,712 and $594,880 of revenue that went to goods produced by small local growers and artisans.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
902	Administration of Projects and Programs

Outcome #9

1. Outcome Measures

Change in Condition Economic Development

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Condition Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	98

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Finding new ways to make money in agricultural areas is paramount to the sustainablilty of farm communities.

What has been done
Extension in Putnam county has worked with farmers on ideas for agritourism. One local farm family sustained their Agritourism? event from the previous year with over 20,000 participants.

Results
Economically, farm family netted over $100,000 for a one month event. Family stated agritourism event has kept their farm in business/solvent for the past 2 years. Additionally, over 20,000 participants have increased their awareness and knowledge of agriculture.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development
903	Communication, Education, and Information Delivery

Outcome #10

1. Outcome Measures

Change in Knowledge Water and Energy Resource Efficiency

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #11

1. Outcome Measures

Change in Behavior Water and Energy Resource Efficiency

2. Associated Institution Types

- 1862 Extension
- 1890 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #12

1. Outcome Measures

Change in Condition Water and Energy Resource Efficiency

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

Outcome #13

1. Outcome Measures

Change in condition in economic development

2. Associated Institution Types

- 1890 Extension

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)
FAMU: Helping new businesses make a good start is important to a sustainable community.

What has been done
Along with an emu, a mule and chickens Henry also has the presence goats, citrus smelling ones at that! DH makes goat lotion and soap that is 100% natural and 88% organic. He was invited to the FAMU Farm Fest to sell his product, which sells itself in person and to contact FAMU CRDâ??s Community Resource Development Coordinator to help with marketing strategies. They say the only thing constant is change and for DH with the help of FAMU CRD, change is good.

Results
Six new enterprises are now registered businesses. A lawn care business started with funding estimated at $20,000; additionally, a non-profit expanded with no additional funding.

4. Associated Knowledge Areas

KA Code	Knowledge Area
608	Community Resource Planning and Development

V(H). Planned Program (External Factors)

External factors which affected outcomes

- 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

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Extension offers many programs related to leaders and decision makers who are challenged with maintaining, enhancing and establishing sustainable communities. Of th leaders who were evaluated 98% reported increased knowledge. Almost 90% reported changes in behavior and 93% reported changes they made that had positive impacts on their environment and communities.

Key Items of Evaluation

Construction Industry and PREC

The housing market in Florida has followed the economy in its downturn. An estimated twenty-five percent of Florida licensed contractors have let their license expire since 2007-2008. According to the U.S. Census, 38,679 building permits were issued in Florida in 2010 compared to 287,250 building permits issued in 2006. But, green building and green remodeling are still making a representation. Florida Green Building Coalition's (FGBC) "Florida Green" home certifications is the leading certification program in the state, and the FGBC broke a previous record having certified 750 homes this year. http://floridagreenbuilding.org/

The Program for Resource Efficient Communities has been providing "Green" building education programs promoting energy and resource efficiency for more than a decade. Many contractors, engineers, architects and building inspectors are now participating in green certification programs because of interest and knowledge gained through continuing education provided by PREC.

V(A). Planned Program (Summary)

Program # 7

1. Name of the Planned Program

Promote Professional Development to Enhance Organizational Efficiency and Effectiveness

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
604	Marketing and Distribution Practices	0%	0%	10%	
610	Domestic Policy Analysis	0%	0%	10%	
802	Human Development and Family Well-Being	0%	0%	10%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%	0%	15%	
805	Community Institutions, Health, and Social Services	0%	0%	10%	
806	Youth Development	0%	0%	10%	
901	Program and Project Design, and Statistics	0%	0%	15%	
902	Administration of Projects and Programs	0%	0%	10%	
903	Communication, Education, and Information Delivery	0%	0%	10%	
	Total	0%	0%	100%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	20.0	1.0	0.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

Extension		Research	
Smith-Lever 3b & 3c	**1890 Extension**	**Hatch**	**Evans-Allen**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct workshops and meetings

•Deliver services •Develop products, curriculum, resources •Provide training •provide counseling •Make assessments •work with the media •develop partnerships

2. Brief description of the target audience

All UF/IFAS extension professionals in 67 counties and State faculty with extension appointments.
UF/IFAS Faculty & Staff

County faculty and staff

Administration

State Faculty and staff

CEDs & DEDs

Advisory Committee Members

Volunteers

Local Industry Leaders

Local UF/IFAS Supporters, Alumni and Gator Club Members

Local Media Outlets

Local Government Officials

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	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	10	43	43

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. **Outcome Measures**

Change in Knowledge Program Development, Implementation and Evaluation

Not Reporting on this Outcome Measure

Outcome #2

1. **Outcome Measures**

Change in Behavior Program Development, Implementation and Evaluation

Not Reporting on this Outcome Measure

Outcome #3

1. **Outcome Measures**

Change in Condition Program Development, Implementation and Evaluation

Not Reporting on this Outcome Measure

Outcome #4

1. **Outcome Measures**

Change in Knowledge Faculty Orientation and Career Training

Not Reporting on this Outcome Measure

Outcome #5

1. **Outcome Measures**

Change in Behavior Faculty Orientation and Career Training

Not Reporting on this Outcome Measure

Outcome #6

1. **Outcome Measures**

Change in Condition Faculty Orientation and Career Training

Not Reporting on this Outcome Measure

Outcome #7

1. **Outcome Measures**

Change in Knowledge Effective Communication and Technology Use

Not Reporting on this Outcome Measure

Outcome #8

1. **Outcome Measures**

Change in Behavior Effective Communication and Technology Use

Not Reporting on this Outcome Measure

Outcome #9

1. **Outcome Measures**

Change in Condition Effective Communication and Technology Use

Not Reporting on this Outcome Measure

Outcome #10

1. **Outcome Measures**

Change in Knowledge Administration and Leadership

Not Reporting on this Outcome Measure

Outcome #11

1. Outcome Measures

Change in Behavior Administration and Leadership

2. Associated Institution Types

- 1862 Extension
- 1890 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)

What has been done

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs
903	Communication, Education, and Information Delivery

Outcome #12

1. Outcome Measures

Change in Condition Administration and Leadership

Not Reporting on this Outcome Measure

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

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

Natural Resources and Environment--research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

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	12.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

•Conduct Research Experiments •Construct Research Facilities •Partnering

2. Brief description of the target audience

homeowners
producers/growers
policy regulators

visitors to the state

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2011

Actual: 2

Patents listed

Viral-based Transient Expression Vector System for Trees that Overcomes Superinfection Exclusion
Viral-Based Transient-Expression Vector System That Ameliorates Superinfection Exclusion

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	252	252

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Improve methods for appraisal of soil resources
2	Improve soil, water and nutrient relationships
3	Improve the management of saline and sodic soils and salinity
4	Increase protection of soil from harmful effects of natural elements
5	Improve conservation and efficient use of water
6	Increase watershed protection and management
7	Improve methods for managing range resources
8	Improve mangement and control of forest and range fires
9	Improve management and sustainability of forest resource
10	Improve urban forestry
11	Improve Florida agroforestry
12	Identify alternative uses of land
13	Increase knowledge related to weather and climate
14	Improved pollution prevention techniques and mitigation
15	Improve methods of protecting aquatic and terrestrial wildlife environment
16	Improve conservation of biological diversity
17	Increase air resource protection and management

Outcome #1

1. Outcome Measures

Improve methods for appraisal of soil resources

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #2

1. Outcome Measures

Improve soil, water and nutrient relationships

2. Associated Institution Types

- 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)

Florida's population is expected to reach 25 million by 2025 (Keen, 2006) and during the past year, agricultural land prices have increased by 50-88% across the state (Reynolds et al., 2006). Of the 44,000 farms in Florida, approximately 85% are less than 180 acres, and 75% of those farms have earnings of less than 25,000 dollars a year (USDA NASS, 2003). All farms in Florida face increasing pressure to manage water resources more effectively. Nationally, agriculture accounts for 80% of the nation's consumptive water use. Florida's Department of Agriculture and Consumer Services initiated Best Management Practices (BMPs) (FLDACS, 2005) to reduce excessive nutrient loads of nitrogen (N) and phosphorus (P) into surface and groundwater (FDEP, 2004). N and P soil applications may be regulated in the future if sufficient progress to water quality is not made.

What has been done

The primary goal of the Sustainable and Organic Vegetable Production Program at the University of Florida is to minimize the negative environmental impacts of nutrient management in vegetable systems while ensuring long term security of local farming systems. Despite the ongoing application of organic soil amendments in cropping systems, there is an acute need for information and technologies to plan and monitor nutrient management programs using plant and animal fertility sources. No studies have been conducted to elucidate the rate and amount of plant available nutrients as influenced by management, soil type and climate from cover crops in subtropical conditions.

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #3

1. Outcome Measures

Improve the management of saline and sodic soils and salinity

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #4

1. Outcome Measures

Increase protection of soil from harmful effects of natural elements

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #5

1. Outcome Measures

Improve conservation and efficient use of water

2. Associated Institution Types

- 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)

Modern-day researchers are faced with the responsibility of finding new ways to conserve natural resources such as freshwater.

What has been done

Michael Dukes, researcher at the Institute of Food and Agricultural Sciences, is doing just that. Dukes specializes in irrigation efficiency and experiments with serveral different devices aimed at reducing water waste that results from over watering residential lawns.

Results

In a few recent studies, Dukes found that soil moisture sensor (SMS) control devices save a dramatic amount of water that is normally wasted by over watering, without compromising the quality of turfgrass. SMS devices trigger irrigation systems to come on only when water is needed by detecting when the soil moisture is below an acceptable level. The water saved benefits homeowners financially, as well as helping to conserve water and reduced the environmental impacts associated with over watering. Dukes also pointed out that the SMS controllers benefit homeowners because of the convenience factor. "So far they have been self sufficient," Dukes said. With the devices installed, there is no need for homeowners to set or maintain timers. The sprinklers simply turn on when the sensors signal the soil is too dry. In a study based in Pinellas County, Dukes tested SMS sensors, rain sensors and educational materials against standard timers on 59 homes. SMS sensors prevailed by a landslide. On average, the homes which had SMS sensors installed used 65 percent less water on irrigation without compromising the quality of turfgrass. Dukes said that most SMS sensors are not designed to replace existing home irrigation controllers, but can actually complement them. They work by sending a signal to the timer to bypass particular times when the soil moisture is adequate and water is not needed. The sensors are non-invasive to lawns and landscaping and do not interfere with existing sprinkler systems. They cost about $100 to $400 per sensor and $100 to $200 for installation. Dukes said usually only one sensor is needed per lawn. Dukes calculated the payback period is around 1 to 3 years, but that time will decrease as water prices continue to rise. "There are areas where there is fundamentally not enough water for all uses." Dukes said. "People will have to do something." Michael Dukes' research is currently sponsored Southwest Florida Water Management District, Orange County Utilities, Water Research Foundation, St. Johns River Water Management District and South Florida Water Management District.

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #6

1. Outcome Measures

Increase watershed protection and management

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #7

1. Outcome Measures

Improve methods for managing range resources

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #8

1. Outcome Measures

Improve mangement and control of forest and range fires

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #9

1. Outcome Measures

Improve management and sustainability of forest resource

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #10

1. Outcome Measures

Improve urban forestry

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #11

1. Outcome Measures

Improve Florida agroforestry

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #12

1. Outcome Measures

Identify alternative uses of land

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #13

1. Outcome Measures

Increase knowledge related to weather and climate

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #14

1. Outcome Measures

Improved pollution prevention techniques and mitigation

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #15

1. Outcome Measures

Improve methods of protecting aquatic and terrestrial wildlife environment

2. Associated Institution Types

- 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)
Hurricanes are utterly destructive forces that afflict the coastlines of Florida with surging water and 100+ mph winds. It is hard to think that any species can sustain such storms. However, a new study shows that a tiny species of shorebirds is not only sustaining storms, they are benefitting from them.

What has been done
A study done at the University of Florida's Institute of Food and Agricultural Sciences (IFAS) revealed that the Snowy Plover, a small brown and white bird that can be seen scurrying along Florida's waterlines, actually benefits from hurricanes.

"In the beginning we thought there was a negative effect on birds," said research associate, Matteo Convertino of the department of Agricultural and Biological Engineering. "But after looking at the data, I noticed a strong correlation of Snowy Plover populations and hurricane seasons."

The Snowy Plover is a threatened shorebird species that has adapted to live on Florida's

coastlines year round, despite the volatile storm season. Convertino and his team decided to seek out explanations for this phenomenon and concluded that hurricanes create a habitat that is suitable for shorebird breeding.

"In the seasons after hurricanes occur, the probability to observe a nest is seven times higher than seasons without hurricanes," Convertino said.

Other studies of hurricanes and bird populations have had opposite findings, with bird populations severely depleted or wiped-out all together. Convertino said that this is because those studies have focused on island populations and vegetation-dependent birds, not shorebirds. Thus, the feedback among extreme phenomena like hurricanes and populations is strongly species-dependent.

Results

"Snowy Plover nesting season is over before hurricane season begins," said Convertino. Young birds are fully fledged and able to fly and live independently from their parents. Adults and young birds sense incoming storms and are able to fly inland and seek shelter until the storm subsides. After the storms, they return and are able to benefit from the changed beach landscape.

Convertino said hurricanes, also known as "tropical cyclones," create ephemeral pools and overwash fans which complement breeding.

"Basically, after hurricanes, the width of the beach is much larger," Convertino said. Storms push sand from sand dunes further away from the water, creating overwash fans, large flattened areas of sand. Since Snowy Plovers usually nest in between the dunes and the water, this increases their potential breeding and ground.

"The extension of the beach creates more nesting areas," Convertino said.

The storms also aid in creating ephemeral pools, small pools of water that form away from the shore line, which Snowy Plovers utilize for feeding.

Convertino and his team gathered 10 years worth of data on Snowy Plovers from the Florida Fish and Wildlife Conservation Commission, Department of Defense installations and other sources. They then evaluated pre and post-hurricane aerial views of the beaches to evaluate the changes in the beach environment.

Convertino said this study applies to other Floridian shorebirds with similar nesting habits and also benefits migratory birds that utilize Florida's beaches seasonally.

"Understanding nesting habits of Florida's shorebirds, especially the threatened and endangered, is an integral part in helping to protect them and restoring some of Florida's native wildlife. This is something that IFAS has been concerned with and we are glad to be making progress, said Mark McLellan, IFAS Dean for Research.

This study is done if collaboration with Florida State University under the auspice of the recently created Florida Climate Institute. The study was sponsored by the United States Department of Defense, through its Strategic Environmental Research and Development Program. The following were involved in the research published in the prestigious biology journal PLoS ONE: Professor James Elsner at FSU; Professors G. Kiker, R. Munoz-Carpena and C.J. Martinez at UF; and R.A.

Fischer and I. Linkov of USACE ERDC.

Florida from the space and the distribution of the Snowy Plover (Charadrius alexandrinus nivosus) (red dots). A Snowy Plover male and a fledgling is on the top-right corner, below is a Piping Plover (Charadrius melodus) and at the left-bottom a Red Knot (Calidris canutus). (Credit NASA and USFWS)

Most favorable habitat for the Snowy Plover: forefront dune areas constituted by fine white sand and silt. East Santa Rosa Island, FL. In the inset Snowy Plover eggs are shown. (Credit M. Convertino and R.A. Fischer)

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #16

1. Outcome Measures

Improve conservation of biological diversity

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #17

1. Outcome Measures

Increase air resource protection and management

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

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

The environment is extremely important in Florida

Key Items of Evaluation

Many Floridians and visiting tourists enjoy the crystal blue waters that provide sunny days of fishing, diving and leisure time. Researchers have found that popular boating destinations are the artificial reefs that have been built around Florida.

Artificial reefs attract locals and tourists alike, pulling in $253 million to six Florida counties in one year, as well as providing habitat for sealife. These infrastructures are built using man-made materials such as concrete blocks, tires, PVC piping, old sunken ships or sunken oil rigs. They provide a habitat for an array of algae, coral, fish and shellfish, as well as preventing erosion.

IFAS researcher Bob Swett and his team investigated the economic impact artificial reefs provide, as well as who is using the reefs and what components are generating economic profit for the counties studied.

"One of the purposes of artificial reefs is to generate economic benefits for local counties and the state of Florida as a whole," Swett explained.

The methods used to gauge this monetary boost were telephone, mail and email surveys sent out to two subsets of probable artificial reef users - residents and tourists. Residents were targeted by studying the use of pleasure boats and tourists by their use of for-hire vessels such as charter, head, dive and guide boats.

Questions about the frequency of reef visits, the purpose of the visits and reef related purchases were asked in order to pinpoint the source and reason for these economic expenditures.

Pinellas County had the most reef visits, with approximately 666,857 people visiting reefs annually. Lee County had the second highest number, with 500,457 reef visitors per year.

"Pinellas has more boats and it is a popular location for marine recreation, both for its

residents and for visitors who come from elsewhere," Swett explained.

Pinellas County also brought in the most money per year - $79 million on reef related expenditures.

"We looked at many things: renting cars, hotel stays, fuel, food, restaurants, shopping, entertainment - anything related to that particular trip," Swett said.

Florida residents contributed to this expenditure more than visitors in most counties, but only by a small percentage.

In addition to the economic gain, the researchers found that artificial reefs generate 2,595 jobs in all six counties studied.

The survey also revealed that people are generally supportive of public funds being allocated to create and maintain artificial reefs.

"The support level was high, even for those boaters who don't use artificial reefs," Swett said. Pinellas County had the highest percent of supporters, with 71 percent of people surveyed approving of artificial reef expenditures.

County government artificial reef expenditures ranged from $20,000 to $60,000 annually. Swett added that some counties have axed artificial reef programs altogether. "If you look at what counties are spending on artificial reefs versus the economic return they get back, it's quite a difference," Swett said. Other artificial reef funding comes from the Florida Fish and Wildlife Conservation Commission, grant programs and donations from the private sector - most likely fishing and boating groups. The research shows that artificial reefs are a publically supported resource that has proven to be profitable as well as enjoyable. "In addition to the fact that people like to fish, it's also about getting away," Swett added. "It's time away from the stresses of life." (article written by Michelle Klug)

V(A). Planned Program (Summary)

Program # 9

1. Name of the Planned Program

Economics, Markets and Policy--research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

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	1.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct Research Experiments
- Partnering on an international level

2. Brief description of the target audience

international:

•Agribusiness •producers •policy makers (county, state, regional, national, international

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	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	0	31	31

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Provide economic analysis of issues confronting Florida stakeholders including assessment of the competitive position of Florida crops in the international market place.
2	Research factors that influence consumers' subjective perceptions about food consumption that will allow agribusiness, ag producers, and policy makers to respond more effectivley to consumer and producer concerns
3	Understand and develop policy necessary for improved development of international trade

Outcome #1

1. Outcome Measures

Provide economic analysis of issues confronting Florida stakeholders including assessment of the competitive position of Florida crops in the international market place.

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #2

1. Outcome Measures

Research factors that influence consumers' subjective perceptions about food consumption that will allow agribusiness, ag producers, and policy makers to respond more effectivley to consumer and producer concerns

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

Outcome #3

1. Outcome Measures

Understand and develop policy necessary for improved development of international trade

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{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

Human Nutrition and Human Health--research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

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	3.0	0.0
Actual Paid Professional	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
Actual Volunteer	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}	{NO DATA ENTERED}

V(D). Planned Program (Activity)

1. Brief description of the Activity

- Conduct Research Experiments
- Partnering

2. Brief description of the target audience

•Food Industry •General public •regulatory agencies

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	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	0	62	62

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Research in the area of human nutrition, food safety, and human health and well-being addresses problems and opportunities important to the food industry and quality of life in Florida and throughout the world

Outcome #1

1. Outcome Measures

Research in the area of human nutrition, food safety, and human health and well-being addresses problems and opportunities important to the food industry and quality of life in Florida and throughout the world

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
{No Data}	null

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 # 11

1. Name of the Planned Program

Families, Youth. and Communities--research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
801	Individual and Family Resource Management	0%	0%	20%	
802	Human Development and Family Well-Being	0%	0%	20%	
803	Sociological and Technological Change Affecting Individuals, Families, and Communities	0%	0%	20%	
804	Human Environmental Issues Concerning Apparel, Textiles, and Residential and Commercial Structures	0%	0%	10%	
805	Community Institutions, Health, and Social Services	0%	0%	20%	
806	Youth Development	0%	0%	10%	
	Total	0%	0%	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	1.0	0.0
Actual Paid Professional	0.0	0.0	1.9	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**
0	0	8377	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	8377	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct Research Experiments

2. Brief description of the target audience

Families
Youth

Family support groups
Schools
community leaders
Businesses (public and private_

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	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	0	14	14

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Decrease crime and violence in youth populations

Outcome #1

1. Outcome Measures

Decrease crime and violence in youth populations

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

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

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{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

Program and Project Support, and Administration, Education, and Communication--research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
901	Program and Project Design, and Statistics	0%	0%	34%	
902	Administration of Projects and Programs	0%	0%	33%	
903	Communication, Education, and Information Delivery	0%	0%	33%	
	Total	0%	0%	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	0.3	0.0
Actual Paid Professional	0.0	0.0	1.5	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**
0	0	62155	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	62155	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Projects will include the study of leadership and communication as well as ways to increase distance education, social marketing and multimedia technology.

2. Brief description of the target audience

County and state faculty
government
students

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2011
Actual: {No Data

Patents listed
{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	1	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Improve project and program design
2	Improve the evaluation, surveys, sampling methods and statistical analysis used in developing strong research projects and extension programs.
3	Improve educational processes, needs and methods needed to achieve educational goals.

Outcome #1

1. Outcome Measures

Improve project and program design

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
901	Program and Project Design, and Statistics

Outcome #2

1. Outcome Measures

Improve the evaluation, surveys, sampling methods and statistical analysis used in developing strong research projects and extension programs.

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
901	Program and Project Design, and Statistics
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs
902	Administration of Projects and Programs
903	Communication, Education, and Information Delivery
903	Communication, Education, and Information Delivery

Outcome #3

1. Outcome Measures

Improve educational processes, needs and methods needed to achieve educational goals.

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
901	Program and Project Design, and Statistics
902	Administration of Projects and Programs
903	Communication, Education, and Information Delivery

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 # 13

1. Name of the Planned Program

Global Food Security and Hunger--Research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
201	Plant Genome, Genetics, and Genetic Mechanisms	0%	0%	5%	
202	Plant Genetic Resources	0%	0%	5%	
203	Plant Biological Efficiency and Abiotic Stresses Affecting Plants	0%	0%	5%	
204	Plant Product Quality and Utility (Preharvest)	0%	0%	5%	
205	Plant Management Systems	0%	0%	5%	
212	Pathogens and Nematodes Affecting Plants	0%	0%	5%	
216	Integrated Pest Management Systems	0%	0%	5%	
302	Nutrient Utilization in Animals	0%	0%	5%	
306	Environmental Stress in Animals	0%	0%	5%	
307	Animal Management Systems	0%	0%	5%	
308	Improved Animal Products (Before Harvest)	0%	0%	5%	
311	Animal Diseases	0%	0%	5%	
312	External Parasites and Pests of Animals	0%	0%	5%	
313	Internal Parasites in Animals	0%	0%	5%	
402	Engineering Systems and Equipment	0%	0%	5%	
403	Waste Disposal, Recycling, and Reuse	0%	0%	5%	
404	Instrumentation and Control Systems	0%	0%	5%	
405	Drainage and Irrigation Systems and Facilities	0%	0%	5%	
501	New and Improved Food Processing Technologies	0%	0%	5%	
502	New and Improved Food Products	0%	0%	5%	
	Total	0%	0%	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	40.0	0.0
Actual Paid Professional	0.0	0.0	11.1	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
0	0	396264	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
0	0	396264	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Conduct research experiments

2. Brief description of the target audience

Growers/ranchers
Producers/packers
Buyers
General Public
Government Officials
Scientists

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2011

Actual: 26

Patents listed

Gerbera plant named 'UFGE 4141'
Gerbera plant named 'UFGE 7014'
A Method for Genome Complexity Reduction and Polymorphism Detection

A Method for Genome Complexity Reduction and Polymorphism Detection

Strawberry Plant Named 'FL 05-107'
Gerbera plant named 'UFGE 7034'
Peach Rootstock Named 'MP-29'
Gerbera plant named 'UFGE 7023'
Gerbera plant named 'UFGE 7032'
Gerbera plant named 'UFGE 7015'
MAR Early 4X - Ryegrass, annual
FLMD - Clover, Red
Bait Spray for Controlling Ant Populations
Materials and Methods for Pest Control
Use of Molt-Accelerating Compounds, Ecdysteroids, Analogs Thereof, and Chitin Synthesis Inhibitors for Controlling Termites
Use of Molt-Accelerating Compounds, Ecdysteroids, Analogs Thereof, and Chitin Synthesis Inhibitors for Controlling Termites [CONTINUATION]
UFT312 and UFT113, Peanut Genotypes with Exceptional Resistance to Tomato Spotted Wilt
Synthesis of flexible lignin-based nanotubes
Viral-based Transient-Expression Vector System For Trees That Allows Multiple Applications
Citrus Root Chemical That Attracts Beneficial Insect-Killing Nematodes
Variable Rate Sprayer System and Method of Variably Applying Agrochemicals
Improving Crop Stress Tolerance, Yield and Quality via Glutaredoxin Overexpression
Antimicrobial Agent, Mentod of Preparing An Antimicrobial Agent and Articles Comprising The Same
Variants of ADP-Glucose Pyrophosphorylase Affecting Phosphate Sensitivity And Other Parameters^
Labeling Tape Manufactured for Easy Removal, Especially with Labware

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	969	969

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Increase plant Production through the development of improved plant production BMPs
2	Improve Plant Protection through the development of new science and BMPs
3	Improve Animal Production through the development of BMPs
4	Improve animal protection through the development of new science and BMPs
5	Identify and increase quality and production of animals and plant systems through the development of new science in agricultural, natural resources and biological engineering
6	Reduce hunger and increase food productivity based on improved methods of processing, improving quality and delivery of animal and plant foods

Outcome #1

1. Outcome Measures

Increase plant Production through the development of improved plant production BMPs

2. Associated Institution Types

- 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)
Although grape is the world's most important fruit crop, relatively little progress in its genetic improvement has occurred. Florida is the nation's second-third largest consumer of grape products in the US, but almost all is imported because there are no local adapted varieties with sufficient quality. Breakthroughs in genetic engineering of grape that now have been achieved in Florida. This project continues the genetic eengineering research at MREC aimed at producing disease resistant varieties. The present project emphasizes development of disease resistant V. vinifera cultivars, particularly heat-tolerant varieties that may be of use in Florida. Development of improved varieties with other desirable traits, such as seedlessness, may be oursued in the future as well.

What has been done
This project continues the genetic eengineering research at MREC aimed at producing disease resistant varieties. The present project emphasizes development of disease resistant V. vinifera cultivars, particularly heat-tolerant varieties that may be of use in Florida. Development of improved varieties with other desirable traits, such as seedlessness, may be oursued in the future as well.

Results
Several grape varieties have been identified that are disease resistant. This project continues in the development of additional cultivars.

4. Associated Knowledge Areas

KA Code	Knowledge Area

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

Outcome #2

1. Outcome Measures

Improve Plant Protection through the development of new science and BMPs

2. Associated Institution Types

- 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)
Just as exotic animals or foreign diseases can disrupt an ecosystem, non native plants pose a huge risk to the natural vegetation and ecological balance of an area. Since its introduction in the 1800s, the Brazilian Peppertree has been an extremely invasive species and the detriment of many of Florida?s native plant communities such as Mangrove and Pine forests as well as Oak hammocks

What has been done
IFAS researcher, Jim Cuda, has seen the need to manage this species and looks for natural ways to rid the landscape of this invasive plant.

?This non native plant is highly invasive and causes severe ecological damage by displacing native plants and threatening many endangered species,? said Cuda.

Typically found thriving in warm climates, it affects Florida, California, Hawaii, Texas and several Caribbean countries. With bright green leaves and red berries, this plant is thought to be ornamentally pleasing and often planted in residential areas. However, it is actually in the same family as Poison Ivy and Poison Oak, disrupting native species of plants and animals, causing allergies, contributing to mosquito production and providing a feeding source for several other invasive pests.

?In its native range, it?s not a problem because it has natural enemies that keep it in balance,? Cuda said. ?Without these natural enemies, it can reproduce at a maximum rate.?

For years, Cuda and his team have been testing potential biological control agents for Brazilian Peppertree. Although over 200 insect species exist that are natural enemies of the plant, Cuda said not all of them are good candidates. An insect must be host-specific, meaning it only feeds and reproduces on the invasive plant and will not attack other plants.
Thrips (Pseudophilothrips ichini, larva)

Cuda and his colleagues have been studying several insects that are host specific to Brazilian Peppertree, including a shoot-attacking thrips, a leaf-feeding caterpillar and a stem-boring weevil. They test these insects in a controlled environment and then prepare release petitions to obtain state and federal approval.

Results

Cuda found a species of thrips (Pseudophilothrips ichini, larva pictured right) to be a good candidate for a controlling young Brazilian Peppertree plants. The thrips are native to Brazil and have been observed feeding and reproducing exclusivity on the Brazilian Peppertree.

In an article, published in Entomological Society of America, Cuda discusses the host-specificity and the practical benefits this species of thrips would have if they were released from quarantine and allowed to feed on the invasive Brazilian Peppertree in the US. Greenhouse and laboratory tests were conducted to expose these thrips to the invasive plants and also native plants, to see which they would attack. Tests proved they are specific to Brazilian Peppertree and posed no risk to Florida?s native species. They eat new shoots and flowers, debilitating the plants and inhibiting growth.
Stem-Boring Weevil (Apocnemidophorus pipitzi)

Cuda also received a grant from the Florida Fish and Wildlife Conservation Commission, Invasive Plant Management Section and the Bureau of Invasive Plant Management to travel to South America to find additional host-specific species to control the Brazilian Peppertree. Recently, in Paraguay, he found a stem-boring weevil (Apocnemidophorus pipitzi, pictured left) that seemed to be thriving on the Brazilian Peppertree. Back in the lab, Cuda discovered the benefits this weevil possessed.

?Because of their unique biology, weevils tend to be inherently host-specific,? Cuda said.

Adults are attracted to the plant where they feed on leaflets and bore holes in the stems to lay eggs.

A challenge to testing new insect species is their inability to survive once taken out of their natural environment and into a controlled setting when virtually nothing is known about the insect?s biology.

?You have to be able to establish a colony in your quarantine lab so you can test the plants,? Cuda said. He found the weevils to reproduce easily, and was able to establish a rearing procedure and a vigorous colony.

In laboratory studies, Cuda found that the female weevil lays eggs in the stem of the plant. An MRI image of the stems revealed larvae feeding on stem material, slowing the transport of water

and nutrients to plant tissue and inhibiting growth.

?The larval stage is the most damaging,? Cuda said.

After exposing adult mating pairs of weevils to different types of economically and ecologically important plants, Cuda found the weevil to be host-specific to the Brazilian Peppertree.

?Clearly, Brazilian Peppertree is preferred over any other plant species,? Cuda said.

Invasive plants are often controlled mechanically or chemically but a natural approach, such as introducing the Weevils and other natural enemies of the Brazilian Peppertree, could have ecological benefits.

"If we could reduce the amount of chemicals by integrating some of these biological controls, then we have a more sustainable control program,? Cuda said.

4. Associated Knowledge Areas

KA Code	Knowledge Area
216	Integrated Pest Management Systems

Outcome #3

1. Outcome Measures

Improve Animal Production through the development of BMPs

2. Associated Institution Types

- 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)

a) Reproductive inefficiency is one of the most costly and production-limiting problems facing both the dairy and cow-calf industries. b) Greater than 17.6% of all culled dairy cows were because of reproductive failure. c) More than 27% of beef cows are culled because of reproductive failure or reproductive problems. d) Losses that occur because of reproductive failure are partly a result of

mismanagement of resources and lack of adopting appropriate technologies to sustain greater reproductive efficiencies. a) It is imperative to continue developing protocols that address concerns related to cattle reproductive efficiency through basic and applied research outlined in the objectives. b) Protocols developed should facilitate the use of fixed-time AI, and should result in increased adoption of these important management practices. c) Modifying reproductive management protocols to synchronize time of ovulation in lactating cows may substantially further reduce labor inputs for reproductive management d) Development of resynchronization strategies to submit cows failing to conceive to previous inseminations will further improve overall pregnancy rates in lactating dairy cows.

What has been done

1. To elucidate mechanisms regulating reproductive efficiency in cattle. 2. To develop reliable, efficient, and economical breeding protocols for cattle.

Results

Inclusion of temporary calf removal resulted in no increase in pregnancy rates, but subsequent calf performance was poorer in calves exposed to 48 or 72 hour calf removal. Therefore, inclusion of calf removal to a progestin-based estrus synchronization protocol may result in decreased calf performance. Heifers developed on perennial peanut have similar weight performance and reproductive performance to heifers receiving a grain-based development supplement, but improved growth and reproductive performance compared to non-supplemented controls. Therefore, development of heifers on high quality legumes may be able to replace expensive grain-based supplements with legume hay during heifer development with little impact on heifer development outcomes.

4. Associated Knowledge Areas

KA Code	Knowledge Area
302	Nutrient Utilization in Animals
306	Environmental Stress in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)

Outcome #4

1. Outcome Measures

Improve animal protection through the development of new science and BMPs

2. Associated Institution Types

- 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)

Until recently, the beef cattle industry has never had the reproductive tools available to facilitate widespread, successful adoption of artificial insemination technologies. The need for increased efforts to transfer this technology to the industry has never before been greater. Pregnancy rates of 55% or greater to TAI in postpartum beef cows are now consistently achievable. Despite the relative success of these protocols, producers have been slow to adopt the technology. The driving force behind adoption of these reproductive management technologies should be the profit derived from improved calf uniformity at weaning and enhanced genetic potential. Ultimately, prior to adoption of any new technology, producers require confidence that the technology will not fail. Generally, that confidence is met when producers have witnessed success in other cattle operations. Therefore, together with traditional Extension dissemination methods and involvement of producers may be the necessary impetus to demonstrate success of these reproductive management practices and initiate an increase in adoption of TAI. EXPECTED IMPACTS/OUTCOMES. The anticipated outcomes of this program include enhanced working relationships among producers, extension specialists, and veterinarians and an increase in profit for beef operations resulting from improvements in reproductive management. Ultimately, increased profits for the producer will be achieved through a higher percentage of cows calving during a more concentrated time frame and earlier in the calving period, as well as an improvement in genetics resulting from use of high accuracy, genetically proven, superior sires.

What has been done

1. Development of cow-calf production systems which reduce unit cost of production while still producing high quality beef that meets the demands of today's consumer. 2. Development and integration of reproductive management technologies into management systems. 3. Maintain and enhance formal and informal linkages which facilitate outreach and information sharing among committee members and with beef cattle producers in the region.

Results

It costs $0.75 to $1.50 per day to raise one post-weaned calf and 70% of the cost ($0.53 to $1.05 per day) is feed related. In addition, a calf is usually backgrounded for 90 to 120 days. If the BIG BEEF Supplement during the backgrounding period does not exceed $0.05 per day and use of the supplement results in a 7% to 8% reduction in feed with no reduction in performance, then cattle producers will save between $3.65 to $9.24 per head during the backgrounding phase (90 to 120 days) or $1.9 to $7.0 million savings to the state of Florida cattle industry each year! Initial data indicate that efficient cows consumed 30.3 lbs of feed daily compared to average cows that consumed 36.1 lbs of feed daily and inefficient cows consumed 43.1 lbs of feed daily (19% to 42% improvement). No differences existed in cow performance, milk production, or calf

performance. Therefore, $0.13 to $0.36 per head per day, or $47.4 to $131.4 per head per year savings in feed costs is realized, resulting in $44.3 million to $125.4 million savings to the state of Florida cattle industry.

4. Associated Knowledge Areas

KA Code	Knowledge Area
302	Nutrient Utilization in Animals
307	Animal Management Systems
308	Improved Animal Products (Before Harvest)

Outcome #5

1. Outcome Measures

Identify and increase quality and production of animals and plant systems through the development of new science in agricultural, natural resources and biological engineering

2. Associated Institution Types

- 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)
Conservation tillage and other good managment practices have been beneficial to the environment but have not resulted in increased yields and have not gone far enough in restoring the environment to native states as far as water and soil quality. Farming systems need to be developed that will result in increased yields as well as improve environmental and economic well being of the agricultural community.

What has been done
This project examines the influence of perennial grasses on crops in rotation as well as soil and water quality parameters. This is a wholistic look at farming sytems including economic impacts, land utilization, and risk management.

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems
405	Drainage and Irrigation Systems and Facilities

Outcome #6

1. Outcome Measures

Reduce hunger and increase food productivity based on improved methods of processing, improving quality and delivery of animal and plant foods

2. Associated Institution Types

- 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)
Conservation tillage and other good managment practices have been beneficial to the environment but have not resulted in increased yields and have not gone far enough in restoring the environment to native states as far as water and soil quality. Farming systems need to be developed that will result in increased yields as well as improve environmental and economic well being of the agricultural community. This project examines the influence of perennial grasses on crops in rotation as well as soil and water quality parameters. This is a wholistic look at farming sytems including economic impacts, land utilization, and risk management.

What has been done
This project examines the influence of perennial grasses on crops in rotation as well as soil and water quality parameters. This is a wholistic look at farming sytems including economic impacts, land utilization, and risk management.

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
404	Instrumentation and Control Systems
501	New and Improved Food Processing Technologies
502	New and Improved Food Products

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.)
- Other ()

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Finding biological controls to pest problems are paramount in a state with as many insects as Florida has.

Key Items of Evaluation

While Americans everywhere enjoy plump, juicy tomatoes straight from the Florida sunshine, they may not know that a papaya plant wasp is helping to keep their beloved red vegetables disease free.

Florida is the dominant supplier of fresh tomatoes in the eastern United States, with 29 thousand acres devoted to tomato production in 2009-10 and a total revenue impact of over $1.64 billion annually, according to Alan Hodges, IFAS agriculture economic analyst.

However, the sunshine state's prized cash crop is often prone to disease. One known culprit, Tomato Yellow Leaf Curl Virus (TYLCV), occurs when an infected silverleaf whitefly (Bemisia tabaci) feeds on tomato plants and spreads the virus. Named for the yellowing and curling of the leaves, TYLCV causes a drastic decrease in tomato yield and may even kill the plant.

"Most greenhouse growers will just cut that plant out and destroy it immediately," said IFAS Researcher Lance Osborne. "It's a very severe problem."

Osborne, researcher at the Mid-Florida Research and Education Center in Apopka, has

found that Papaya plants host a small wasp that attacks this infectious whitefly and acts as a biocontrol, a naturally occurring control mechanism.

"The Encarsia sophia is a little, tiny wasp - almost the size of the head of a pin," Osborne said. It's in the environment, it's flying all over Florida - people just don't know it's there."

Osborne said that the wasp does not attack people or other insects and is even specific in the kind of whitefly it feeds on.

The method Osborne and post-doctoral scientist Yingfang Xiao tested was the Banker Plant System, a specific type of biocontrol that involves intentionally placing plants that host parasitoids within range of unwanted pests for a natural control system.

To test this system, Osborne reared colonies of the predator wasp and the unwanted silverleaf whitefly, as well as a harmless whitefly (Trialeurodes variabilis). This harmless whitefly only lives on papaya plants and is essential in getting the wasps established to papaya plants before they can be used as a biocontrol. Wasps feed on the papaya whiteflies and they increase in number. After the papaya whiteflies and wasps were properly established to papaya plants, they were placed in the vicinity of tomato, cucumber, eggplant and many ornamental plants.

Results showed that the harmless whitefly stayed on the papaya plants (demonstrating that it is no risk to other plants), the infectious silverleaf whitefly preferred the tomato plants and the parasitic wasp, E. Sophia, effectively eliminated many diseased whiteflies feeding on tomato plants - proving that utilizing the Banker Plant System can act as a natural control agent for this serious pest of over 900 host plants.

Cindy McKenzie, entomologist for the USDA Agricultural Research Service, had previously determined that papaya plants are not a host for TYLCV - a crucial step in the implementation of these plants in the banker plant strategy. Papaya plants proved to be a valuable reservoir for beneficial parasitoids that feed on unwanted pests.

As well as leading the way for a more sustainable production process, this biocontrol strategy helps to solve a common pesticide problem.

"In our industry, one of the biggest problems we have is pesticide resistance," Osborne said.

Insects such as the silverleaf whitefly become resistant to insecticide chemicals and farmers are left with fields of unproductive plants.

"It allows us to back off of the 100 percent dependence we had on pesticides - That's the number one benefit of this, "Osborne said.

Use of pesticides can impede the natural pollination process by killing off natural pollinators.

"If you have to use insecticides, it will impact your bumble bees and the pollination process," Osborne said. "Tomato plants must be pollinated in order to produce fruit. It's very expensive to send people through the greenhouse and not as effective as using bumble bees."

Osborne said this study applies to greenhouse farming and outside crop systems, as well as smaller gardens.

article by Michelle Klug

V(A). Planned Program (Summary)

Program # 14

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
132	Weather and Climate	100%	100%	0%	
	Total	100%	100%	0%	

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	1.0	0.0	0.0
Actual Paid Professional	2.3	1.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
24929	67056	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
24929	67056	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

1. In service training workshops will be developed using research-based information

2. A centralized website will be implemented (as a component of the Florida Climate Institute's website) containing:

• Resource library of internally vetted articles, government documents, lectures, NGO reports and links to websites

• List and links to existing UF/FSU research programs related to climate variability and change

• In-service training presentations

• Extension curriculum materials (PowerPoint presentations, EDIS publications, other resources)

• Funding opportunities, especially via RFPs which require an Extension component

3. EDIS publications targeting specific sectors, needs assessment reports, and risk assessments for specific industries and geographies

2. Brief description of the target audience

Potential partners include the Florida Climate Institute, the Southeast Climate Consortium, UF Water Institute, Florida's Water Management Districts, NOAA-Sea Grant Program, FL Fish and Wildlife Conservation Commission, Florida Exotic Pest Plant Council, and others.

Target audience includes all UF/IFAS Extension professionals and stakeholders.

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	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	10	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

Outcome #1

1. Outcome Measures

Change in knowledge related to climate variability and climate change

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1270

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
FAMU:Climate Variability and Change
Alternative agricultural organic diversified farming systems have an excellent potential for improving soil fertility, organic matter, and building sustainable food systems. Organic farming practices are foundational to climate resistant local food systems. By 2050 all agroecosystems are expected to be impacted by climate change.
However, utilization of organic methods that support agroecological farming systems have the potential to reduce the impact of climate change, it's impact on our local food system and global environment.

What has been done
Following is a list of several education and hands-on training sessions provided 2010 â?? 2011.

Eco-farms are the Viable Solution Workshops- Provided knowledge on successful eco-farm management systems, organic method strategies, farmer leadership, and identification of goals, possible solutions, and networking.

Farming in small spaces/urban farming capacity building workshop.
Provided information to encourage building sustainable innovative communities centered about integrated agroecology urban farming systems, including concepts of aquaponics, alternative energy, compost, vermiculture and community support. Hands-on workshop.

Farmer Nutrition Program
Provided required information and training to farmers interested in participating in the Department of Agriculture and Department of Health Program Food Coupon Program. This certification allows

participant farmers providing produce at farmerâ??s market to receive coupons from customers. Allows customers to save fuel, purchase locally grown, organically grown produce, and encourages healthy sustainable living.

Sustainable Living Workshop: How to control squash bugs and other pests. Provided technical assistance and organic integrated Pest Management preventative strategies to control insect pests and disease. Hands-on training collaboration with USDA-ARS.

World Food Day at the Growersâ?? Market
Provided an opportunity for community to become aware of local food resources. Farmers provided fresh sustainably grown season and local produce to community.

World Food Day at Kleman Plaza/City of Tallahassee
Provided an opportunity for community to meet local small farmers, receive free food, and network with other collaborators.

Organic integrated Pest Management Demonstration
Growing vegetables using integrated pest management strategies. Demonstrations included management strategies for various vegetables and legumes. Held during the FAMU Grape Festival on the grounds of the Center for Viticulture and Small Fruit.

Results
Utilizing a Sustainable Development Approach identified needs, developed and implemented capacity building strategies, learning sessions, learning farm tours to encourage sustainable alternative agroecological farming and production and management, growth of local small farm systems, farmer leadership, farm-to-community linkages, sustainable living, etc. Promoting a climate-proof local food network.
Programs provided knowledge needed by clientele to decrease their impact on climate change and reduce their carbon footprints.

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

Outcome #2

1. Outcome Measures

Change in behavior related to climate variability and climate change

Not Reporting on this Outcome Measure

Outcome #3

1. Outcome Measures

Change in condition related to climate variability and climate change

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	279

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
County climate change efforts lead to opportunities for new Extension leadership. Municipalities across the country are developing climate action plans. In Monroe County the challenge of sustainability and climate change needed multidisciplinary approaches and due to budget issues was struggling to address them.

What has been done
The Extension Service as part of the Land-Grant Institutions has been the most cost-effective and efficient way to provide outreach leadership and educational programming to the county. Through a network of county agents and specialists, Monroe County Extension agents formed a link between the research community and administration to develop local adaptation and mitigation strategies for responding to climate change. Development of local and regional climate action plans provided multidisciplinary opportunities for Extension programs.

Results
This effort lead the agents to coordinate development of a sustainability vision statement with 55 specific recommendations to conduct a greenhouse gas emissions audit, and collaborate to develop new policies related to climate change.
The impact of these new opportunities includes 7 new climate related resolutions brought to the county Commissioners by Extension, immediate financial savings of over 37,000 dollars per year through Extension auditing, a grant award of $2.6 million to improve efficiency in county buildings and provide energy education, and more cost-effective services for county constituents while reducing its environmental impacts.

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

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

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.
Also, weather conditions and this year droughts continue as cnditions common to the tropics.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Of those tested in Extension related activities, 94.7% increased their knowledge in ways to improve the environment in areas related to climate change. Over 87% made behavioral changes and 85.3% made changes that they reported will have a positive impact not only themselves but also on their environment.

Key Items of Evaluation

The impacts of climate change, sea level rise, temperature changes and changes in the amount, distribution and intensity of rainfall represent challenges to Florida's economy, environment and the livelihoods of its citizens. We in IFAS as well as the State University System have a responsibility to bring the most current scientific findings together toward understanding, mitigating and adapting to a changing environment. We also have the responsibility of communicating inside and outside the classroom and laboratory the knowledge about climate change, sea level rise, and societal response options to what is, arguably, one of the greatest challenges of our time. UF Extension is part of a multi-university endeavor that includes the Florida Climate Institute (FCI). The Director of FCI is Dr. Jim Jones of UF/IFAS.

As part of this project, four "white papers" were produces as well as two workshops on

these topics held statewide. A state-wide database of university climate expertise has been created and will continually be updated with new profiles. All of these reports, papers, and presentations can be found at http://floridaclimateinstitute.org/or http://floridaclimate.org.

V(A). Planned Program (Summary)

Program # 15

1. Name of the Planned Program

climate Change--research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
132	Weather and Climate	0%	0%	100%	
	Total	0%	0%	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	0.0	5.0
Actual Paid Professional	0.0	0.0	38.3	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
0	0	707777	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	707777	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Florida has many projects planned in the area of climate change. Some projects will relate to the development of climate information and decision support systems for the Southeastern USA. Other projects will look at the development of cultivars that do well in changing climate conditions.

2. Brief description of the target audience

Agricultural Producers/growers
Florida residents/ Stakholders

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2011
Actual: 1

Patents listed
A Heat Stable Variant of Maize Endosperm ADP-Glucose Pyrophosphorylase

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	12	12

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Develop new climate information that will contribute to an improved agricultural ecosystem in the SE USA.
2	Develop Climate decision support systems that improve quality of life, increase profitability and decrease economic risk.

Outcome #1

1. Outcome Measures

Develop new climate information that will contribute to an improved agricultural ecosystem in the SE USA.

2. Associated Institution Types

- 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)
Transportation, production of manufactured goods and human inhabitation all contribute to a more advanced society, yet an ever-rising carbon footprint ? one that has had impacts on the environment such as climate change, global warming and the endangerment of certain species.

As the hot topic of global warming becomes more and more prevalent in both the science and political realm, modern-day researchers are now faced with the responsibility of finding new practices that allow a growing society to flourish sustainably, mitigating past damage done to the environment and laying groundwork for the way future generations will operate.

What has been done
Transportation, production of manufactured goods and human inhabitation all contribute to a more advanced society, yet an ever-rising carbon footprint ? one that has had impacts on the environment such as climate change, global warming and the endangerment of certain species.

As the hot topic of global warming becomes more and more prevalent in both the science and political realm, modern-day researchers are now faced with the responsibility of finding new practices that allow a growing society to flourish sustainably, mitigating past damage done to the environment and laying groundwork for the way future generations will operate.

Results
Urban forests are essentially tree communities in and around urbanized areas (including residential or natural areas), specifically conserved for their positive social or ecological benefits ?

a natural filtration system, lessening pollution and the consequences that come with it.

Escobedo?s research study looked at existing urban forests in two different regions, Gainesville ? a small, inland town, and Miami-Dade ? a larger coastal city, in order to account for two distinctly different landscapes that make up Florida.

Escobedo found that urban trees reduced the prevalence of carbon dioxide in the air by 3.4 percent in Gainesville and 1.8 percent in Miami Dade.

?Urban forests are just as effective as other policies trying to reduce carbon dioxide,? said Escobedo. Urban forests, paired with other strategies - such as transportation efficiency, create noteworthy reductions in carbon emissions.

The most effective tree communities were ones which were established - existing in natural areas such as parks and preserves ? and low-maintenance, thriving locally without human care. Pine-oak forests in Gainesville and mangroves and melaleuca stands-an invasive, non-native tree - in Miami-Dade proved to be the tree communities that sequestered the most carbon.

The research team found trees that were larger than 30.6 centimeters in diameter accounted for only 16 percent of trees in Gainesville but stored 75 percent of total carbon sequestered by urban forests. Similarly, five percent of trees in Miami-Dade qualified as large trees and stored 72 percent of total carbon.

In addition to the carbon reduction urban forests offer, Escobedo also pointed out that they reduce the amount of carbon initially released into the atmosphere by providing shade and climate regulation for large buildings, reducing the amount of energy needed and lessening the amount of carbon emitted.

Since Florida?s enactment of House Bill 697 in 2008, land developers are now required to implement practices that emphasize clean energy and lessen the prevalence of greenhouse gases in the air. Paired with an escalating population, research on how this can be effectively done is of the upmost importance.

?The best possibility for reducing carbon emissions during the development process is conserving the larger, healthy trees that capture more carbon,? Escobedo said.

Escobedo?s research is proof that conserving existing forests and tree cover is far more beneficial and cost-effective than other policies such as roadside tree plantings which can be costly and hard to maintain. (original article by Michelle Klug)

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

Outcome #2

1. Outcome Measures

Develop Climate decision support systems that improve quality of life, increase profitability and decrease economic risk.

2. Associated Institution Types

- 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)

Climate varies considerable from year to year and this variability has major impacts on agricultural production. Scientists now understand sources of some of the year to year differences in rainfall and now have methods to forecast climate several months in advance. A majority of crop failures in the USA are associated with either drought conditions or excess rainfall. If such conditions could be anticipated ahead of time, farmers may be able to adjust practices to reduce risks to losses or take advantage of anticipated favorable conditions. However, the forecasts can potentially reduce but not eliminate risks associated with climate variability. The problem is that incorrect use of climate forecasts may increase risks. This research is designed to understand climate forecasts and how they can be used safely to benefit farmers in Florida. The overall purpose of this project is to investigate interactions of climate, crops, and management practices and methods for using climate forecasts for decision support in Florida. Specific objectives are: 1. Develop methods for forecasting agricultural responses to annual climate variability and for quantifying the uncertainties associated with forecasts 2. Identify agricultural management options that reduce risks associated with climate variability for major cropping systems in Florida 3. Develop methods for developing climate and weather information for agricultural system decision support to reduce risks.

What has been done

This research is designed to understand climate forecasts and how they can be used safely to benefit farmers in Florida. The overall purpose of this project is to investigate interactions of climate, crops, and management practices and methods for using climate forecasts for decision support in Florida. Specific objectives are: 1. Develop methods for forecasting agricultural responses to annual climate variability and for quantifying the uncertainties associated with forecasts 2. Identify agricultural management options that reduce risks associated with climate variability for major cropping systems in Florida 3. Develop methods for developing climate and

weather information for agricultural system decision support to reduce risks.

Results

4. Associated Knowledge Areas

KA Code	Knowledge Area
132	Weather and Climate

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

Climate changes is an area that Florida researchers are taking seriously.

Key Items of Evaluation

As the planet heats up, climate changes have impacts on many ecological systems, including pine forests. Pine forests are an important resource due the large amounts of carbon dioxide they absorb from the air. This carbon sequestration helps to eliminate some greenhouse gases that contribute to global warming.

New temperature and precipitation changes are leading to a change in the way we see pine forests function - a change that may not have desirable effects for the forests.

In order to appropriately monitor these changes and mitigate any potential damage, IFAS Researcher Tim Martin, is leading a consortium of researchers, called PINEMAP, all with the common goal of helping this valuable resource thrive. PINEMAP, which began March 2011 and will last 5 years.

"The general goals are to see how climate affects carbon sequestration in planted pine and use the information to design management systems," Martin said.

Martin will coordinate the project, which encompasses eight regional forestry cooperatives, 10 land grant universities, the USDA Forest Service, state climate offices and the Southeast Climate Consortium.

"One of the most important things we are doing is sharing data among the research co-ops," Martin said.

Martin says he is optimistic about the research and excited to see many forestry researchers banding together for the purpose of creating better systems for southern pine. "In the past, much research has been independent," Martin added. Now, researchers are sharing data to produce better pine forest management for maximum future sustainability.

Loblolly pine makes up the majority of planted pine in the southeast region and will be the main research focus. Research will help to inform pine growers and managers on how to manage forests for optimum carbon sequestration, efficiently use fertilizers and know which pine varieties to plant for best performance under climate change.

As one of the largest grants seen in IFAS, PINEMAP will incorporate research, outreach activity for forest landowners and education programs for students.

"We are looking at density management regimes that will help forests to be resilient to a number of disturbances," Martin said. Some known culprits are drought and southern pine beetle, the most destructive insect pest of pine in the southern United States.

One method the researchers will employ is utilizing genetics to help pine forests adapt. Along with using existing data, researchers will use genetic sequencing to discover which genes control certain adaptation processes.

"Researchers will try to identify particular genes that control processes associated with carbon sequestration and resilience under changing climate," Martin explained. "This information can be used to select tree strains suited for changing climate."

In addition, climate information will be collected and projections of future climate scenarios will be estimated, so growers can use long-term applied information to shape their future practices.

In addition to the applied research and estimating climate effects, PINEMAP seeks to create an effective extension program to relay the discoveries to both industrial and non-industrial growers, as well as policy makers. Education programs will be implemented to train teachers on informing the public of the importance of pine forests and managing them as they face climate change.

"It's one of the biggest opportunities in the southeast to bring most of the researchers that have been working on southern pine all together in one place," Martin explained. (article written by Michelle Klug)

V(A). Planned Program (Summary)

Program # 16

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
123	Management and Sustainability of Forest Resources	25%	25%	0%	
131	Alternative Uses of Land	25%	25%	0%	
403	Waste Disposal, Recycling, and Reuse	25%	25%	0%	
404	Instrumentation and Control Systems	25%	25%	0%	
	Total	100%	100%	0%	

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	1.0	0.0	0.0
Actual Paid Professional	2.3	1.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
24929	67056	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
24929	67056	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

No information at this time. Team is just forming that will identify specific activities

2. Brief description of the target audience

General public
Agricultural producers/growers
Business
Community government

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2011
Actual: {No Data

Patents listed
{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	5	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Changes in Knowledge related to bio-energy: Sustaining and fueling Florida
2	Changes in behavior related to Bio-Energy: Sustaining and Fueling Florida
3	Change in Conditions related to Bio-energy: Sustaining and Fueling Florida
4	Changes in knowledge related to bioenergy and the sustaining and fueling of Florida

Outcome #1

1. Outcome Measures

Changes in Knowledge related to bio-energy: Sustaining and fueling Florida

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1264

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
With the price of oil at an all time high, Florida Extension is working to increase alternative energy opportunities and to find new companies interested in learning more about Florida new bioenergy clones being grown by Florida producers.

What has been done
While the biofuel extension program is relatively new, we have already had promising feedback from British Petroleum on their interest in using the new energy cane clones developed by UF and USDA. The BP cellulosic ethanol plant at the Lykes Bros. facility in Highland County requires 25,000 acres of energycane feedstock, and BP was planning on using released energycane clone L 79-1002 from Louisiana as the feedstock source.

Results
However after seeing the smut susceptibity of L 79-1002, and smut resistance and high yields of our new clones in our field trials and presentations, BP has decided to abandon L 79-1002 and is presently negotiating a material transfer agreement to multiply and test our energycane clones at Lykes Bros. and elsewhere.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
131	Alternative Uses of Land
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems

Outcome #2

1. Outcome Measures

Changes in behavior related to Bio-Energy: Sustaining and Fueling Florida

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	640

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
The cost of fuel impacts all Floridians. Warm-season perennial grasses have tremendous potential to produce biomass and, eventually, serve as a source of energy worldwide. Any types of alternative fuel could help improve the economy. Bioenergy crops also provides the opportunity for greater plant diversity which can lead to increased profitability.

What has been done
The St. Lucie County CED and the agent coordinated with personnel at the USDA Horticultural Research Laboratory in Ft. Pierce to conduct a Creating a Regional Sustainable Biodiesel Industry Workshop, a two-day program which included presentations at the USDA facility, a field trip to USDA oil seed demonstration field trials and tour of the Greenwave Biodiesel facility in Ft. Lauderdale. A total of 79 individuals attended the programs. Examples of the presentations were:
â?¢Sustainable Biodiesel Concepts
â?¢Market Potential
â?¢Oilseed Feedstocks for Biodiesel Selection
â?¢Oil Seed Pressing & Crushing, the Missing Link
â?¢Processing Regionally Grown Crop Oil into High Value Biodiesel
The field trip included demonstration plots of the oilseed crops canola, camelina and Salvia hispanica. Information about nutrition, seedbed preparation, planting methods and equipment was also presented.

Agent made a presentation entitled Bioenergy Crops; the Good, the Bad and the Ugly at an Alternative Ag Enterprises on the Treasure Coast workshop was attended by 61 growers and small farm enthusiasts. The presentation included information on canola, camelina, jatropha, miscanthus, elephantgrass, giant reedgrass, kenaf, sunflower, sweet sorghum, energycane and

ethanol technology.

Results
Agent provided horticultural and fertility information to several growers who have planted over 100 acres of Salvia hispanica in the county. This oilseed crop is in high demand in the food industry because of the high omega-3 oil content of the seeds and other healthy attributes. Potential yields of 500 pounds per acre that sell for $1.25 per pound make this crop a potential profitable alternative.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
131	Alternative Uses of Land
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems

Outcome #3

1. Outcome Measures

Change in Conditions related to Bio-energy: Sustaining and Fueling Florida

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	375

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Working with companies interested in developing biorefineries in Florida can add to the economic growth within the state through an increase in available jobs as well as new crops for agricultural production.

What has been done
By 2011 Lee County has become established as a biofuels center with a biorefinery opened in July, and Algenol, an algae ethanol company clearing land for production of the fuel. The

Ag/Natural Resources Agent was part of the team invited by County Commissioners to review the RFP packets of both companies prior to their arrival in Lee County.

Results

The Jatropha program continues to offer information based on collection of data from test plots situated on farmers fields, and a 102 acre pilot project which has resisted frost over the last three years continue to be expanded in Palm Beach County.Lee County stand to benefit from the production of 700,000 gallons of biodiesel from waste oil and trapped grease beginning in 2012, as well as ethanol which will be produced by Algenol.

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
131	Alternative Uses of Land
403	Waste Disposal, Recycling, and Reuse
404	Instrumentation and Control Systems

Outcome #4

1. Outcome Measures

Changes in knowledge related to bioenergy and the sustaining and fueling of Florida

2. Associated Institution Types

- 1890 Extension

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)

Bioenergy from plant and vegetable oils are an important part of the energy mix for sustainable energy sources of the future. Producing bioenergy from agricultural crops grown by farmers is one way to reduce dependency on fossil fuel and thereby reduce the anthropogenic emissions of greenhouse gases from fossil fuels. On-farm production and processing of oilseed plants contribute to a less toxic environment and environment-friendly bioenergy from value-added food grade vegetable oil. A sustainable production of bioenergy from agricultural crops is important for the country's
future, its energy stability, and the protection of its communities public health and environment.

Small organic methods farms are uniquely sustainable and beneficial to the environment.

What has been done

Developed and implementing a Small Farm Sustainable Alternative Energy Capacity Building Model. The FAMU Whole Farm Sustainable Biofuels Demonstration Project began in 2006 when the first hands-on Using Alternative Fuels Workshop was held on a small organic methods farm. Alternative energy capacity building/hands-on sessions addressing utilization of waste vegetable oil to produce biodiesel have been provided from beginning to advance levels. Biodiesel made on-farm provides bioenergy for all farm equipment, mowers, and farm vehicles. Organic methods farms provide a uniquely sustainable farmscape and are beneficial to environment and community.

The concept of integrating oilseed crops to meet total on-farm energy requirements (fuel for cars, trucks, tractors, and farm house, etc.) can be easily scaled up or down to meet residential sustainable community energy requirements. This viable alternative energy pathway when added to the mix is expected to provide a sustainable option that will impact how we relate to climate variability and innovative farming communities.

Results

BIOENERGY IMPACT: Sustainably living off the grid, the success of this small farm alternative energy project has served as a model for the region.

Over three hundred people have participated in the bioenergy capacity building sessions held on-organic farm. Students interested in green energy have also participated in the sessions. Sustainable living sessions, learning farm tours, and hands-on bioenergy workshops are on going.

A second participating minority small farm has partnered with the Sustainable Biofuels Demonstration Project to grow oilseed crops for biofuels. A Youth Biofuels Working Group has been established to provide information, education and training in organics and biofuels production to FAMU students.

Participated in the US-Brazil Biofuels Education Cross Cultural Initiative as invited lecturer; a capacity building effort with Brazilian small farmers and faculty. Addressed the need for participatory biofuels project for small agroecological family farms. Brazil 2011.
The first International Biofuels Workshop and Farm Tour was provided on-farm in October 2011.

FAMU Youth Biofuels Working Group presented international agroecological impact during FAMU 2011 Biofuels Symposium.
Contributed/provided small farm biofuels model during United Nations Roundtable for Sustainable Biofuels.
Paper selected for presentation at the 2010 ISEIS Conference/International Conference on Environmental Informatics Sciences held in Beijing, China.

4. Associated Knowledge Areas

KA Code	Knowledge Area
131	Alternative Uses of Land

403 Waste Disposal, Recycling, and Reuse

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.
Cost of fuel and changing weather conditions, especially drought have impacted our ability to do a good job.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Many Extension programs in the area of bioenergy have been developed for those making community decisions in this area of sustainable energy. Of those evaluated 83.9% reported increases in knowledge. Sixty-five percent reported they had changed their behavior and 62.7% were involved in change that had a broader financial or environmental impact on others and their communities.

Key Items of Evaluation

The University of Florida's Program for Resource Efficient Communities (PREC) works with various stakeholders to evaluate a wide range of energy-efficiency programs to quantify their impacts and relative measures of energy and economic savings. Our analyses address the need to accurately compare homes for energy efficiency and to understand the energy and monetary benefits of making specific energy-efficiency retrofit investments. Resulting energy savings estimates can provide a basis for prioritizing and targeting specific building improvement programs that are likely to optimize efficiency gains.
Findings of a recent study, supported by the National Renewable Energy Laboratory (NREL) and the Orlando Utilities Commission (OUC), will be applied in the field through the Osceola Energy Initiative (OEI) Energy Efficiency Finance Program (EEFP). As a U.S. Department of Energy (DOE) Energy Efficiency and Conservation Block Grant (EECBG) initiative under the American Recovery and Reinvestment Act of 2009 (ARRA), the OEI must show measurable

and verifiable success in its programmatic goals and objectives. In turn, the EEFP will rely on the availability of valid and transparent comparisons of energy consumption data to measure and verify the efficacy of eligible measures to be implemented as part of an energy efficient building improvement revolving loan program for Osceola County.

OUC provides electric service to customers in the City of St. Cloud. Analysis of OUC's end use billing data merged with building asset data provide the means to generate the types of energy consumption comparisons necessary for successful implementation of energy efficiency and conservation behavior programs such as the OEI EEFP. This analysis will provide estimates of program impact for direct use by OUC staff and is expected to directly inform key components of the OEI EEFP, such as market segmentation, participant targeting, loan risk assessment, feedback tailoring, and pre- vs. post-intervention measurement and verification (M&V).

The overarching goal of PREC's work in evaluating energy efficiency and conservation behavior programs is to provide accurate and objective information on the costs and benefits of building improvements in order to help Florida businesses and residents save energy and money.

V(A). Planned Program (Summary)

Program # 17

1. Name of the Planned Program

Sustainable Energy--Research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
123	Management and Sustainability of Forest Resources	0%	0%	25%	
125	Agroforestry	0%	0%	25%	
402	Engineering Systems and Equipment	0%	0%	25%	
511	New and Improved Non-Food Products and Processes	0%	0%	25%	
	Total	0%	0%	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	4.0	0.0
Actual Paid Professional	0.0	0.0	32.1	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
0	0	761296	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	761296	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Projects will relate to the development of potential of energy crops, as well as refining and developing new process technologies. Some projects will include conducting environmental assessments and using the information to improve the quality. Other projects will define the economics of energy production.

2. Brief description of the target audience

Residents of Florida
Growers and producers
Fuel producers
Industry

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2011
Actual: 7

Patents listed
Materials and Methods for the Efficient Production of Acetate and Other Products [DIVISIONAL]
Engineering of Thermotolerant Bacillus Coagulans for Production of D(-)-Lactic Acid
Methods of Using Cellulase for Reducing the Viscosity of Feedstock
Over-Expression of NADH-dependent Oxidoreductase (FucO) for Increasing Furfural or 5-Hydroxymethylfurfural
Functionalized Fullerenes as a Biomass Stimulant and a Life Extension Agent
Biocatalyst and Methods for Conversion of Hemicellulose Hydrosylates to Biobased Products

Biocatalyst and Methods for Conversion of Hemicellulose Hydrosylates to Biobased Products
Functionalized Fullerenes as a Biomass Stimulant and a Life Extension Agent
Over-Expression of NADH-dependent Oxidoreductase (FucO) for Increasing Furfural or 5-Hydroxymethylfurfural
Material and Methods to Regulate Carbon Allocation and Biomass Growth
Household Energy Use Protocol

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	5	5

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Demonstrate potential of energy crops
2	Refine and develop new process technologies
3	Conduct environmental assessments that provide evidence as to the value of sustainable energy
4	Define the economic values of energy production
5	protecting against negative environmental impacts while developing alternative forms of energy

Outcome #1

1. Outcome Measures

Demonstrate potential of energy crops

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
125	Agroforestry
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes

Outcome #2

1. Outcome Measures

Refine and develop new process technologies

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
125	Agroforestry
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes

Outcome #3

1. Outcome Measures

Conduct environmental assessments that provide evidence as to the value of sustainable energy

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

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

Outcome #4

1. Outcome Measures

Define the economic values of energy production

2. Associated Institution Types

- 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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
123	Management and Sustainability of Forest Resources
125	Agroforestry
402	Engineering Systems and Equipment
511	New and Improved Non-Food Products and Processes

Outcome #5

1. Outcome Measures

protecting against negative environmental impacts while developing alternative forms of energy

2. Associated Institution Types

- 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)
As we seek alternative energy sources and attempt to move away from fossil fuels, new processes, such as wind turbines, appear to have promising effects for future sustainable energy production. However, they are not void of their own environmental impacts.

Wind turbines have been observed to be killing large amounts of bats, a process that may have severe ecological impacts.

What has been done
To help combat this occurrence, IFAS researcher John Hayes and his team experimented with adjusting wine turbine cut?in speeds ? the lowest speed at which wind turbines begin spinning and generating power ? as a possible solution for mitigating bat fatalities.

In a 2010 article published in ?Frontiers in Ecology and the Environment,? Hayes and his team predicted that by reducing operational hours during low-wind periods, bat fatalities would be lower.

To test this, they designated one of four treatments to 12 turbines at the Casselman Wind Project in Pennsylvania. Morning bat fatality counts were done each day for 75 consecutive days and the species of the bat was identified and recorded.

Results
In the study, Hayes and his team found that by adjusting the turbines to activate at slightly higher wind speeds (5 meters-per-second), bat mortalities were reduced by 44 to 93 percent with less than one percent of power being lost annually.

?A relatively small reduction has a significant conservation benefit for the bats,? Hayes said.

In higher levels of wind, bats are not as active and fatalities are not a major concern.

?There?s a narrow slice of time when a high number of active bats are flying around and when the wind conditions are high enough that the turbines are running,? Hayes said.

If steps are not taken to reduce fatalities, insectivorous bats such as the hoary bat could face significant reductions, imperiling some populations. These winged mammals make ecological

contributions by keeping insect populations in check.

?Bats are the primary nocturnal predator of flying insects,? IFAS researcher John Hayes said. The endangerment of certain insectivorous bat species could have a huge impact on agricultural production. Bats are a natural control mechanism for some agricultural pests and without them large populations of insects would be free to graze on crops, causing farmers to up their pesticide use and budgets.

Finding the balance between environmental conservation and maximum energy potential is key to clean energy production and Hayes? research helps to make wind energy a more sustainable practice. (original article by Michelle Klug)

4. Associated Knowledge Areas

KA Code	Knowledge Area
402	Engineering Systems and Equipment

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

Finding new methods of energy are of great interest to researchers in Florida.

Key Items of Evaluation

Finding alternative, renewable sources of energy is essential to meet our nation's future energy challenges. One alternative that holds promise is to tap into agriculture to grow some of our future fuel needs.

Jatropha is a plant whose seeds produce oil so pure, you can practically pour it right into the tractor which plowed the land it grew from. The Jatropha plant is a candidate for future biofuel production - a hardy small, drought-resistant tree that produces seeds

containing oil suitable for premium biofuel production.

IFAS Researcher Wagner Vendrame, located at the Tropical Research and Education Center in Homestead, investigates this plant and creates cultivars and growing practices for future sustainable fuel production.

Jatropha as an Ideal Plant for Biofuel Production

"There is tremendous interest in Jatropha as a biofuel crop because of the final product - the oil that comes from the seeds," Vendrame said. "It has excellent qualities to be used as a biofuel - specifically to be used as biodiesel and as jet fuel."

The small trees produce green fruit, about the size of a ping pong ball. The fruit usually holds three seeds, which are removed and crushed by a press to extract the oil.

The raw oil itself has noteworthy qualities. "You could take the crude oil and put it in any diesel engine and it will work really well - it's amazing."

However, before the oil reaches engines, it undergoes transesterification, a process which cleans the oil and removes the Glycerin, which would cause buildup in engines. It is an inexpensive and efficient process that can operate in a small room.

"Once the Glycerin is removed from the oil, you have pure biodiesel," Vendrame said. The oil produced from this process goes beyond the specifications that exist in the biodiesel industry and is considered premium fuel. The Glycerin byproduct can be sold to pharmaceutical or cosmetic companies.

The oil can be used by diesel engines and is also ideal to be mixed with jet fuel due to its stability at low temperatures.

Using Plant Genetics to Create an Optimal Cultivar

Although Jatropha oil holds ideal qualities for biofuel production, it is still a wild plant. Cultivars have not been developed for commercial farming. Breeding and genetic improvement still need to be done before farmers can grow this crop commercially.

Vendrame said genetics play a major role in developing a model cultivar.

"For breeding and genetic improvement of any crop, you need to tap in to the natural genetic variability that occurs in the plant."

Vendrame and his team are working with 17 different varieties from 12 different countries. After growing the different varieties of Jatropha, the team assesses over 50 characteristics such as fruit production, flowering and seed weight, in order to select genotypes of Jatropha that are best for breeding and creating new cultivars.

In order to go further and to learn about which genes control particular processes, the researchers performed genetic sequencing and got a partial sequence of the Jatropha genome - a process that allowed them to identify over 100,000 genes.

"We can better tailor genetic improvement by targeting specific genes," Vendrame said.

The researchers identified genes that express cold tolerance and also genes that relate to oil production. By manipulating those genes, the researchers are trying to create future cultivars that resist low temperatures and produce more oil.

Biotechnology is used to multiply the plants which exhibit desirable characteristics. In vitro clonal propagation of plant tissue culture is used to create clones of the Jatropha for distribution to growers.

Jatropha Space Shuttle Expeditions

Sparked by previous experiments that have proven plant cells grow and function differently in microgravity, Vendrame and his team partnered with NASA to send Jatropha into orbit in 2010. A preliminary experiment in 2007 demonstrated that the plant cells have a much different growth pattern in space. They grow much faster and at a much higher volume.

Subsequent space shuttle experiments have examined differential gene expression.

"In microgravity, there will be some genes of Jatropha that become activated and

might assist in improving the plant genetically," Vendrame said.

Researchers hope the space shuttle experiments will accelerate the breeding program and the genetic improvement of Jatropha, and help create a commercial cultivar with desirable characteristics such as cold tolerance and high oil content.

"If we can tap into a more renewable and environmentally friendly source of fuel, we can help set the stage to meet our country's future energy needs," Vendrame said. (article by Michelle Klug)

V(A). Planned Program (Summary)

Program # 18

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
701	Nutrient Composition of Food	20%	20%	0%	
702	Requirements and Function of Nutrients and Other Food Components	20%	20%	0%	
703	Nutrition Education and Behavior	20%	20%	0%	
704	Nutrition and Hunger in the Population	20%	20%	0%	
724	Healthy Lifestyle	20%	20%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	25.0	2.0	0.0	0.0
Actual Paid Professional	13.8	2.0	0.0	0.0
Actual Volunteer	0.0	2.0	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
149574	134113	0	0
1862 Matching	1890 Matching	1862 Matching	1890 Matching
149574	134113	0	0
1862 All Other	1890 All Other	1862 All Other	1890 All Other
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Educate families and children to make healthier choices related to nutrition and physical activity through a variety of educational methods:
Lifestyle intervention programs to address Childhood Obesity

Information outreach to raise awareness of each of the health issues targeted above. These will include print and broadcast media, Family Album Radio scripts, and articles for the Solutions for Your Life and county Web sites.

2. Brief description of the target audience

Target audiences for chronic disease risk reduction programs include at-risk persons including adults, parents and persons who are obese including youth. Also those who have a family or personal history, or are in a high-risk ethnic group.

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Year: 2011
Actual: {No Data

Patents listed
{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	5	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Changes in knowledge that will reduce childhood obesity
2	Changes in behavior related to nutrition that will reduce childhood obesity
3	Changes in physical activity that will lead to reduced childhood obesity
4	Weight loss that leads to reduced health issues related to childhood obesity
5	Changes in condition related to childhood obesity

Outcome #1

1. Outcome Measures

Changes in knowledge that will reduce childhood obesity

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	89678

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
According to the Center for Disease Control (CDC), the trend towards obese adults is increasing alarmingly. The average American adult is more than 24 pounds heavier today than in 1960. The trends in obesity among US children and adolescents in the same time frame have quadrupled. Studies shown from CDC from a systematic review found 24%90% of obese adolescents become overweight/obese adults. In one study, 87% of obese adolescents were obese adults and 39% of obese adolescents were severely obese adults. As of Sept 2011, according to Woman, Infant and Children (WIC), Susan Vetter, St. Johns County WIC Coordinator, stated that 27.1% of children over 2 are at risk or/are overweight. Teaching about healthy eating habits through increased vegetable consumption (ie local agriculture) changes dietary habits.

What has been done
This goal was met through teaching 790 elementary students about increased vegetable consumption through classroom instruction and hands-on activities and/or food demonstrations.

Results
One instance, in collaboration with teaching eight food demonstrations to 4th and 5th grade students (n=144) with the science department at SouthWoods Elementary school, students sampled twelve raw vegetables. One hundred and fifteen (115) students sampled a new vegetable for the first time and will incorporate increased vegetable consumption in their diet. Included in the presentations were lessons on antioxidants, benefits of the vegetable group and serving amounts. The goal of focusing healthier eating habits by increasing vegetable consumption, such as through local agriculture, lowers the risk for obesity and other diet-related diseases. The CDC statistics show that 9.1% of the annual medical costs are due to obesity in the United States (over 140 billion).

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

Outcome #2

1. Outcome Measures

Changes in behavior related to nutrition that will reduce childhood obesity

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	43873

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Childhood Obesity is reaching epidemic levels.

What has been done
Workshops were held in Sumter county for parents and children facing issues related to obesity.

Results
One student lost 80 pounds over one year and half as a results of adding exercise to her daily routine, making healthy food choices by reading labels and using the MyPlate. Her parents contribute the weight lose to knowledge learned through the FNP program and materials parents received from FCS Agent. The weight lose has improved the childâ??s self esteem reported the mother.

One parent reported her son would not eat any vegetables and thanks to the FNP program her son will now try different types of fruits and vegetables and eats a wide variety. She credits the FNP Program Assistants program/activities on sampling different fruits and vegetables and

making students aware how each aids in body functions.

4. Associated Knowledge Areas

KA Code	Knowledge Area
701	Nutrient Composition of Food
702	Requirements and Function of Nutrients and Other Food Components
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population

Outcome #3

1. Outcome Measures

Changes in physical activity that will lead to reduced childhood obesity

Not Reporting on this Outcome Measure

Outcome #4

1. Outcome Measures

Weight loss that leads to reduced health issues related to childhood obesity

2. Associated Institution Types

- 1862 Extension
- 1890 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 the International Journal on Obesity and Related Metabolic Disorders (1998), nearly 80% of obese adults have diabetes, high blood cholesterol levels, high blood pressure, coronary artery disease or other ailments. The National Coalition for Promoting Physical Activity estimates that in 2004 dollars at $10 per person of intervention costs per year, Florida would see a state savings of $196,100,000 within one to two years ($1,071,6000,000 in five years and

$1,193,600,000 in 10-20 years.)

What has been done

: As a result of attending Rural Lite in Suwannee County, participants will improve their nutrition and increase their activity as evidenced by improvements in blood pressure, blood lipids, LDL-cholesterol and Cardio-Reactive Protein (CRP).

Results

Blood pressure of Wave One- Rural Lite participants decreased over time, going from 124/79 mmHg at baseline to 118/74 mmHg at month six. Blood lipids also decreased. The average triglycerides at baseline was 182 mg/dl and decrease to about 144 mg/dl at month six. This represents a 38 mg/dl reduction. LDL-cholesterol was lowered from 123 mg/dl to 117 mg/dl, a 6 mg/dl reduction. CRP also decreased over time, going from 5.6 mg/L at baseline to 4.2 mg/L at month six; a 1.4 mg/L reduction. All of these measures significantly decreased from baseline to month six. Blood pressure at month 24 was 123/75. Triglycerides at month 24 was 157 mg/dl which represents a decrease of 21 mg/dl from baseline and a 14 mg/dl increase from month six. Triglyceride values for Suwannee county participants were much higher at all 3 time points compared to all Wave 1 participants (in the three other counties participating.) HbA1c was very stable: 5.9% at baseline, 6.0% at month six, and 5.9% at month 24.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior

Outcome #5

1. Outcome Measures

Changes in condition related to childhood obesity

2. Associated Institution Types

- 1890 Extension

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)

FAMU: Public school systems have long been seen as not serving the most helathy lunches. Changes to fresh fruits and vegtables could have a direct impact on childhood obesity. The more publicity brought to this situation the more likely positive change will occur.

What has been done

FAMU Extension has been collaborating with the New North Florida Cooperative for over 16 years in an effort to develop alternative market opportunities with schools for small-scale farmers (Farm-to-School). The collaboration has yielded the development of a model that allows schools to incorporate fresh locally and/or regionally agricultural products grown into school meals.

Results

Over 100 school districts in FL and surrounding states, serving over 1 million children, have participated in this model either through pilot efforts or full year deliveries to schools. These innovative farm-to-school efforts have received national recognition for improving nutritional value of school meals, as well as providing a profitable alternative market opportunity for small farmers. A notable accomplishment was the invitation to be filmed for feature story for World Report on HDTV; production crew filmed FAMU and NNFC representatives, participating farmers and participating school personnel over three day period; feature story aired on October 18, 2011. Also, Through the FAMU Farm to School efforts, five (5) Florida school districts improved nutritional value of school meals for over 100,000 children due to incorporation of local and regional fresh products; fresh products included leafy greens and sweet potatoes; schools purchased a total approximately 50,000 lbs of fresh produce (leafy greens, sweet potatoes) during Spring and Fall Semesters of 2011.

4. Associated Knowledge Areas

KA Code	Knowledge Area
703	Nutrition Education and Behavior
704	Nutrition and Hunger in the Population
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

Florida is presently being affected by the economic issues plaguing the world. There

are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

According to the Centers for Disease Control and Prevention, one in three children is obese or overweight, putting them on the road to lifelong chronic conditions like diabetes and heart disease. If left unchecked or untreated, obesity will affect 43 percent of adults by 2018 and will add nearly $344 billion in that year alone to the nation's annual direct health care costs, accounting for more than 21 percent of health care spending, according to America's Health Rankings®. America's Health Rankings is an annual comprehensive assessment of the nation's health on a state-by-state analysis. It is published jointly by United Health Foundation, the American Public Health Association and Partnership for Prevention.

Extension has been working through nutrition programs, parenting programs and 4-H activities to reduce the causes of childhood obesity. They have also been increasing partnerships that can effectively assist in reaching these goals.

Key Items of Evaluation

Two articles:

1. **Florida Extension Child Obesity Program works with State Officials to improve children's eating habits**

Following in a state and national push for better nutrition Tallahassee's Astoria Park Elementary School is going a step further. Instead of telling students and their families to eat better, the school is embarking on a project to SHOW them how to do it. Lynn Hatter took a trip to the school and prepared this report.

In the back of Astoria Park Elementary School, in a space just big enough for a school bus, a small group of teachers, grounds keepers and volunteers are busy assembling garden beds. On a table in a corner sits a brown bag filled with leafy greens, and tomatoes.

"This is stuff from the garden we did during Earth Day we planted on Earth Day and we had to pull it up. We had some greens, some basil and tomatoes. It's still giving us tomatoes, we don't know why but we had to pull them up to re-do the beds. So that's the end-product of an April Earth Day planning."

Ms. Merlin JnBaptiste (Ms. JB) is the program specialist at Astoria Park. The school began planting veggie gardens back in April and its now preparing to start a new season featuring winter vegetables. The school is also building three additional garden beds where students can plant their seeds and watch them grow.

Stefanie Duda is with the UF-IFAS extension project and Four-H. She says the project is a way to show students what living and eating healthy is all about.

"You can get your sixty minutes of daily recommended exercise doing fun, active things. Gardening is active. We know there's an obesity epidemic going on but we don't

want to continually preach that to children. We just want to help them understand that living healthier will help them feel and be a better person."

Both state and federal officials are pushing awareness about childhood obesity. First Lady Michelle Obama has her "Let's Move" campaign and the Florida Department of Agriculture recently obtained permission from the federal government to operate the state's school lunch program. Commissioner Adam Putnam says the goal of the transfer to his department will help get more fresh fruits and vegetables in front of children. At Tallahassee's Astoria Park Elementary, the health programs also extend to parents, where Jean-Baptiste says eating and living healthy has become a family effort.

"We actually have students in our after-school program who are policing their parents. They're like, mom that's not good why are you eating that?" And we have parents who stop me and are like, "can you help me? My child is telling me I'm not doing this right. And I'm going to start exercising, you know, what do you do what are you guys doing?"

And for those parents, Ms. Jean-Baptiste says the school does provide an alternative to gardening.

"We actually started a Zumba class here. It's available for the parents to get. And its Monday, Wednesday and Friday, from 5:30-6."

Zumba classes and veggie gardens give students and parents at Astoria Park a way to live better and eat better while having some fun doing it. (Original article by Lynn Hatter)

2. **Three-Hundred Florida 4-H Youth Leaders, UnitedHealthcare Launch Partnership to Promote Nutrition Literacy, Physical Fitness and Personal Safety**

Florida 4-H and UnitedHealthcare joined together in 2011 to launch a new partnership - *Youth Voice: Youth Choice* - a program to help young people in the state improve their health and well-being through exercise, proper nutrition and attention to personal safety.

More than 300 4-H youth leaders were on-hand as UnitedHealthcare presented Florida 4-H with a $55,000 check to mark the beginning of the partnership.

To officially kick-off the partnership, UnitedHealthcare's Dr. Health E. Hound mascot joined 4-H students, community leaders and health-fitness coaches for a group exercise and an afternoon of healthy workshops designed to teach the 4-H youth gathered for the event basic physical fitness exercises and smart tips for healthier eating. The workshops focused on the importance of diet and exercise in their daily lives and how to apply that knowledge with their families and friends in their communities.

As part of the Youth Voice: Youth Choice partnership, 4-H will sponsor events and activities in targeted counties in Florida. For example, Dade County 4-H has developed educational workshops designed for students in Miami-Dade County. Additional events include nutrition education at youth camps in Brevard County, youth fitness activities at county fairs, student workshops in Leon County, and other events at community health fairs and schools which are making changes in the way students exercise and their understanding of nutrition.

"UnitedHealthcare is partnering with 4-H to ensure children, particularly those in

underserved communities, learn skills to enhance their health and well-being," said Kathleen R. Crampton, president & CEO, UnitedHealthcare Community & State in Florida. "By teaming up with 4-H youth leaders, we can help thousands of young people take action to lead healthier lives."

V(A). Planned Program (Summary)

Program # 19

1. Name of the Planned Program

Childhood Obesity--Research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
701	Nutrient Composition of Food	0%	0%	25%	
702	Requirements and Function of Nutrients and Other Food Components	0%	0%	25%	
724	Healthy Lifestyle	0%	0%	25%	
802	Human Development and Family Well-Being	0%	0%	25%	
	Total	0%	0%	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	1.0	0.0
Actual Paid Professional	0.0	0.0	5.8	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
0	0	332912	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	332912	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Projects will relate to finding ways to reduce the incidence of childhood obesity through the study of foods and nutrient values and ways to improve physical activity. Projects may also relate to managing change that would lead to decreases in obesity.

2. Brief description of the target audience

Florida residents
parents and children

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	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	0	1	1

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Identified ways to increase acceptance of sustainable change in eating and exercise

Outcome #1

1. Outcome Measures

Identified ways to increase acceptance of sustainable change in eating and exercise

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

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)
{No Data Entered}

What has been done
{No Data Entered}

Results
{No Data Entered}

4. Associated Knowledge Areas

KA Code	Knowledge Area
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

Finding solutions to the epidemic in human obesity is important. Obesity has been directly tied to many chronic diseases that are expensive in both medical cost and human capital. Florida resesearch scientists have been working on solutions.

Key Items of Evaluation

The prevalence of overweight and obesity in both adults and children in the United States is a leading public health concern. Over sixty-six percent of US adults are either overweight or obese with 32.2% falling into the obese category. Many chronic health conditions such as high blood pressure, type 2 diabetes, heart disease, stroke, gallbladder disease, arthritis, sleep apnea, and some types of cancers are strongly related to increasing body weight. A combination of environmental factors appears to be responsible for this sharp rise in obesity including changes in both physical activity and nutrition habits. Because the rise in obesity is not due to a single cause, effective weight management strategies must also take a broad approach targeting both physical activity and nutrition interventions through creative low-cost methods. Thus, our goal is to cast a wider net into society to combat obesity and improve health for all peoples, not just those with access to quality health care and associated resources. Specifically, this set of obesity related projects has 4 goals: to investigate best methods for long-term weight management support for Floridians in rural areas; improve physical activity and dietary habits of children receiving Medicaid benefits; gain understanding into how children make food choices and how to best communicate sound nutrition information to children; and to study how different dietary fibers affect blood sugar levels.

The physical and psychological effects of our nation's current obesity epidemic are well documented. The dramatic rise in obesity is likely due to a combination of environmental factors that have affected both physical activity and dietary patterns. Working with colleagues from various departments at the University of Florida, both within and outside IFAS, our goal is to develop sustainable multifaceted strategies to reduce the rate of obesity and its related diseases. To this end, our objectives include projects aimed

at increasing physical activity and improving the dietary behaviors of the citizens of Florida.

Our research evaluating the effects of dietary fiber on food intake by young adults has large potential impacts for all adults. With over 65% of the US adult population being overweight, finding solutions that can be adopted by food companies and individuals to curb this trend is essential. If successful, this could support the addition of dietary fiber to a number of food products and serve as a motivational reason for people to choose foods that are high in fiber, which are often also low in calories and rich in other nutrients. Both ongoing weight management intervention projects described above have very large potential impacts on the health of our society, particularly those living in rural areas where access to health care is often limited. Each of these projects are multi year interventions and initial analysis of baseline data has just begun. We have submitted several abstracts to the Society for Behavioral Medicine annual meeting as well as the American Dietetic Association annual meeting. Lastly, the Motivational Interviewing project produced two high quality educational CDs that will be used in training our own dietetics students and will be available for sale through UF's IFAS Bookstore.

V(A). Planned Program (Summary)

Program # 20

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
711	Ensure Food Products Free of Harmful Chemicals, Including Residues from Agricultural and Other Sources	50%	50%	0%	
712	Protect Food from Contamination by Pathogenic Microorganisms, Parasites, and Naturally Occurring Toxins	50%	50%	0%	
	Total	100%	100%	0%	

V(C). Planned Program (Inputs)

1. Actual amount of FTE/SYs expended this Program

Year: 2011	Extension		Research	
	1862	1890	1862	1890
Plan	25.0	3.0	0.0	0.0
Actual Paid Professional	15.6	3.0	0.0	0.0
Actual Volunteer	0.0	0.0	0.0	0.0

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

Extension		Research	
Smith-Lever 3b & 3c	1890 Extension	Hatch	Evans-Allen
169084	201169	0	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
169084	201169	0	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Key educational methods to be used across the state: Improving fresh produce safety/ Small farm food safety

• On-site training for produce workers using existing materials on CD with appropriate activities or other adult learning methods; In-service training for faculty; County training with activities, adult learning methods for consumers; Distribution of current EDIS pubs, develop others as needed.

• Use media outreach to increase awareness of fresh produce food safety e.g. print and broadcast media, Family Album Radio, the Solutions for Your Life and county Web sites.

Key educational methods: Revitalizing home food preservation

• Continue training of county faculty based on recent research on home food preservation in collaboration with UGA National Center for Home food preservation, Dr. Elizabeth Andress.

• Seek grant funding and/or support for canning supplies for training

• Facilitate county faculty mentoring program to support for 4-H and adult community training

• Prepare and review publications as needed.

Key educational methods: Continuing food safety education for food handlers

• Serv Safe® Training and Certification for food service managers/operators

• Food service workers/food handlers training (SafeStaff ®or equivalent) on site or elsewhere

• Use media to raise awareness and classes/programs to increase knowledge and competency of consumers and volunteers on safe food handling

• Face-to-face training: Food safety and quality update for FCS county faculty; training by state government officials on food businesses regulation; other emerging programs and issues.

2. Brief description of the target audience

1) Improving fresh produce safety/ Small farm food safety Target audience: Small farm owners; farm workers; produce handlers; consumers
2) Revitalizing home food preservation

Potential partners: Produce vendors; canning centers; regulators Target audiences: County faculty; adults

(consumers/ volunteers); youth (4-Hers)

3) Continuing food safety education of food handlers Target audiences: Food service operators: food handlers (adults; youth); consumers; volunteers, and county faculty

3. How was eXtension used?

Florida is not collecting this information at this time.

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2011

Actual: {No Data

Patents listed

{No Data Entered}

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	15	0	0

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Change in knowledge related to processing, distribution, safety and security of food systems
2	Change in behavior related to processing, distribution, safety and security of food systems
3	Change in condition related to processing, distribution, safety and security of food systems
4	Change in knowledge related to safety and security of food systems
5	Change in behavior related to security and saftey from animal zoonotic diseases

Outcome #1

1. Outcome Measures

Change in knowledge related to processing, distribution, safety and security of food systems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	2403

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
There is a need to improve field sanitation and food safety for farm labor contractors working in the state of Florida.

What has been done
The field sanitation and food safety training module is a training section offered to farm labor contractors as part of a certificate requirement. This section is designed to improve the sanitary and food safety conditions of harvesting workers.

Results
In 2011, the pre and post test results showed a knowledge increase of 55% on this subject matter. The data collected of the farm labor contractor attending this training program showed that they hired and manage about 3500 workers per year. Improving knowledge on this extension audience will impact a large number of workers and food safety will improve by reducing the number of food contamination incidents.

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

Outcome #2

1. Outcome Measures

Change in behavior related to processing, distribution, safety and security of food systems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Action Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1786

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Building Your Own Farms Food Safety Manual
Farmers today are increasingly responsible to implement voluntary and required programs such as: food safety, pesticide application, BMPs, and labor requirements.

What has been done
Educational program efforts were conducted in these areas in 2011. Perhaps the program of greatest current need is farm food safety. Small and mid-sized farmers in the Suwannee Valley and throughout the state have requested help from extension agents to determine how they can become compliant in food safety.
During 2010, four â??Build Your Own Food Safety Manualâ?? classes were delivered by Hochmuth, Landrum and Toro with over 50 attendees (2010).
*FDACS Specialty Crops Block funding included support to conduct county agent IST in 2011. This two day training was implemented by Landrum, Hochmuth, Treadwell(overall leadership and organization)and Galindo (evaluation) in May to 20 agents to form the statewide Small Farms Food Safety Implementation Team (2011).
*During 2011, the trainings for farmers was expanded with classed implemented by newly trained agents in Live Oak(2), Kissimmee, Jay (2), Bushnell (2),and Gainesville and a standardized knowledge gain? type evaluation tool for each class began to be implemented in August(2011).

Results
The impact of the four food safety training programs in 2010 and continuing in 2011 delivered directly or in part by Landrum and Hochmuth was 120 farms gained knowledge and moved

forward to begin food safety compliance by developing their manuals. As a result of the programs, 12 farmers were able to further implement programs on their farm and to pass a third party audit. On those farms which completed the audit, the impact was their ability to sell their product in the US wholesale food system. This program was the first such training implemented by IFAS where the growers actually develop their manual

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

Outcome #3

1. Outcome Measures

Change in condition related to processing, distribution, safety and security of food systems

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

3a. Outcome Type:

Change in Knowledge Outcome Measure

3b. Quantitative Outcome

Year	Actual
2011	1314

3c. Qualitative Outcome or Impact Statement

Issue (Who cares and Why)
Agricultural threats are a real issue in this day and age of bioterrorism. The economy has also been responsible for an increase of crime including robberies of food supplies and distruction of property.

What has been done
Collier County Emergency Operations Center and Extension have worked together to create a list of vulnerable agricultural sites that could be threatened in such a way that would endanger the health of humansand/or animals. It also identifies agricultural sites that are more likely to have increased levels of crimial attacks including distruction

Results

The list has been created and will be used to assist the sheriff's office and other agencies in decreasing agricultural crime rates and protecting the security of food systems in that county.

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

Outcome #4

1. Outcome Measures

Change in knowledge related to safety and security of food systems

2. Associated Institution Types

- 1890 Extension

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)
FAMU: Training in Hazard analysis and the critical control point of food safety can reduce the risk of disease and sickness within Florida populations as well as those buying Florida food products.

What has been done
FAMU conducts annual Hazard Analysis and Critical Control Point (HACCP) food safety training workshop. The objective is to train food service processors, producers, and students in practices that will minimize potential food-borne hazards. The program administered a pre- (before the training) and post (after the training) to the participants to test their knowledge on food safety.

Results
For 2011 HACCP workshop, 10 participants took a 20-multiple choice-question test on food safety and potential hazards. Analysis showed that 100 percent (10 participants) improved knowledge (by up to 28%) after the training.One hundred percent of the participants also revealed that their experience gained from the workshop will make them more confident in dealing with HACCP matters.

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

Outcome #5

1. Outcome Measures

Change in behavior related to security and saftey from animal zoonotic diseases

2. Associated Institution Types

- 1862 Extension
- 1890 Extension

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)
FAMU and UF: The treatment of farm animals is the first step in stemming many zoonotic diseases (diseases which go from animals to humans), and represent an important public health (and veterinary health) service to the community.

What has been done
On November 15, 2011, the Ag/Natural resources Program hosted the second annual training workshop in animal diseases at the Lee County extension.

Results
Twenty-five smallstock owners attended. Florida Agricultural and Mechanical University (FAMU) provided the faculty member who gave the specialty training which is referred to by the acronym FAMACHA. The training day provide the opportunity to launch the fecal diagnostic laboratory which will receive support from veterinarians at the South Trail Animal Hospital in Bonita Springs. The laboratory (through voluntary work which will be done by Master Gardeners), will diagnose fecal samples for parasite eggs and a report will be sent to the South Trail Animal Hospital, which will propose a treatment regime. The treatment of farm animals is the first step in stemming many zoonotic diseases (diseases which go from animals to humans), and represent an important public health (and veterinary health) service to the community.

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

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

Florida is presently being affected by the economic issues plaguing the world. There are also state and federal public policy changes, government regulations and reduced appropriations affecting Extension, research and the Florida land-grant universities as a whole. There are competing programmatic challenges and the changing attitudes of the general public precipitated by the economic issues affecting jobs, home foreclosures and the overall quality of life.

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Extension works closely with constituents involved in processing, distribution, safety and security of Florida grown foods. Of those who reported 77.4% increased their level of knowledge related to ways to improve food safety and security while 70.8% said they made changes in their behaviors. Another 71.3% said they made changes that had a broader impact on other individuals and their community in improving food safety and security. Additional programs done in food safety related to families is reported in the individual, family and community planned program in this report.

Key Items of Evaluation

Food Safety and Quality Program

Members: Katherine Allen (Suwannee County), Rita Law (Seminole County), Brenda Williams (Alachua County), Marjorie Moore (Bay County), Elizabeth Shephard (Brevard County), Monica Bonsett (Citrus County), Jenny Jump (Columbia County), Sharon Treen (Flagler County), Mary Keith (Hillsborough County), Celia Hill (Lee County), Samantha Kennedy (Manatee County), Nancy Gal (Marion County), Christine Kilbride (Martin County), LuAnn Duncan (Orange County), Betsy Crisp (Pasco County), Ada Medina-Solorzano (Palm

Beach County), Nan Jensen (Pinellas County), Wendy Wood (Putnam County), Catherine Rogers (Suwannee County), Amy Simonne (state specialist - food safety), David Diehl (state specialist - evaluation) and Debora Bell (Program Assistant)

1. **Situation**

The Centers for Disease Control and Prevention (CDC) estimates that foodborne illnesses are responsible for 76 million illnesses, 325,000 hospitalizations, and 5,000 deaths each year in the United States alone. The Food and Drug Administration (FDA) estimates the economic cost of foodborne illness (in terms of pain and suffering, reduced productivity, and medical expenses) to be between $10 billion and $83 billion. This equates to an estimated cost of $131 to $1,092 per foodborne illness case.For healthy individuals, foodborne illnesses are usually relatively mild and self-limiting, but for persons with compromised health or immunity, such as the elderly, infants, young children, and those with medical conditions or chronic diseases, foodborne illnesses can be severe and even life-threatening. The majority of foodborne illnesses are caused by microbial contamination in commercial eating establishments and homes. The Florida Department of Health reports that the most common contributing factors to foodborne illness outbreaks include contamination issues, such as unsanitary food handling and cross-contamination, and preparation issues, such as the ways foods are cooked, prepared, or served. Experts agree that foodborne illness of microbial origin is the most serious food safety issue in the United States and a major public health concern.

1. **Target Audience**

The main target audiences for the food safety and quality program in 2010 were food-service personnel from restaurants, hotels, school cafeterias, hospitals, churches, daycare centers, nursing homes, caterers, non-profit organizations, volunteer associations, golf courses, gas stations, food production and distribution companies, community centers, camps, county health departments, general stores, and food cart vendors.

1. **Objectives**

1) To implement effective educational programs for food professionals, food handlers, and Florida's citizens and consumers, leading to improved food handling practices, and consequently, to a safer food supply; and

2) To provide professional development opportunities in the food safety and quality subject areas for University of Florida Family and Consumer Science county Extension faculty, volunteers, policy makers, and stakeholders with interests in food safety and quality.

1. **Educational Efforts/Activities**

Twenty family and consumer sciences faculty participated in the food safety and quality program in 2010. Overall, the faculty taught 89 classes of the ServSafe® food manager certification program, reaching 562 participants throughout the state of Florida.

1. **Accomplishments**

In 2010, the average passing rate of participants was 78%, with an average score of 81.6 (minimum passing score is 75). Participants who pass the exam receive a ServSafe® food manager certification, which is valid for five years; the certification is required by the majority of food service operations and other food businesses. Since March 2001, more than 8400 food managers have taken the training, with an overall passing rate of 80%. According to the program evaluation survey, the majority of participants gain food safety knowledge and adopt one or more recommended practice; some adopt two or more recommended practices. The most commonly adopted practices were time and temperature control, personal hygiene practices, prevention of cross-contamination, and the use of appropriate cleaning and sanitizing practices.

Furthermore, the food safety and quality program has helped the FCS county faculty to continue to increase their food safety competency, using this knowledge to enhance food safety programs in their counties. The mentoring systems initiated for county faculty participating in this program offer opportunities for county faculty to be either a mentor or a mentee. Experienced county faculty have the opportunity to teach or coach newcomers to the program, and faculty also can take advantage of our "buddy system," in which faculty from two adjacent counties team up to cover the teaching schedule in order to eliminate class cancellations; this approach has resulted in positive feedback from clientele.

Since this is a fee-based certification program, county faculty may earn a small amount of financial support each year to enhance food safety programs in their counties. County faculty have used this funding to purchase teaching materials and equipment and to support domestic and international travel to professional meetings.

Finally, the food safety and quality program has resulted in interagency collaborations between UF/IFAS Extension and many food safety regulatory agencies, including the Florida Department of Health (FDH), the Florida Department of Agriculture and Consumer Services (FDACS), the Florida Department of Business and Professional Regulations (FDBPR), and some industry partners.

V(A). Planned Program (Summary)

Program # 21

1. Name of the Planned Program

Food Safety--Research

V(B). Program Knowledge Area(s)

1. Program Knowledge Areas and Percentage

KA Code	Knowledge Area	%1862 Extension	%1890 Extension	%1862 Research	%1890 Research
723	Hazards to Human Health and Safety	0%	0%	100%	
	Total	0%	0%	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	1.0	0.0
Actual Paid Professional	0.0	0.0	43.7	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
0	0	871487	0
1862 Matching	**1890 Matching**	**1862 Matching**	**1890 Matching**
0	0	871487	0
1862 All Other	**1890 All Other**	**1862 All Other**	**1890 All Other**
0	0	0	0

V(D). Planned Program (Activity)

1. Brief description of the Activity

Projects may be in many areas but many will relate to improving fresh produce safety/ Small farm food safety and/or identifying BMPs to improve home food preservation and food safety issues related to food handlers.

2. Brief description of the target audience

Residents of Florida
Those in restaurant related careers
growers and producers
home canners

3. How was eXtension used?

{No Data Entered}

V(E). Planned Program (Outputs)

1. Standard output measures

2011	Direct Contacts Adults	Indirect Contacts Adults	Direct Contacts Youth	Indirect Contacts Youth
Actual	0	0	0	0

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

Patent Applications Submitted

Year: 2011
Actual: 6

Patents listed
Type I Interferon Mimetics as Therapeutics for Cancer, Viral Infections, and Multiple Sclerosis
Control of Mosquito Larvae with Bti Toxins and TMOF
Methods and Compositions for Diagnosing and Treating Autoimmune Disorders
Resistance-Breaking Carbamates for Malaria Control
L-Malate production by metabolically engineered Escherichia coli
Biologically Activated Biochar, Methods of Making Biologically Activated Biochar, and Methods of Removing Contaminants from Water [Combined with UF#13419]
Method of Inhibition of Enzymatic Browning in Food Using of Hypotaurine and Equivalents

3. Publications (Standard General Output Measure)

Number of Peer Reviewed Publications

2011	Extension	Research	Total
Actual	0	6	6

V(F). State Defined Outputs

Output Target

Output #1

Output Measure

- {No Data Entered}

V(G). State Defined Outcomes

V. State Defined Outcomes Table of Content

O. No.	OUTCOME NAME
1	Identify BMPS that would decrease foodborne illness

Outcome #1

1. Outcome Measures

Identify BMPS that would decrease foodborne illness

2. Associated Institution Types

- 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)
But until now, regulators and public health officials had no way of determining which pathogens, and pathogen-food combinations, they should focus on.

What has been done
Batz and study co-authors Glenn Morris, director of the Emerging Pathogens Institute, and Sandra Hoffmann of the U.S. Department of Agriculture, created a new tool for ranking foodborne illnesses.

The Foodborne Illness Risk Ranking Model ? or FIRRM ? measures such factors as hospitalization, doctor visits, lost wages and quality of life. By applying the formula to more than 10 years of data on foodborne illnesses and surveying nearly 50 public health experts, the researchers were able, for the first time, to identify the worst culprits.

Results
The report concludes that 90 percent of the annual $14 billion health burden can be attributed to just five pathogens ? Campylobacter, Salmonella, Listeria monocytogenes, Toxoplasma gondii, and norovirus. Even more important for the purpose of prevention, the analysis identified the foods most commonly contaminated by these pathogens. The researchers discovered that the top 10 pathogen-food combinations were responsible for more than $8 billion in medical costs, lost wages and significant loss of quality of life.

?We hear about outbreaks all of the time associated with various products and it lends a

perception that there?s just contamination lurking in every corner,? Batz says. ?But what we find is that ? a relatively small number of these hazards account for a significantly large portion of the overall burden.?

4. Associated Knowledge Areas

KA Code	Knowledge Area
723	Hazards to Human Health and Safety

V(H). Planned Program (External Factors)

External factors which affected outcomes

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

Brief Explanation

{No Data Entered}

V(I). Planned Program (Evaluation Studies)

Evaluation Results

Florida is a costal state with well over 58 million visitors per year. Research in food safety related to seafood is important as is following proper food safety BMPs in the state's thousands of restaurants.

Key Items of Evaluation

Seafood is an $80 billion-a-year business in the United States, where consumers each eat about 16 pounds of seafood annually. But as much as 25 percent of that seafood might not be what it claims to be. Paying $25 a pound for grouper? It could be Asian catfish worth $2 a pound. Mahi-mahi? It could be yellowtail.

Out of its headquarters in UF's Sid Martin Biotechnology Incubator in Alachua, AFT is perfecting genetic testing that identifies processed fish with as much accuracy as scientifically possible.

Mislabeling of seafood is a growing international economic problem with fraud for some species, like red snapper, running as high as 75 percent.

Overfishing, along with a rising global demand, has created seafood shortages and a big incentive for fish suppliers to cheat -- which isn't hard to do when only 2 percent of seafood in the U.S. market is inspected.

Getting what you pay for isn't the only issue. Safety is another. In 2007, for example,

600 people in Hong Kong became sick after consuming what they thought was Atlantic cod. Instead, they dined on escolar, or oil fish, which is known to cause diarrhea and other gastrointestinal problems.

In 2006, AFT became the first company to offer this "DNA barcoding" service to food suppliers. It was a timely move, because the FDA -- which monitors fish supplies -- was just beginning to recommend DNA barcoding over isoelectric-focusing. (IEF)

"AFT was one of the first private labs to switch over to this method," says FDA spokesperson Stephanie Yao. "Therefore, it was one of the few labs the FDA could recommend to industry that would perform analyses FDA would consider acceptable."

Applewhite, who learned the business during a decade, first as a graduate student and then an employee of UF's Aquatic Food Products Laboratory, recognized early on that there was a need to develop an authenticated database of fish species she could use for reliable comparisons.

So she turned to UF's Florida Museum of Natural History, a world leader in identifying fish taxonomically, which is the science of identification using specific physical characteristics.

Applewhite worked out a deal where she sends the museum curators fish from around the world and for a fee they provide taxonomic information on the samples, give AFT a letter of validation that affirms the species, then store the samples as reference samples.

The relationship is a mutually beneficial one, says Rob Robins, senior biologist/collection manager for the Division of Ichthyology at the Florida Museum. Valuable specimens are added to the museum and AFT receives expert identification and has a place to store its index fish. The company also collaborates with the Smithsonian Institution, the University of Louisiana, the University of Kansas, the National Oceanic and Atmospheric Administration and the National Marine Fisheries Service to do some of the taxonomical work and issue letters of validation.

AFT keeps a sample of each fish tissue the museum identifies, which it uses to develop a DNA profile for its database. Today, the company boasts information on more than 350 commercially important species and is adding new ones all the time.